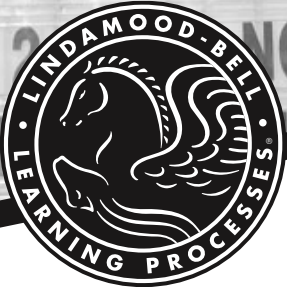




We Create the Magic of Learning!

# Baggs Elementary School

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## LINDAMOOD & BELL

*Learning Processes*

**LARAMIE COUNTY SCHOOL DISTRICT #1**  
**FINAL REPORT**  
**2007 – 2008**

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## Executive Summary

The Laramie County School District #1 (LCSD) partnered with Lindamood-Bell during the 2007-08 school year to implement a School Services project at seven schools. This is the second full year of the collaboration. The comprehensive implementation included professional development, on-site consulting and support for teachers, use of diagnostic assessments, intensive intervention, classroom implementation, and certification for key district personnel.

This report includes information regarding the provisions of the 2007-08 project design and assessment data on students pre- and post-instruction.

The primary goal of this year's Lindamood-Bell® implementation was to provide the professional development necessary to identify and meet the learning needs of students. Intensive intervention was provided to 2<sup>nd</sup> through 12<sup>th</sup> grade students at-risk for reading failure. These students either performed below proficiency on the Proficiency Assessments for Wyoming Students (PAWS) or generally exhibited difficulty with reading. All selected students were administered diagnostic assessment to identify individual learning needs and were placed in small, homogeneous groups of 3 to 5 students. Groups received daily, intensive instruction for 45 to 105 minutes per day. The duration of the intervention was based on individual learning needs and the school's schedule.

A secondary focus at the five elementary schools was the provision of the Lindamood-Bell® instruction in classrooms. For a school-wide implementation, it is expected that all instructional staff attend Lindamood-Bell® workshops and provide daily and consistent instruction. Support has been available by Lindamood-Bell® staff in the form of inservices and in-class mentoring.

Key district personnel received additional professional development through the Lindamood-Bell® Consultant Certification program. These candidates participated in additional workshops and received coaching with the goal of attaining Lindamood-Bell® Consultant Certification. In this capacity, these district staff will be expected to monitor and sustain program quality and fidelity in the future.

While Lindamood-Bell exerts reasonable effort to obtain accurate data, the pre and post-test results are based on data entered by district staff into Lindamood-Bell's proprietary database, *INFORMS for Schools*. Useable data must include pre and post-instruction test results and attendance in addition to accurate identifiers. Therefore, student information included in this report may not reflect total number of students in instruction. Lindamood-Bell is not responsible for the input or accuracy of the district-provided data.

## Key Indicators

Lindamood-Bell’s research has identified the essential components of an effective implementation model. These key indicators significantly affect student achievement, program fidelity, sustainability, and cost-effectiveness. The following information was obtained just prior to publication and may have changed.

Key Indicators	Summary
Professional Development	<ul style="list-style-type: none"> <li>Over 225 district staff have attended the Lindamood-Bell® workshops provided since 2006.</li> <li>4 Lindamood-Bell® staff provided program support and coaching at the schools.</li> </ul>
Intensive Intervention Schedule	<ul style="list-style-type: none"> <li>Elementary Schools—25 instructors provided instruction for 170 students.</li> <li>Junior High Schools—5 instructors provided instruction for 22 students.</li> <li>High School—5 instructors provided instruction for 36 students.</li> <li>Total Students served: 228.</li> </ul>
Classroom Implementation	<ul style="list-style-type: none"> <li>50 teachers reported using Lindamood-Bell® programs a minimum of 4-5 times per week. This resulted in approximately 890 students receiving instruction in the classroom.</li> </ul>
Certification	<ul style="list-style-type: none"> <li>4 instructors were certified by Lindamood-Bell.</li> <li>12 instructors are candidates for certification during the 2008-09 school year.</li> </ul>

Test Results	Summary
Students Receiving Remedial Instruction	<ul style="list-style-type: none"> <li>In aggregate, students receiving decoding instruction made statistically significant gain on every measure of language processing ability.</li> <li>In aggregate, students receiving comprehension instruction made statistically significant gain on every measure of comprehension ability.</li> <li>Afflerbach Elementary decoding students’ posttest average was higher than the 25<sup>th</sup> percentile in 10 of 11 measures.</li> <li>Baggs Elementary decoding students improved their fluency average from the 6<sup>th</sup> to the 21<sup>st</sup> percentile.</li> <li>Bains Elementary decoding students increased their aggregate average word recognition from 21<sup>st</sup> to the 37<sup>th</sup> percentile.</li> <li>East High decoding students averaged over 108 hours of instruction.</li> </ul>

- Goins Elementary decoding students increased fluency from the 9<sup>th</sup> to the 23<sup>rd</sup> percentile.
- Johnson Junior High School students received on average 141 hours of instruction.
- Rossman Elementary decoding students increased reading comprehension average 13 percentile points.
- 9 English Language Learners and 101 students receiving Special Education services were included in intensive intervention.

**Post Instruction Results**  
*Laramie County School District #1*  
*End-of-Year, 2007 – 08*

The following are the results pre- and post-Lindamood-Bell® instruction for the district as a whole.

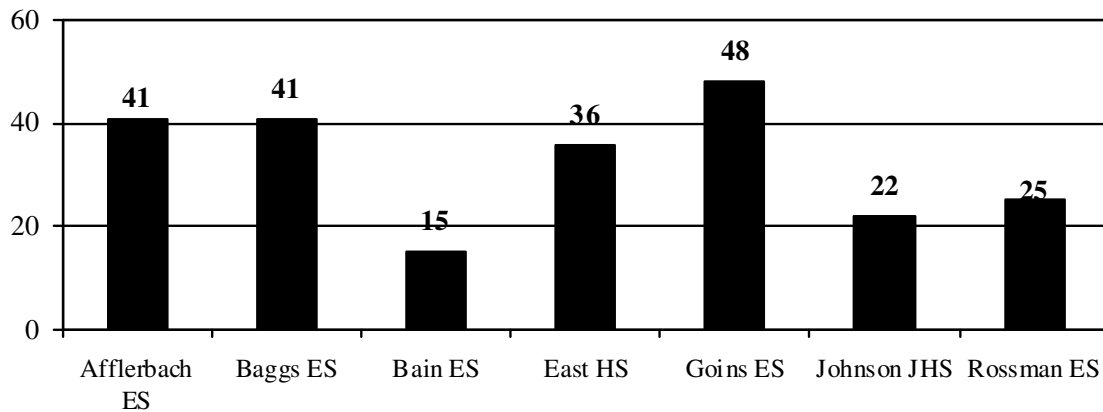
**District Students in Intensive Intervention**

Number of Students	228
Females	42% <sup>1</sup>
Males	57%

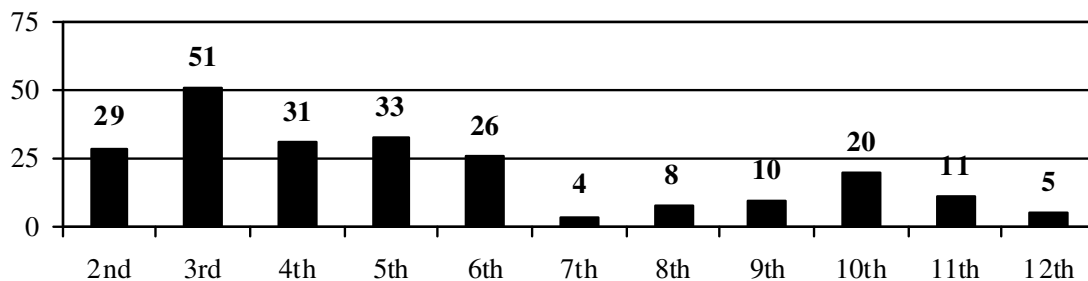
<sup>1</sup>Gender data unavailable for 2 students

Average Age & Range	11.7	7.4 to 19.7
Average Grade Level & Range	6	2 to 12
Average Hours of Instruction & Range	95	20 to 211

**Number of Students by School**



**Number of Students by Grade Level**



Post Instruction Results  
 Laramie County School District #1  
 End-of-Year, 2007 – 08

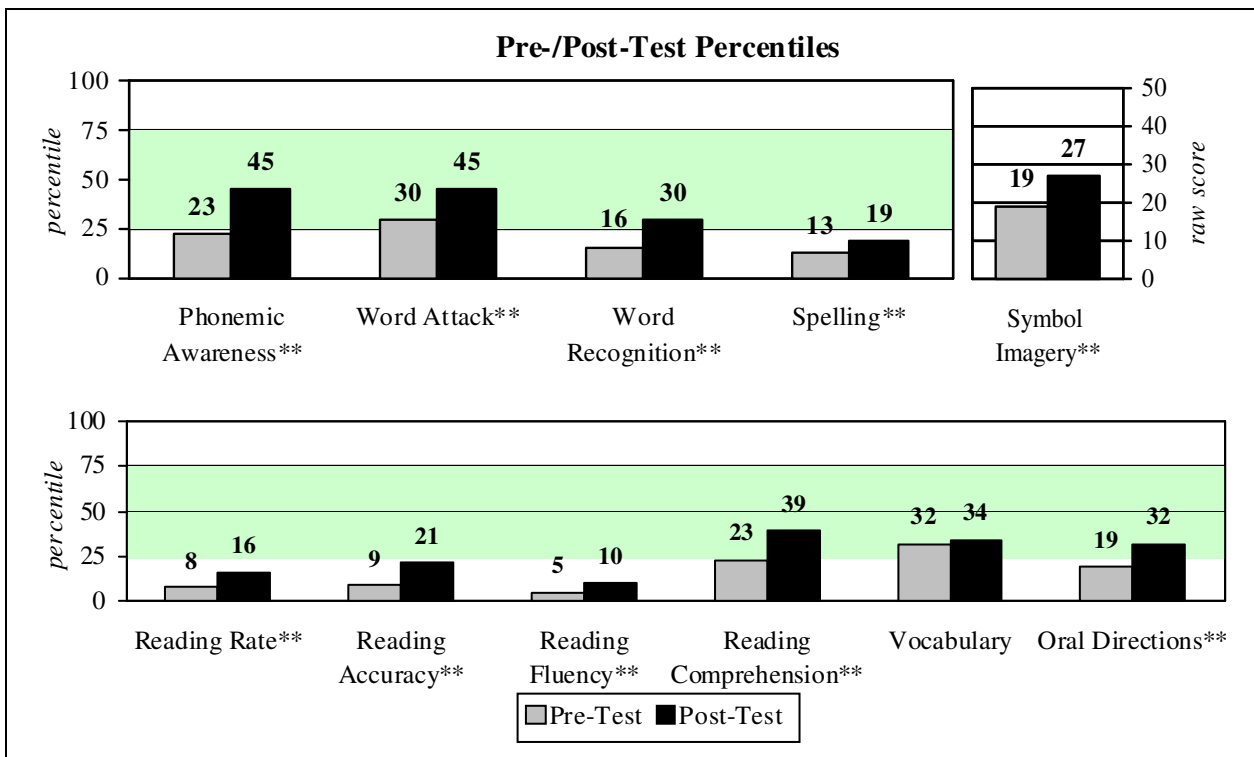
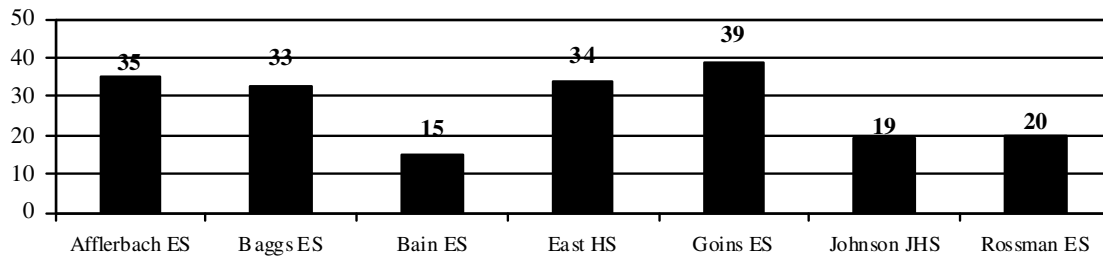
**District Students in Intensive Intervention—Decoding Focus**

Number of Students	195
Females	41% <sup>1</sup>
Males	58%

<sup>1</sup>Gender data unavailable for 2 students

Average Age & Range	11.7	7.4 to 19.7
Average Grade Level & Range	6	2 to 12
Average Hours of Instruction & Range	98	20 to 211

**Number of Students by School**



\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

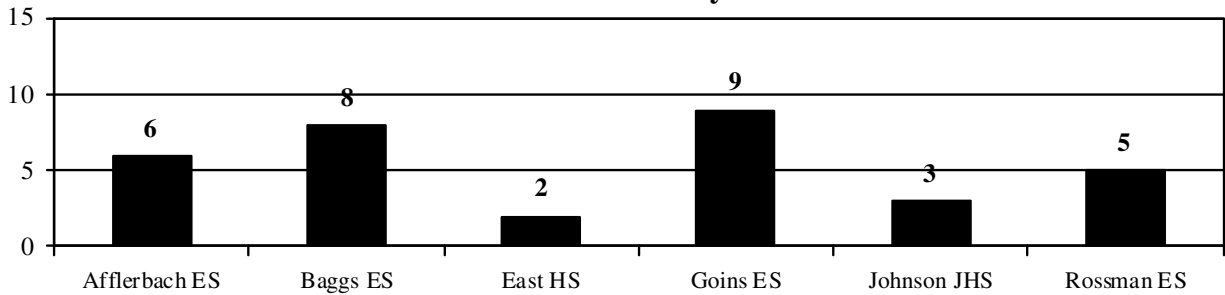
Post Instruction Results  
 Laramie County School District #1  
 End-of-Year, 2007 – 08

**District Students in Intensive Intervention— Comprehension Focus**

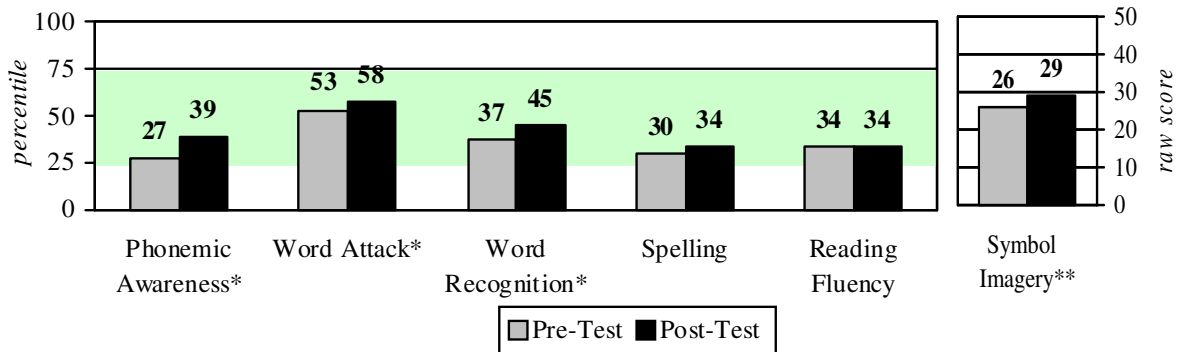
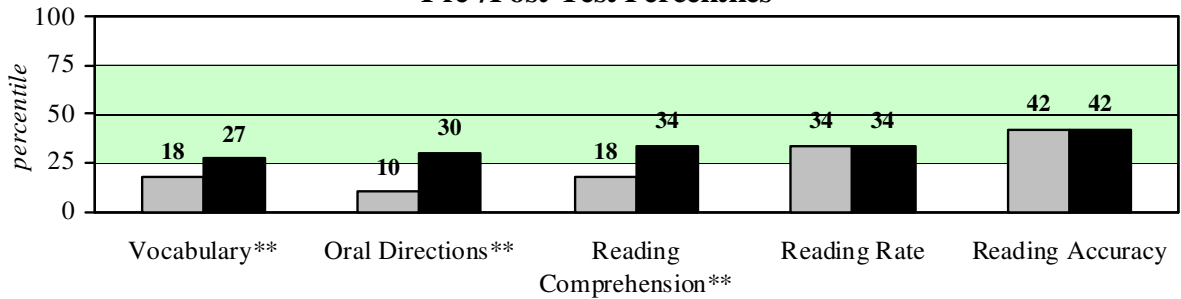
Number of Students	33
Females	45%
Males	55%

Average Age & Range	11.6	9.2 to 17.9
Average Grade Level & Range	6	3 to 12
Average Hours of Instruction & Range	79	29 to 137

**Number of Students by School**



**Pre-/Post-Test Percentiles**



\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

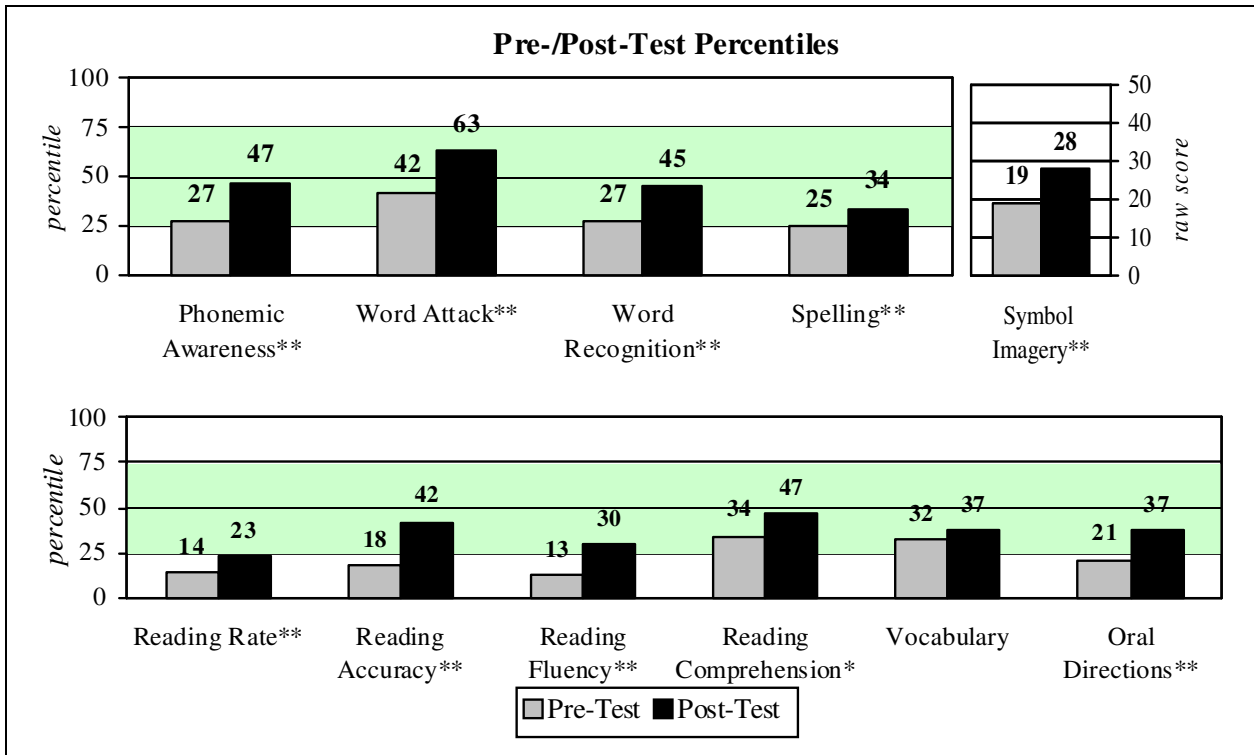
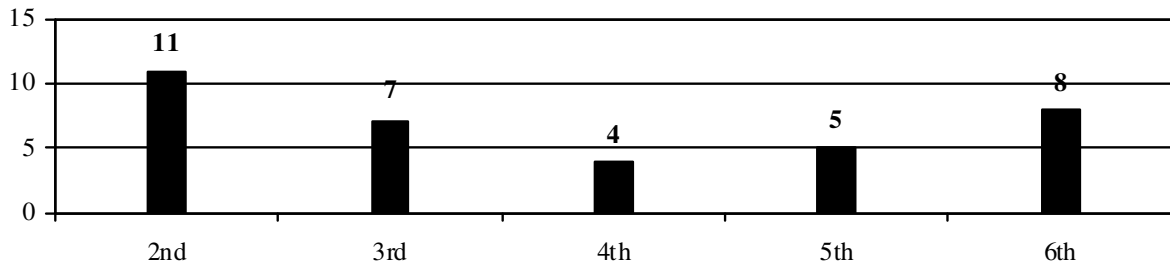
Post Instruction Results  
 Afflerbach Elementary School  
 End-of-Year, 2007 – 08

**Students in Intensive Intervention— Decoding Focus**

Number of Students	35
Females	57%
Males	43%

Average Age & Range	10.0	7.4 to 13.2
Average Grade Level & Range	4	2 to 6
Average Hours of Instruction & Range	87	33 to 127

**Number of Students by Grade Level**

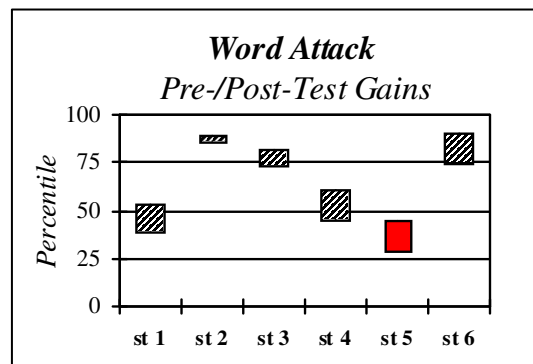
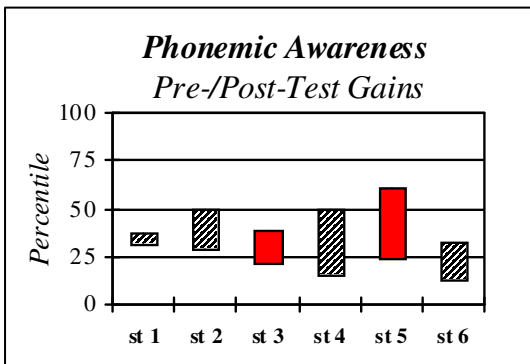
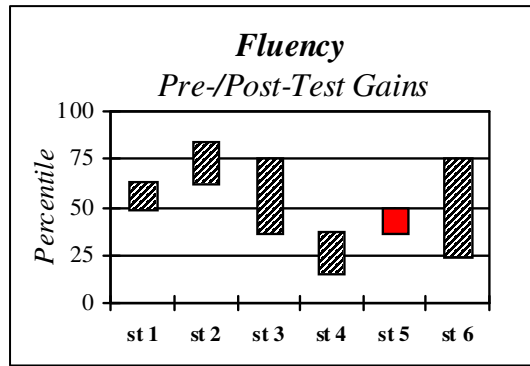
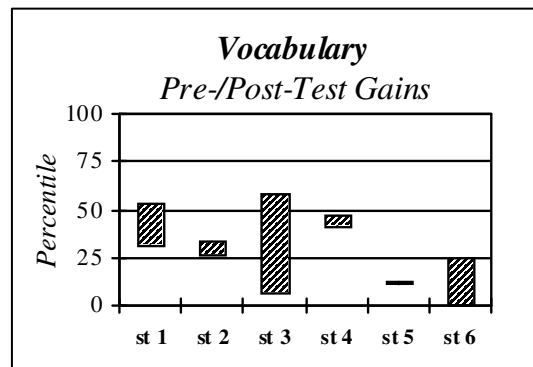
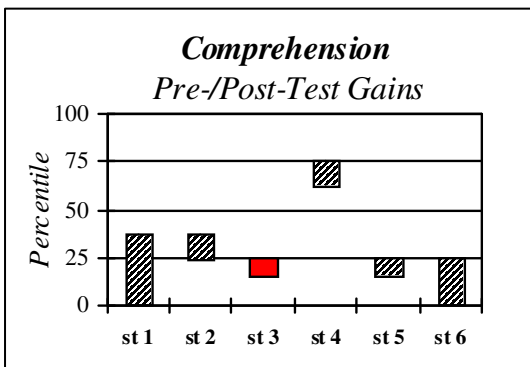


\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

Post Instruction Results  
 Afflerbach Elementary School  
 End-of-Year, 2007 – 08

**Students in Intensive Intervention— Comprehension Focus  
 Individual Demographics and Results**

Number of Students	6
Females	2
Males	4
Age Range	9.2 to 11.3
Grade Level Range	3 to 5
Range of Hours of Instruction	40 to 115



▨ Gain    ■ Loss

Post Instruction Results  
*Afflerbach Elementary School*  
*End-of-Year, 2007 – 08*

**Students in Intensive Intervention— Comprehension Focus**  
**Individual Demographics and Results**

Student ID	493040	492775	452576	452547	452542	453460
Age	11.25	11.33	9.75	9.75	10.75	9.17
Hours of SI	0	0	0	0	0	0
Hours of VV	96	74	108	108	115	105
Vocabulary Pre	32	27	8	42	12	2
Vocabulary Post	53	34	58	47	13	25
Oral Directions Pre	25	9	37	9	1	9
Oral Directions Post	63	9	9	16	25	37
Comprehension Pre	1	25	25	63	16	2
Comprehension Post	37	37	16	75	25	25
Rate Pre	37	50	25	9	25	16
Rate Post	50	75	50	37	16	63
Accuracy Pre	50	75	50	37	75	37
Accuracy Post	75	91	84	37	50	75
Phonemic Awareness Pre	32	30	39	16	61	14
Phonemic Awareness Post	37	50	23	50	25	32
Word Attack Pre	40	86	74	46	45	75
Word Attack Post	53	89	82	61	30	90
Word Recognition Pre	32	84	55	53	58	47
Word Recognition Post	39	68	58	58	21	61
Spelling Pre	21	61	42	32	14	34
Spelling Post	61	81	55	30	10	30
Symbol Imagery Pre	20	24	25	19	22	13
Symbol Imagery Post	28	27	29	29	20	24
Fluency Pre	50	63	37	16	50	25
Fluency Post	63	84	75	37	37	75

Post Instruction Results  
 Baggs Elementary School  
 End-of-Year, 2007 – 08

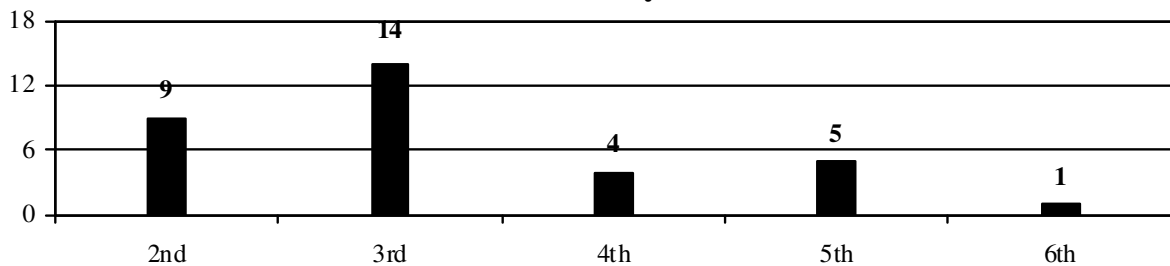
**Students in Intensive Intervention— Decoding Focus**

Number of Students	33
Females	42% <sup>1</sup>
Males	55%

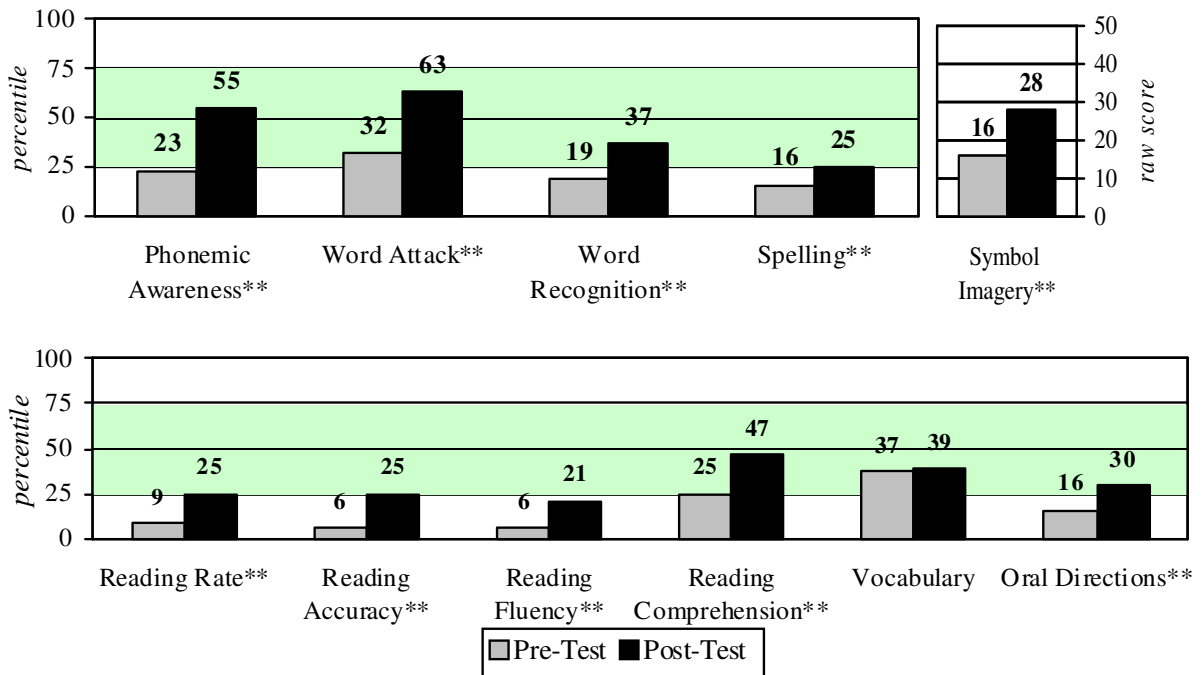
<sup>1</sup>Gender data unavailable for one student

Average Age & Range	9.6	7.8 to 13.6
Average Grade Level & Range	4	2 to 6
Average Hours of Instruction & Range	94	46 to 177

**Number of Students by Grade Level**



**Pre-/Post-Test Percentiles**



\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

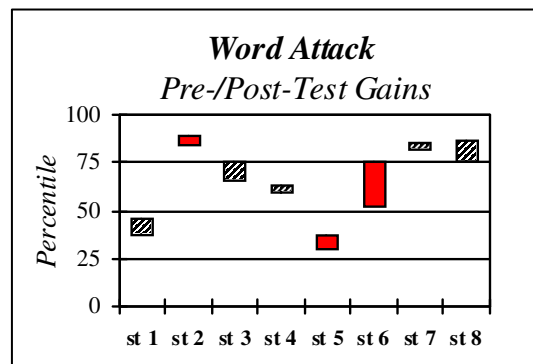
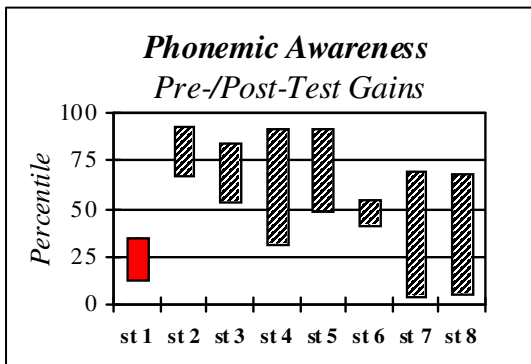
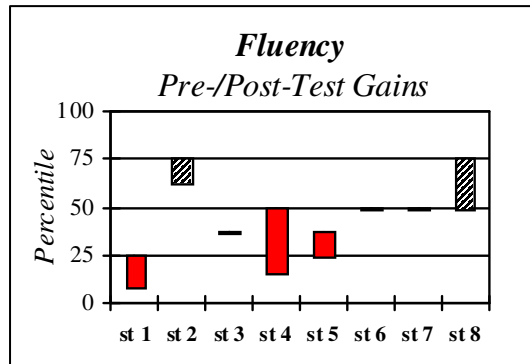
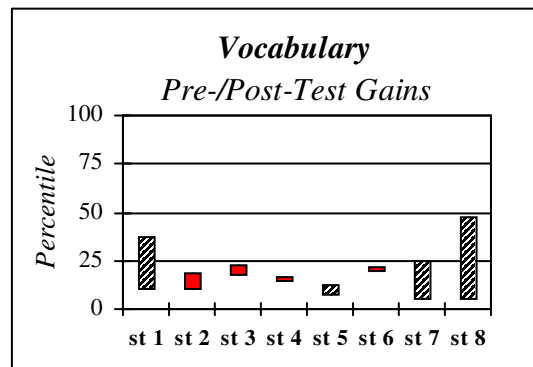
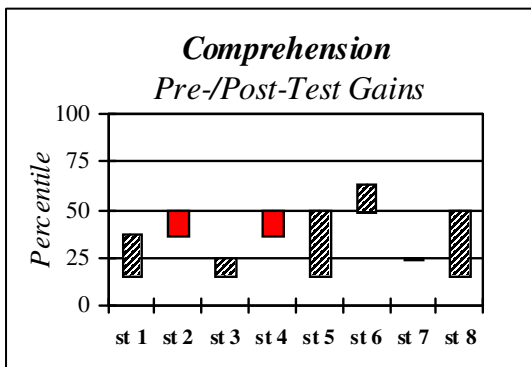
# Post Instruction Results

Baggs Elementary School

End-of-Year, 2007 – 08

## Students in Intensive Intervention— Comprehension Focus Individual Demographics and Results

Number of Students	8
Females	4
Males	4
Age Range	10.2 to 13.4
Grade Level Range	4 to 6
Range of Hours of Instruction	62 to 104



▨ Gain    ■ Loss

Post Instruction Results  
*Baggs Elementary School*  
*End-of-Year, 2007 – 08*

**Students in Intensive Intervention— Comprehension Focus**  
**Individual Demographics and Results**

Student ID	453089	453130	453122	452658	453314	453120	452771	491529
Age	13.42	12.42	12.25	12.08	12	11.25	11.5	10.17
Hours of SI	0	0	0	0	0	0	0	0
Hours of VV	94	104	93	99	103	62	89	89
Vocabulary Pre	10	19	23	16	7	21	5	5
Vocabulary Post	37	10	18	14	12	21	25	47
Oral Directions Pre	N/A	16	9	25	37	50	2	16
Oral Directions Post	84	16	37	63	37	37	25	50
Comprehension Pre	16	50	16	50	16	50	25	16
Comprehension Post	37	37	25	37	50	63	25	50
Rate Pre	25	50	37	37	37	50	50	63
Rate Post	16	63	37	9	25	37	50	75
Accuracy Pre	25	63	50	50	50	50	50	50
Accuracy Post	16	84	50	37	37	63	50	63
Phonemic Awareness Pre	35	68	55	32	50	42	5	7
Phonemic Awareness Post	14	93	84	92	92	55	70	68
Word Attack Pre	38	89	67	60	37	75	83	76
Word Attack Post	46	85	76	63	31	53	85	87
Word Recognition Pre	19	77	63	30	14	27	27	50
Word Recognition Post	23	79	93	55	34	37	88	42
Spelling Pre	25	83	70	16	39	53	32	47
Spelling Post	21	75	87	9	37	39	77	79
Symbol Imagery Pre	35	33	34	31	31	32	26	24
Symbol Imagery Post	33	34	41	36	37	28	37	32
Fluency Pre	25	63	37	50	37	50	50	50
Fluency Post	9	75	37	16	25	50	50	75

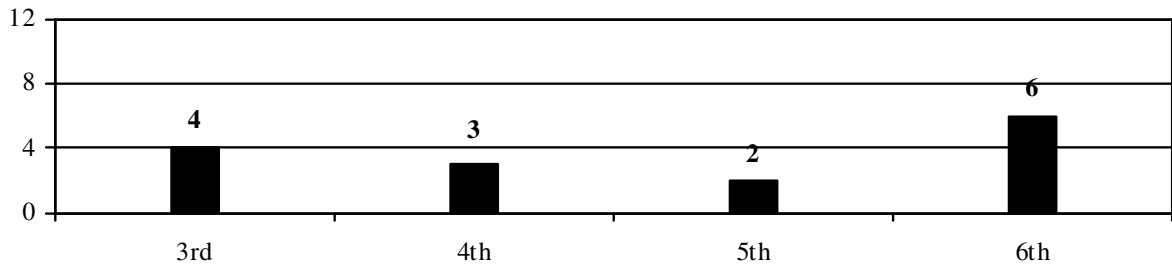
Post Instruction Results  
 Bain Elementary School  
 End-of-Year, 2007 – 08

**Students in Intensive Intervention— Decoding Focus**

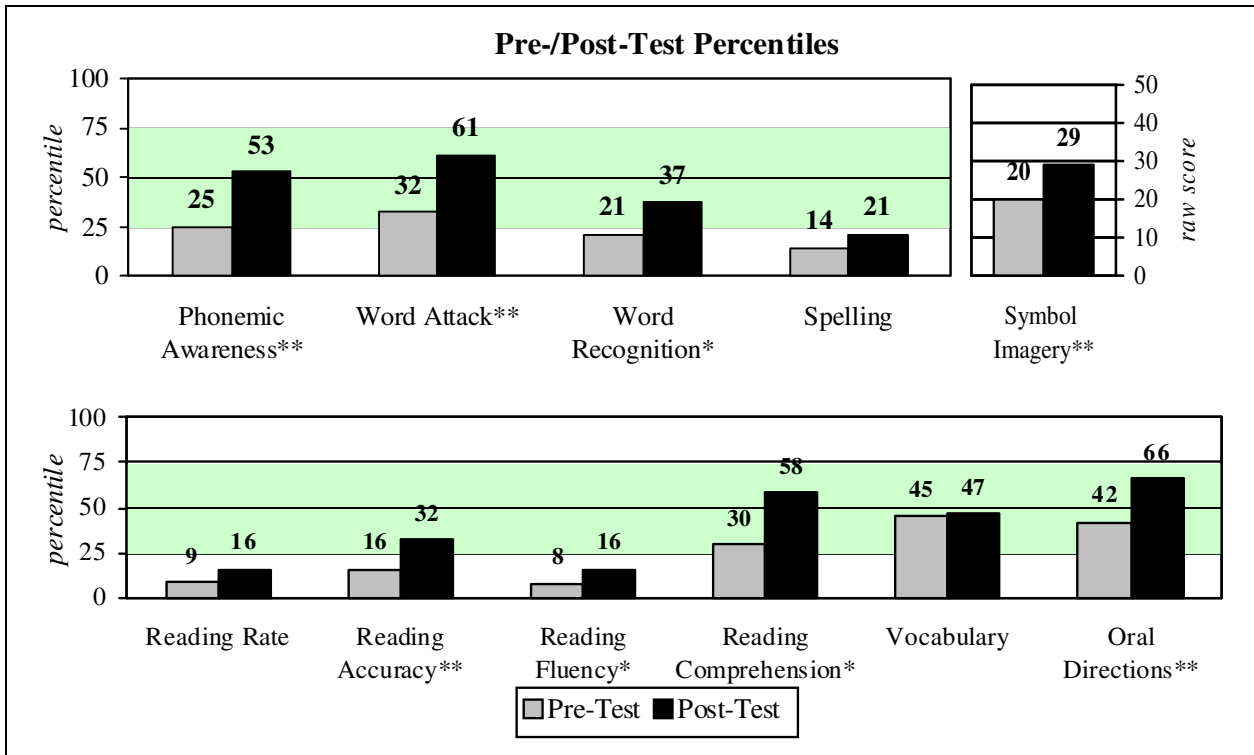
Number of Students	15
Females	53%
Males	47%

Average Age & Range	10.9	8.8 to 13.1
Average Grade Level & Range	5	3 to 6
Average Hours of Instruction & Range	82	36 to 143

**Number of Students by Grade Level**



**Pre-/Post-Test Percentiles**



\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

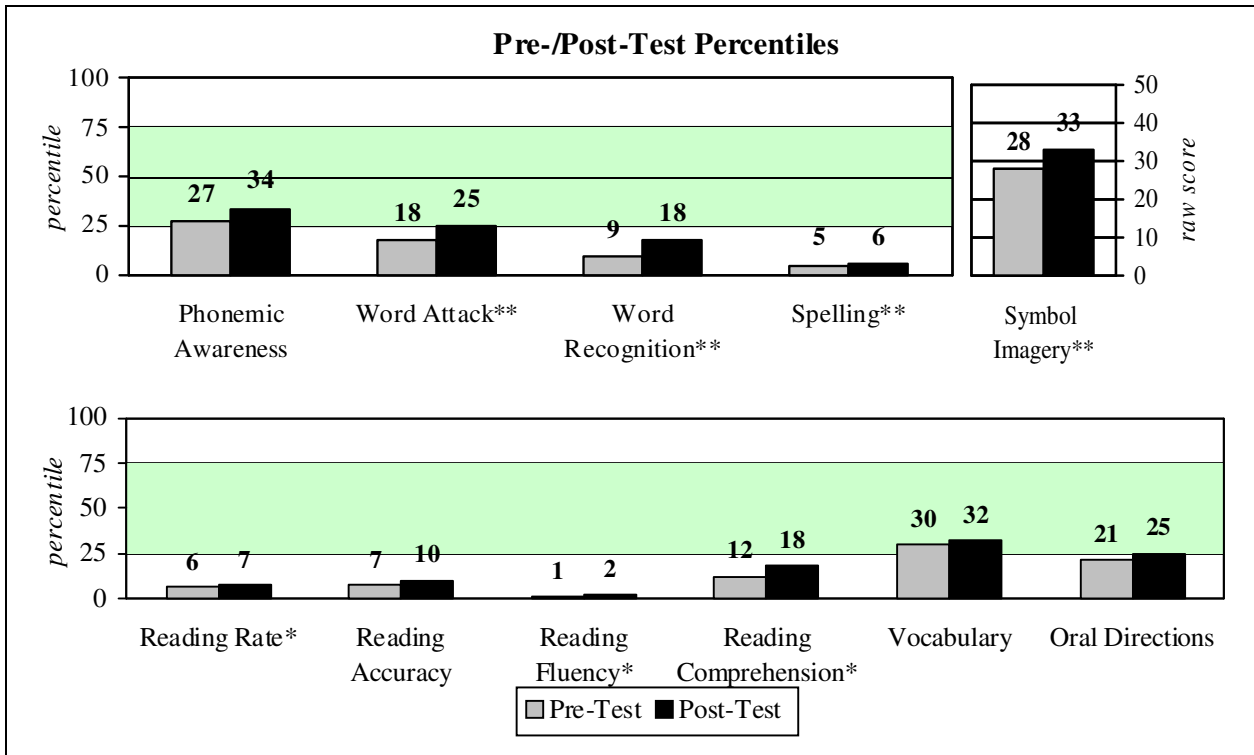
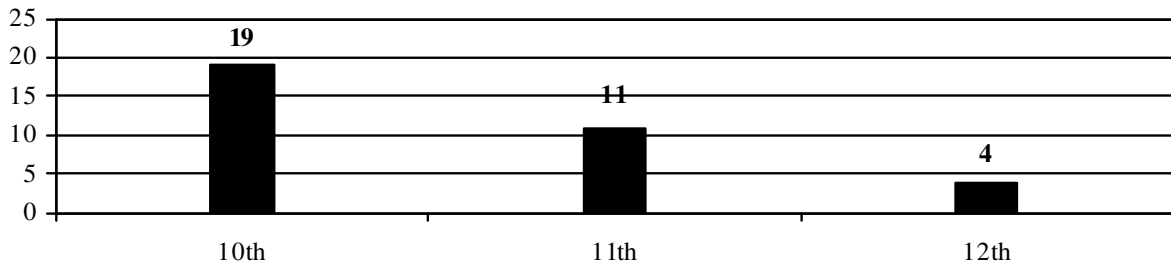
Post Instruction Results  
*East High School*  
*End-of-Year, 2007 – 08*

**Students in Intensive Intervention— Decoding Focus**

Number of Students	34
Females	26%
Males	74%

Average Age & Range	17.1	15.8 to 19.7
Average Grade Level & Range	11	10 to 12
Average Hours of Instruction & Range	108	20 to 211

**Number of Students by Grade Level**



\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

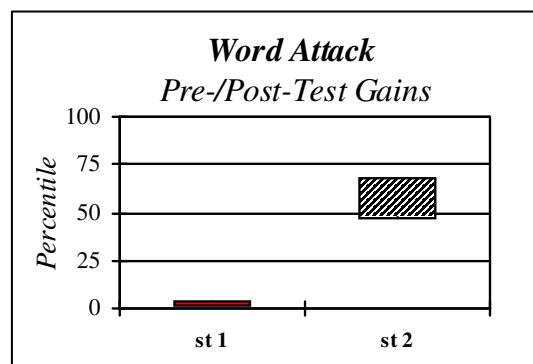
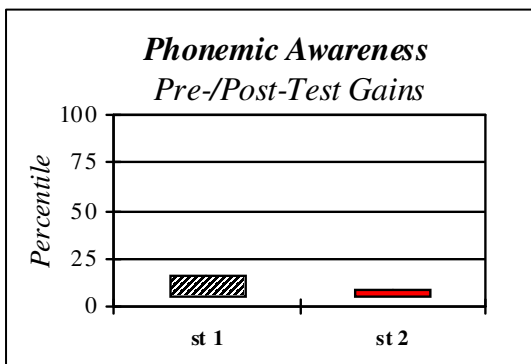
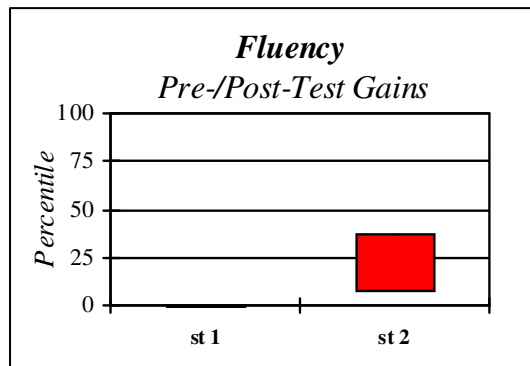
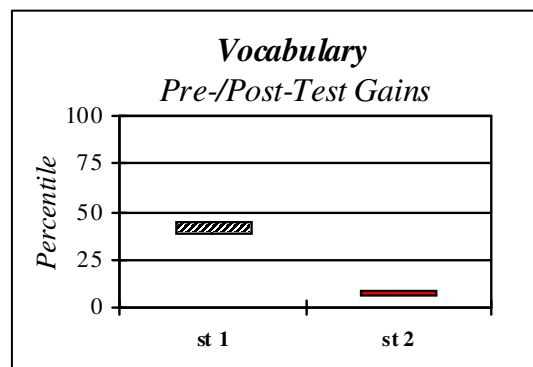
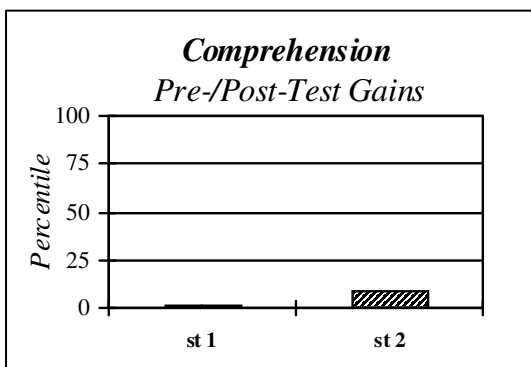
# Post Instruction Results

East High School

End-of-Year, 2007 – 08

## Students in Intensive Intervention— Comprehension Focus Individual Demographics and Results

Number of Students	2
Females	1
Males	1
Age Range	17.6 to 17.9
Grade Level Range	10 to 12
Range of Hours of Instruction	120 to 136



▨ Gain    ■ Loss

# Post Instruction Results

*East High School*

*End-of-Year, 2007 – 08*

## **Students in Intensive Intervention— Comprehension Focus Individual Demographics and Results**

Student ID	453213	453238
Age	17.91	17.58
Hours of SI	0	0
Hours of VV	136	120
Vocabulary Pre	39	9
Vocabulary Post	45	8
Oral Directions Pre	9	0.5
Oral Directions Post	25	0.5
Comprehension Pre	2	2
Comprehension Post	2	9
Rate Pre	0.5	25
Rate Post	0.5	16
Accuracy Pre	0.5	50
Accuracy Post	0.5	25
Phonemic Awareness Pre	7	9
Phonemic Awareness Post	16	6
Word Attack Pre	4	48
Word Attack Post	3	68
Word Recognition Pre	0.07	37
Word Recognition Post	0.7	63
Spelling Pre	2	2
Spelling Post	0.9	42
Symbol Imagery Pre	19	38
Symbol Imagery Post	27	37
Fluency Pre	0.5	37
Fluency Post	0.5	9

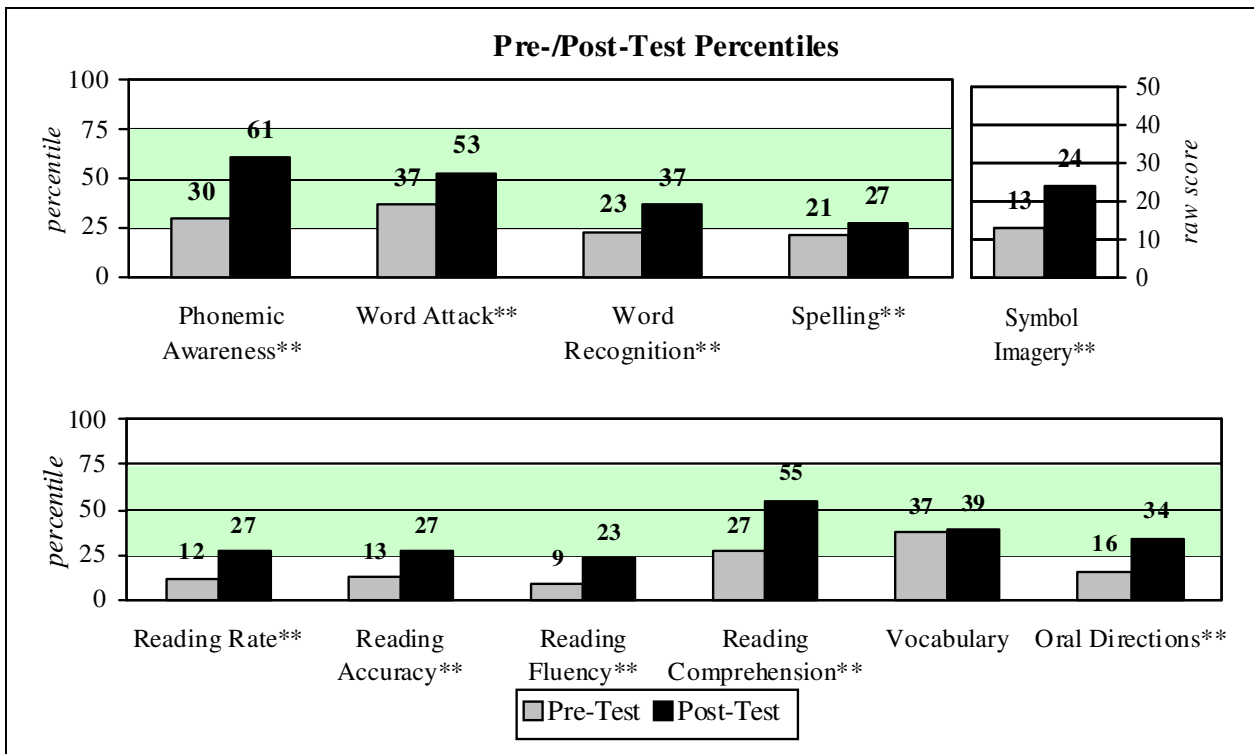
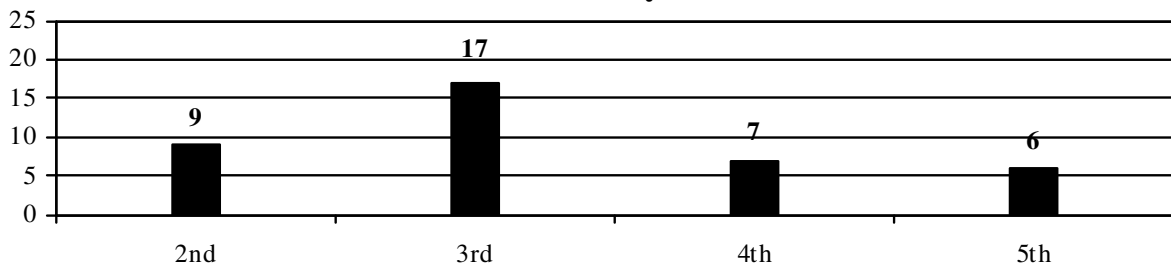
Post Instruction Results  
 Goins Elementary School  
 End-of-Year, 2007 – 08

**Students in Intensive Intervention— Decoding Focus**

Number of Students	39
Females	44%
Males	56%

Average Age & Range	9.4	7.8 to 11.2
Average Grade Level & Range	4	2 to 5
Average Hours of Instruction & Range	95	28 to 162

**Number of Students by Grade Level**



\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

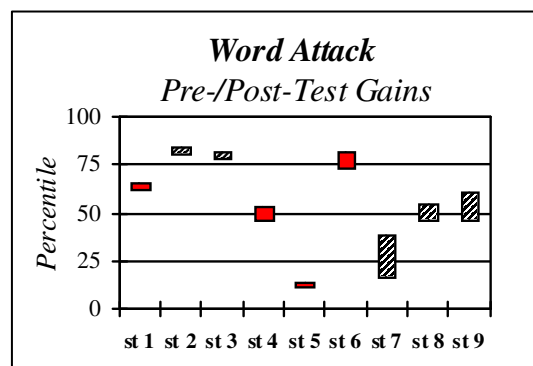
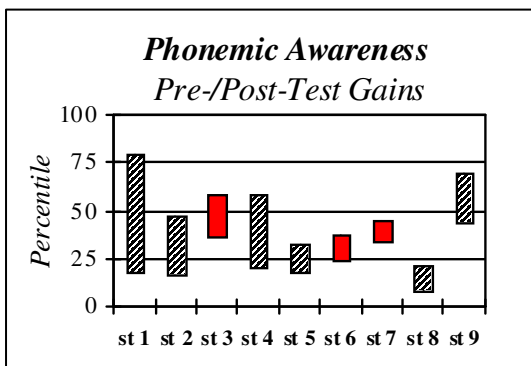
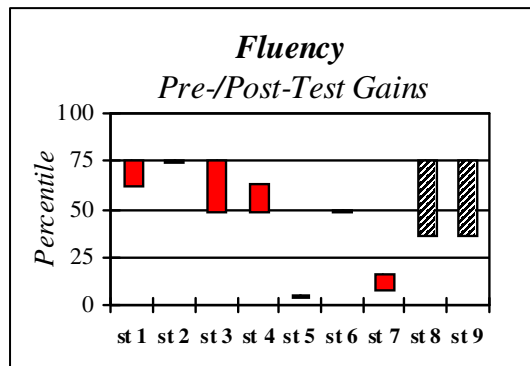
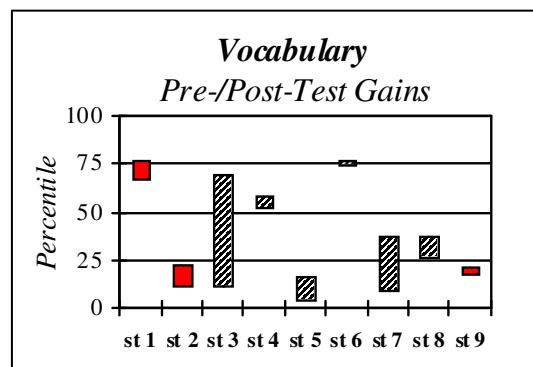
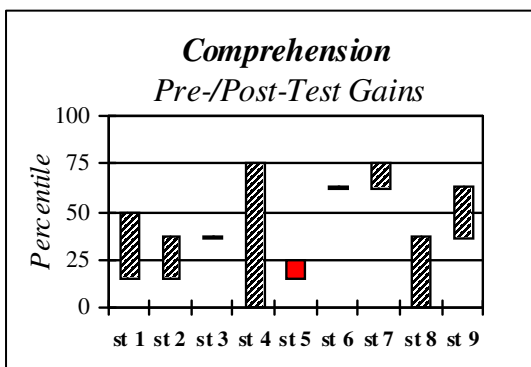
# Post Instruction Results

Goins Elementary School

End-of-Year, 2007 – 08

## Students in Intensive Intervention— Comprehension Focus Individual Demographics and Results

Number of Students	9
Females	5
Males	4
Age Range	9.3 to 11.0
Grade Level Range	4 to 5
Range of Hours of Instruction	29 to 71



Gain Loss

Post Instruction Results  
*Goins Elementary School*  
*End-of-Year, 2007 – 08*

**Students in Intensive Intervention— Comprehension Focus**  
**Individual Demographics and Results**

Student ID	457708	457478	457537	457529	457533	457709	457532	457707	491806
Age	10.91	10.75	11	9.25	9.58	9.58	9.25	10	10.42
Hours of SI	0	0	0	0	0	0	0	0	0
Hours of VV	67	34	71	32	34	33	33	29	34
Vocabulary Pre	77	23	12	53	5	75	10	27	21
Vocabulary Post	68	13	70	58	16	77	37	37	19
Oral Directions Pre	25	0.5	16	25	25	9	16	2	25
Oral Directions Post	75	5	16	63	75	25	50	37	75
Comprehension Pre	16	16	37	1	25	63	63	2	37
Comprehension Post	50	37	37	75	16	63	75	37	63
Rate Pre	75	75	63	63	16	75	25	37	37
Rate Post	63	63	37	50	16	63	25	63	75
Accuracy Pre	75	75	63	63	5	37	16	50	37
Accuracy Post	50	84	50	63	5	37	9	75	63
Phonemic Awareness Pre	19	18	58	21	19	37	45	9	45
Phonemic Awareness Post	79	47	37	58	32	25	35	21	70
Word Attack Pre	66	81	79	53	14	82	18	47	47
Word Attack Post	63	84	81	47	13	74	38	55	61
Word Recognition Pre	58	75	47	61	19	66	39	58	81
Word Recognition Post	47	87	75	45	10	70	30	63	86
Spelling Pre	39	68	53	50	19	25	21	19	53
Spelling Post	23	83	53	32	19	14	25	16	79
Symbol Imagery Pre	29	36	33	22	18	21	19	19	27
Symbol Imagery Post	34	33	31	23	18	20	19	20	31
Fluency Pre	75	75	75	63	5	50	16	37	37
Fluency Post	63	75	50	50	5	50	9	75	75

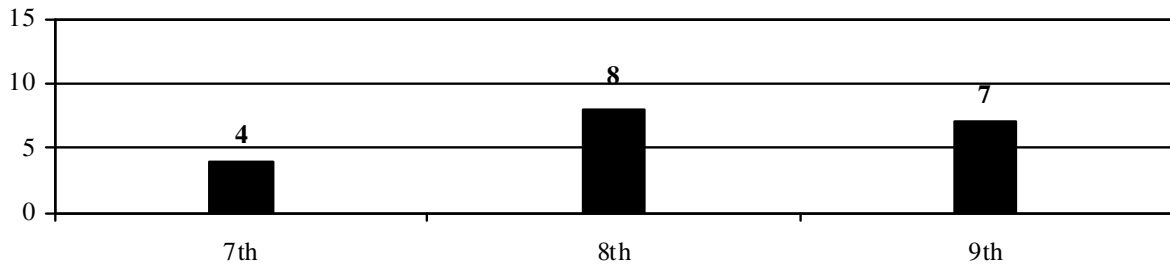
Post Instruction Results  
*Johnson Junior High School*  
*End-of-Year, 2007 – 08*

**Students in Intensive Intervention— Decoding Focus**

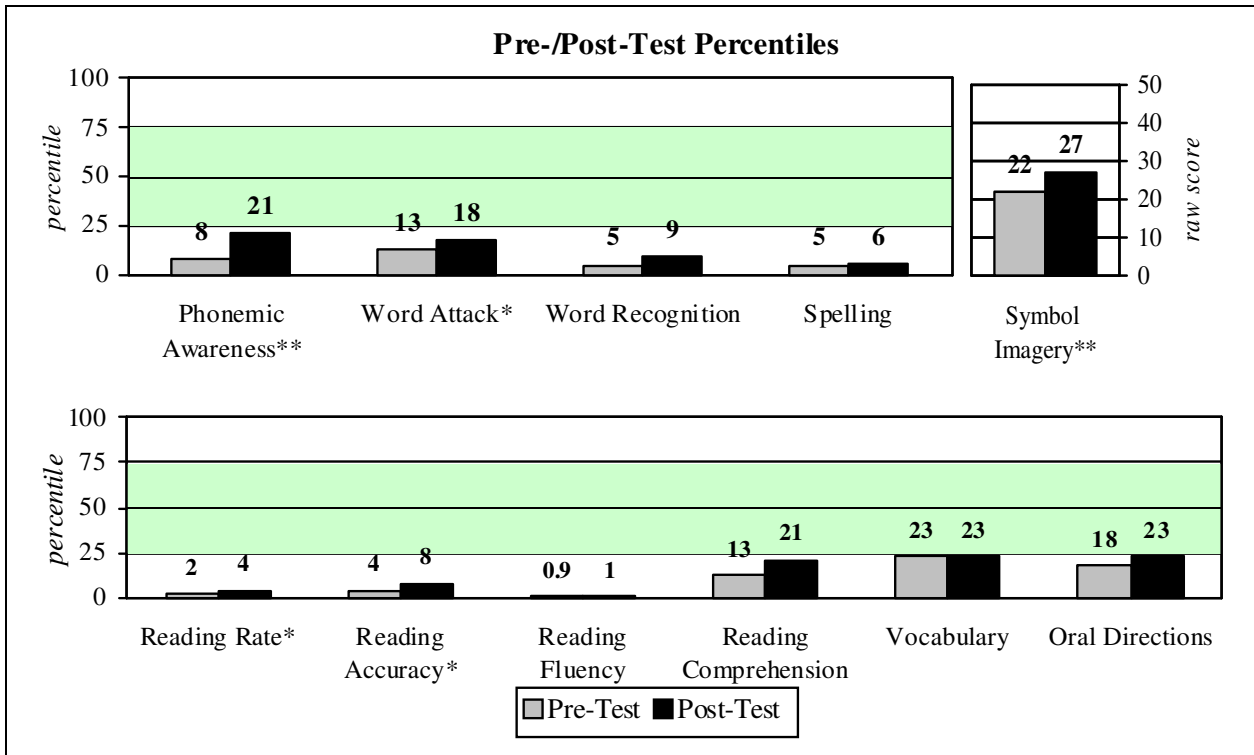
Number of Students	19
Females	26%
Males	74%

Average Age & Range	14.8	13.1 to 16.2
Average Grade Level & Range	9	7 to 9
Average Hours of Instruction & Range	141	88 to 161

**Number of Students by Grade Level**



**Pre-/Post-Test Percentiles**

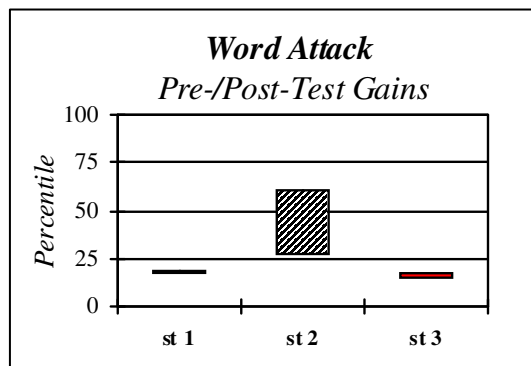
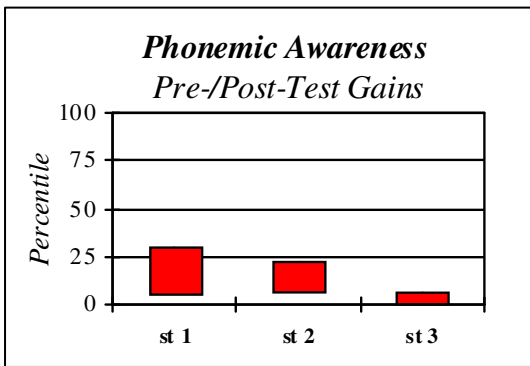
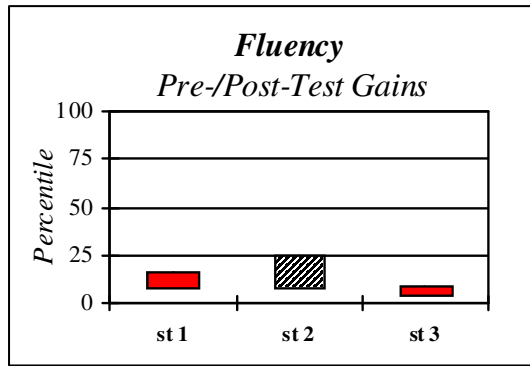
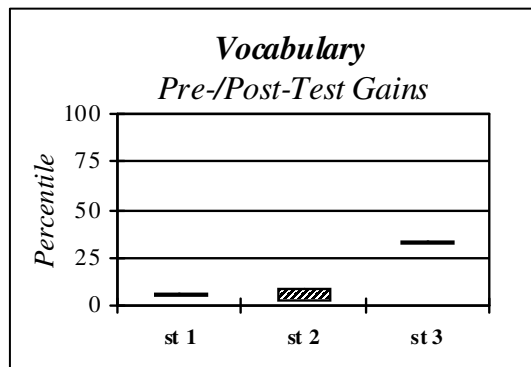
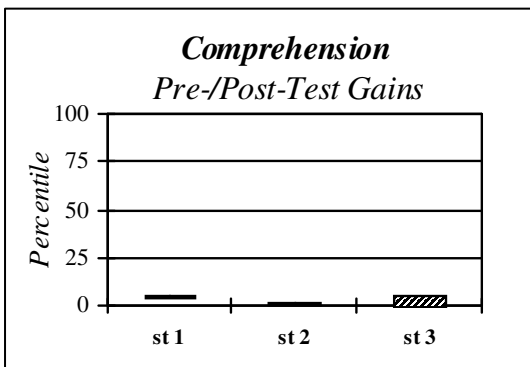


\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

Post Instruction Results  
 Johnson Junior High School  
 End-of-Year, 2007 – 08

**Students in Intensive Intervention— Comprehension Focus  
 Individual Demographics and Results**

Number of Students	3
Females	1
Males	2
Age Range	14.0 to 15.2
Grade Level	9 (all)
Range of Hours of Instruction	118 to 137



▨ Gain    ■ Loss

Post Instruction Results  
*Johnson Junior High School*  
*End-of-Year, 2007 – 08*

**Students in Intensive Intervention— Comprehension Focus**  
**Individual Demographics and Results**

Student ID	489989	489984	490011
Age	14	15.08	15.17
Hours of SI	0	0	0
Hours of VV	128	118	137
Vocabulary Pre	7	4	34
Vocabulary Post	7	9	34
Oral Directions Pre	16	5	2
Oral Directions Post	25	9	25
Comprehension Pre	5	2	0.5
Comprehension Post	5	2	5
Rate Pre	25	16	16
Rate Post	16	25	16
Accuracy Pre	25	25	25
Accuracy Post	16	37	16
Phonemic Awareness Pre	30	23	7
Phonemic Awareness Post	6	8	1
Word Attack Pre	19	29	17
Word Attack Post	19	61	17
Word Recognition Pre	12	16	10
Word Recognition Post	8	27	23
Spelling Pre	21	37	5
Spelling Post	18	47	6
Symbol Imagery Pre	30	24	20
Symbol Imagery Post	33	27	24
Fluency Pre	16	9	9
Fluency Post	9	25	5

Post Instruction Results  
 Rossman Elementary School  
 End-of-Year, 2007 – 08

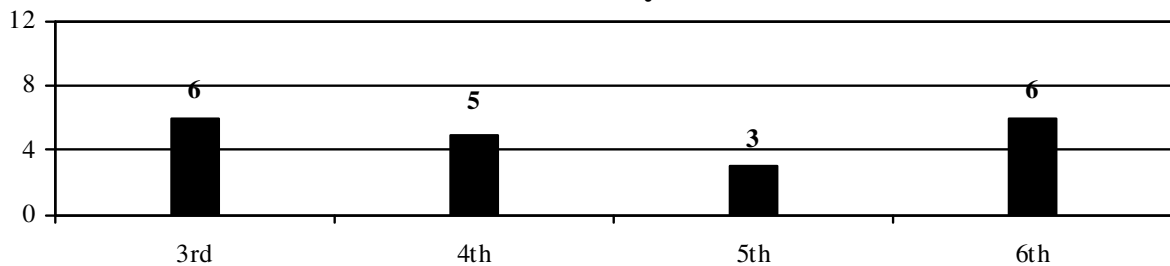
**Students in Intensive Intervention— Decoding Focus**

Number of Students	20
Females	35%
Males	60%

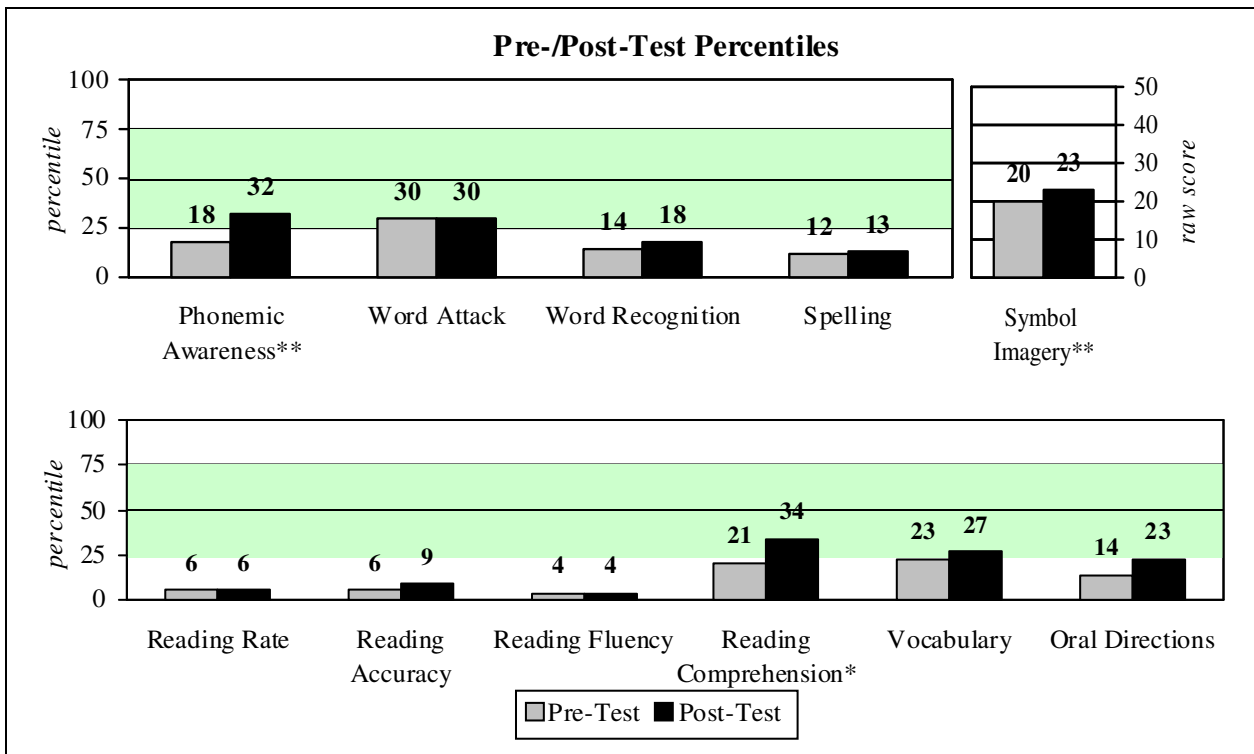
<sup>1</sup>Gender data unavailable for one student

Average Age & Range	10.9	8.8 to 13.9
Average Grade Level & Range	5	3 to 6
Average Hours of Instruction & Range	83	35 to 131

**Number of Students by Grade Level**



**Pre-/Post-Test Percentiles**

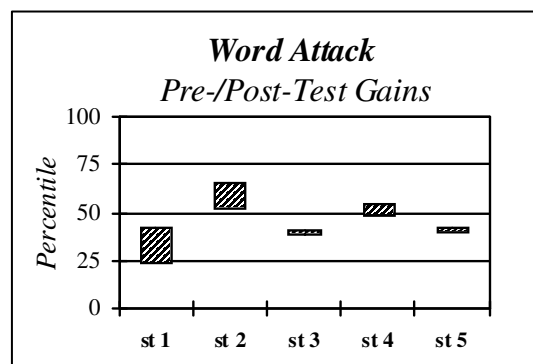
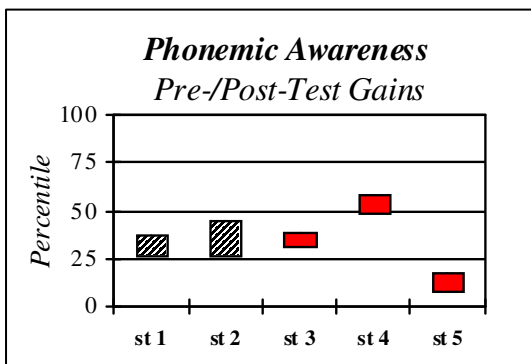
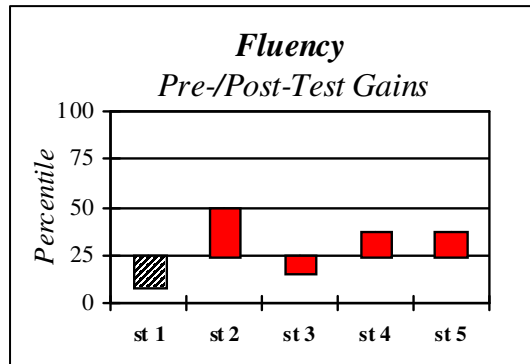
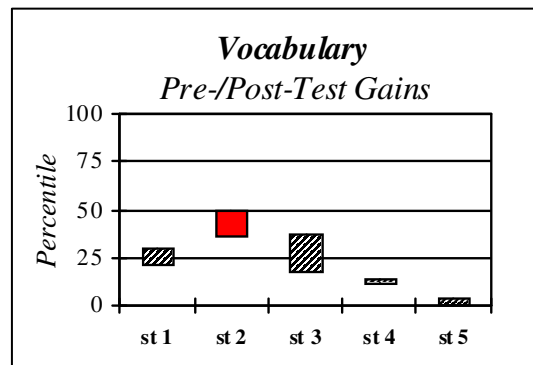
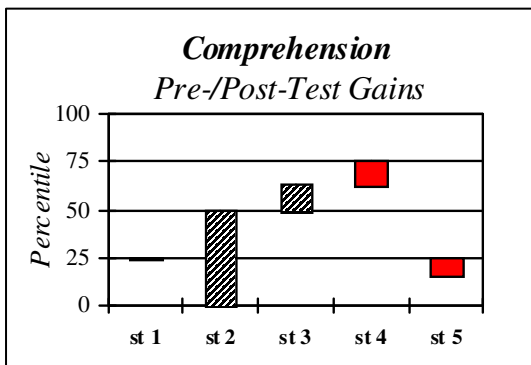


\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

Post Instruction Results  
 Rossman Elementary School  
 End-of-Year, 2007 – 08

**Students in Intensive Intervention— Comprehension Focus  
 Individual Demographics and Results**

Number of Students	5
Females	2
Males	3
Age Range	10.5 to 12.1
Grade Level Range	5 to 6
Range of Hours of Instruction	67 to 116



▨ Gain    ■ Loss

Post Instruction Results  
*Rossman Elementary School*  
*End-of-Year, 2007 – 08*

**Students in Intensive Intervention— Comprehension Focus**  
**Individual Demographics and Results**

Student ID	492503	492599	453067	453064	453028
Age	12	10.58	10.5	10.83	12.08
Hours of SI	0	0	0	37	0
Hours of VV	67	76	70	79	73
Vocabulary Pre	23	50	19	13	1
Vocabulary Post	30	37	37	14	4
Oral Directions Pre	37	9	9	0.5	9
Oral Directions Post	63	25	2	25	25
Comprehension Pre	25	0.5	50	75	25
Comprehension Post	25	50	63	63	16
Rate Pre	25	50	25	16	37
Rate Post	25	16	16	25	25
Accuracy Pre	9	37	37	75	50
Accuracy Post	25	37	25	37	37
Phonemic Awareness Pre	27	27	39	58	18
Phonemic Awareness Post	37	45	32	50	9
Word Attack Pre	25	53	39	50	41
Word Attack Post	42	66	41	55	42
Word Recognition Pre	16	34	23	18	16
Word Recognition Post	14	39	32	32	23
Spelling Pre	9	21	19	32	16
Spelling Post	13	25	39	25	16
Symbol Imagery Pre	26	20	25	31	25
Symbol Imagery Post	27	23	21	38	31
Fluency Pre	9	50	25	37	37
Fluency Post	25	25	16	25	25

## Post Instruction Results (English Language Learners)

*Laramie County School District #1*

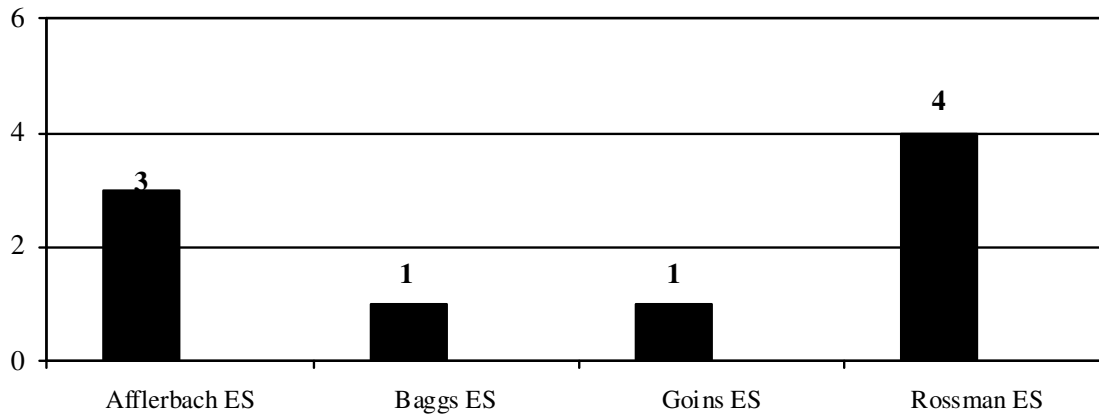
*End-of-Year, 2007 – 08*

The following are the results pre- and post-Lindamood-Bell<sup>®</sup> instruction for the district as a whole.

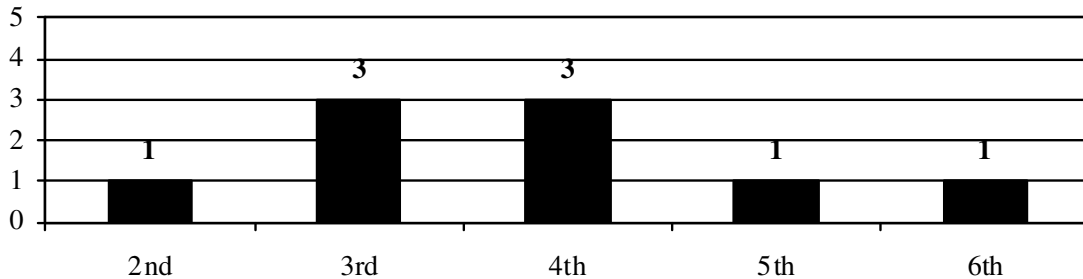
### Students in Intensive Intervention Individual Demographics and Results

Number of Students	9
Females	4
Males	5
Age Range	9.2 to 12.1
Grade Level Range	2 to 6
Range of Hours of Instruction	33 to 129

### Number of Students by School



### Number of Students by Grade Level



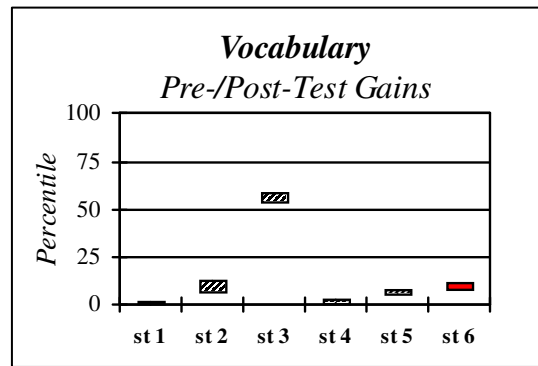
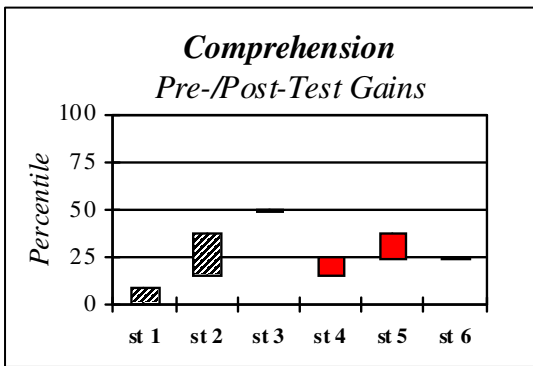
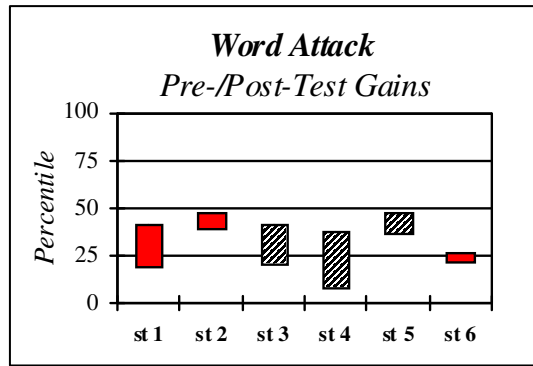
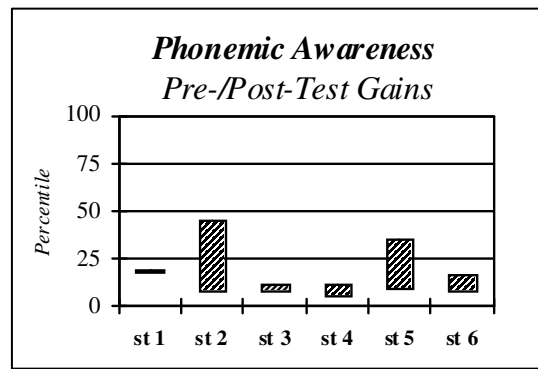
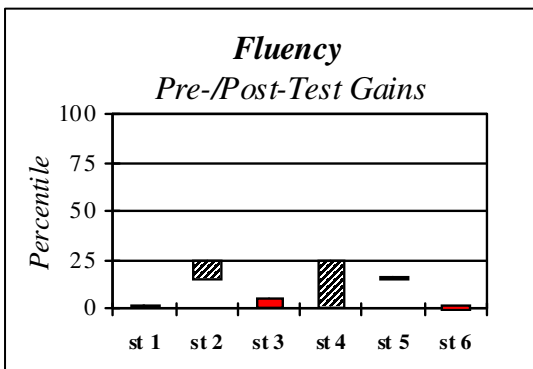
# Post Instruction Results (English Language Learners)

Laramie County School District #1

End-of-Year, 2007 – 08

## Students in Intensive Intervention— Decoding Focus Individual Demographics and Results

Number of Students	6
Females	4
Males	2
Age Range	9.2 to 10.5
Grade Level Range	2 to 4
Range of Hours of Instruction	33 to 129



▨ Gain    ■ Loss

Post Instruction Results (English Language Learners)  
*Laramie County School District #1*  
*End-of-Year, 2007 – 08*

**Students in Intensive Intervention— Decoding Focus**  
**Individual Demographics and Results**

Student ID	453058	453052	492967	491765	500161	453155
Age	9.83	10.5	9.5	9.25	9.25	9.17
Hours of SI	41	116	84	109	33	36
Hours of VV	0	13	0	0	0	0
Phonemic Awareness Pre	19	9	9	7	10	9
Phonemic Awareness Post	19	45	12	12	35	16
Word Attack Pre	41	48	21	9	38	27
Word Attack Post	20	40	41	38	47	23
Word Recognition Pre	18	25	9	13	14	13
Word Recognition Post	14	39	14	32	19	5
Spelling Pre	10	25	16	21	23	12
Spelling Post	14	12	14	23	25	10
Symbol Imagery Pre	19	19	8	13	19	13
Symbol Imagery Post	18	28	22	25	15	11
Rate Pre	5	16	9	5	16	1
Rate Post	5	16	2	25	9	2
Accuracy Pre	2	25	2	2	25	2
Accuracy Post	5	37	5	37	37	0.5
Fluency Pre	2	16	5	2	16	1
Fluency Post	2	25	2	25	16	1
Comprehension Pre	1	16	50	25	37	25
Comprehension Post	9	37	50	16	25	25
Vocabulary Pre	1	8	55	2	7	12
Vocabulary Post	2	13	58	3	8	9
Oral Directions Pre	0.5	2	2	2	9	25
Oral Directions Post	0.5	9	5	1	37	25

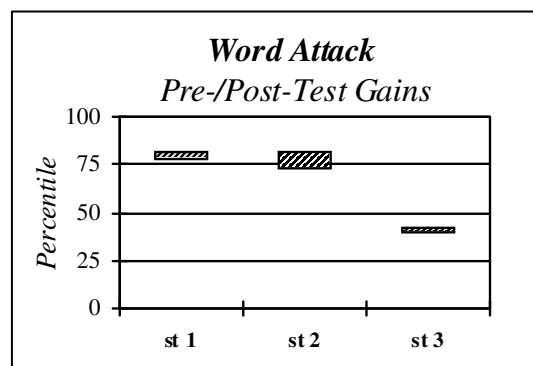
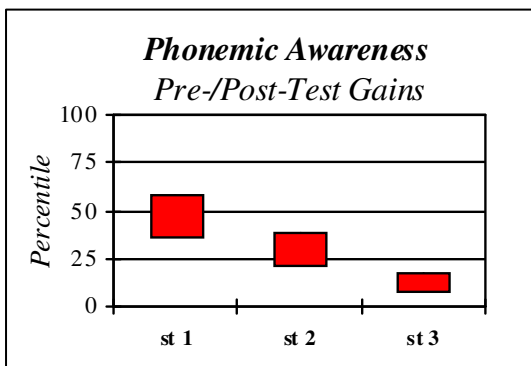
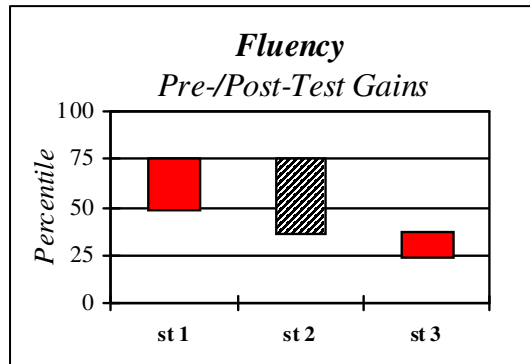
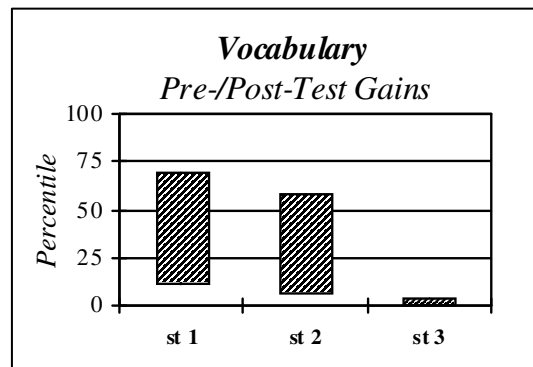
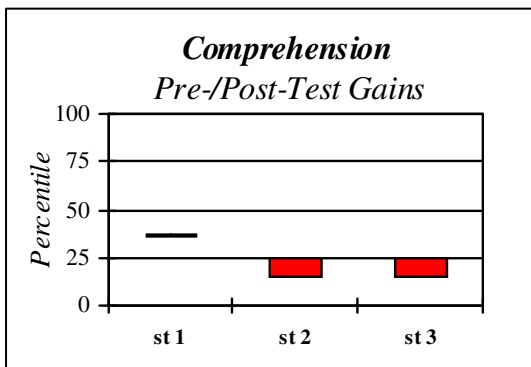
# Post Instruction Results (English Language Learners)

Laramie County School District #1

End-of-Year, 2007 – 08

## Students in Intensive Intervention— Comprehension Focus Individual Demographics and Results

Number of Students	3
Females	0
Males	3
Age Range	9.8 to 12.1
Grade Level Range	4 to 6
Range of Hours of Instruction	71 to 73



▨ Gain    ■ Loss

Post Instruction Results (English Language Learners)  
*Laramie County School District #1*  
*End-of-Year, 2007 – 08*

**Students in Intensive Intervention— Comprehension Focus**  
**Individual Demographics and Results**

Student ID	457537	452576	453028
Age	11	9.75	12.08
Hours of SI	0	0	0
Hours of VV	71	108	73
Vocabulary Pre	12	8	1
Vocabulary Post	70	58	4
Oral Directions Pre	16	37	9
Oral Directions Post	16	9	25
Comprehension Pre	37	25	25
Comprehension Post	37	16	16
Rate Pre	63	25	37
Rate Post	37	50	25
Accuracy Pre	63	50	50
Accuracy Post	50	84	37
Phonemic Awareness Pre	58	39	18
Phonemic Awareness Post	37	23	9
Word Attack Pre	79	74	41
Word Attack Post	81	82	42
Word Recognition Pre	47	55	16
Word Recognition Post	75	58	23
Spelling Pre	53	42	16
Spelling Post	53	55	16
Symbol Imagery Pre	33	25	25
Symbol Imagery Post	31	29	31
Fluency Pre	75	37	37
Fluency Post	50	75	25

## Post Instruction Results (Special Education Students)

*Laramie County School District #1*

*End-of-Year, 2007 – 08*

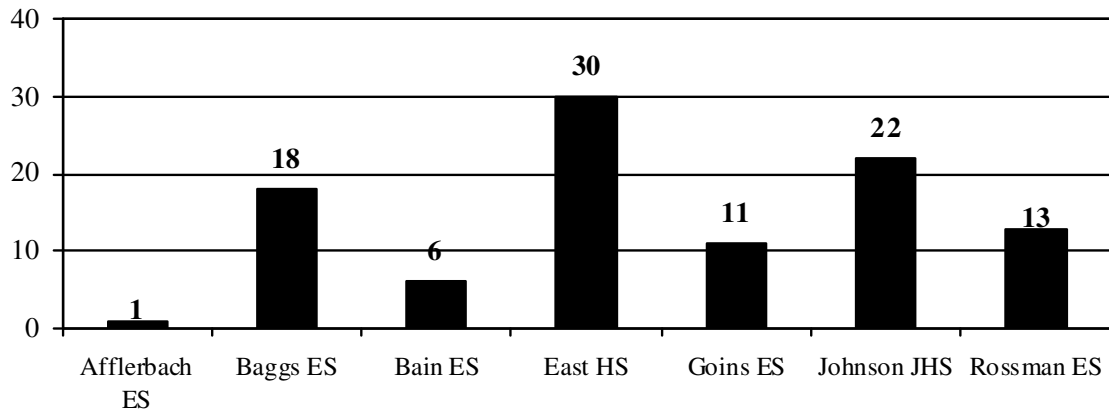
The following are the results pre- and post-Lindamood-Bell® instruction for the district as a whole.

### Demographics

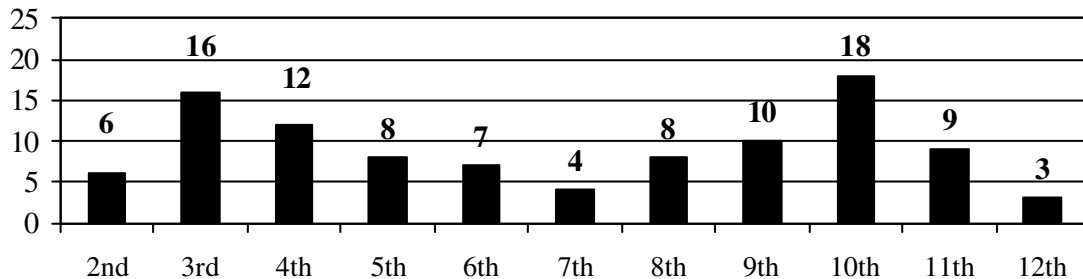
Number of Students	101
Females	31%
Males	69%

Average Age & Range	13.3	7.8 to 19.7
Average Grade Level & Range	7	2 to 12
Average Hours of Instruction & Range	111	20 to 211

### Number of Students by School



### Number of Students by Grade Level



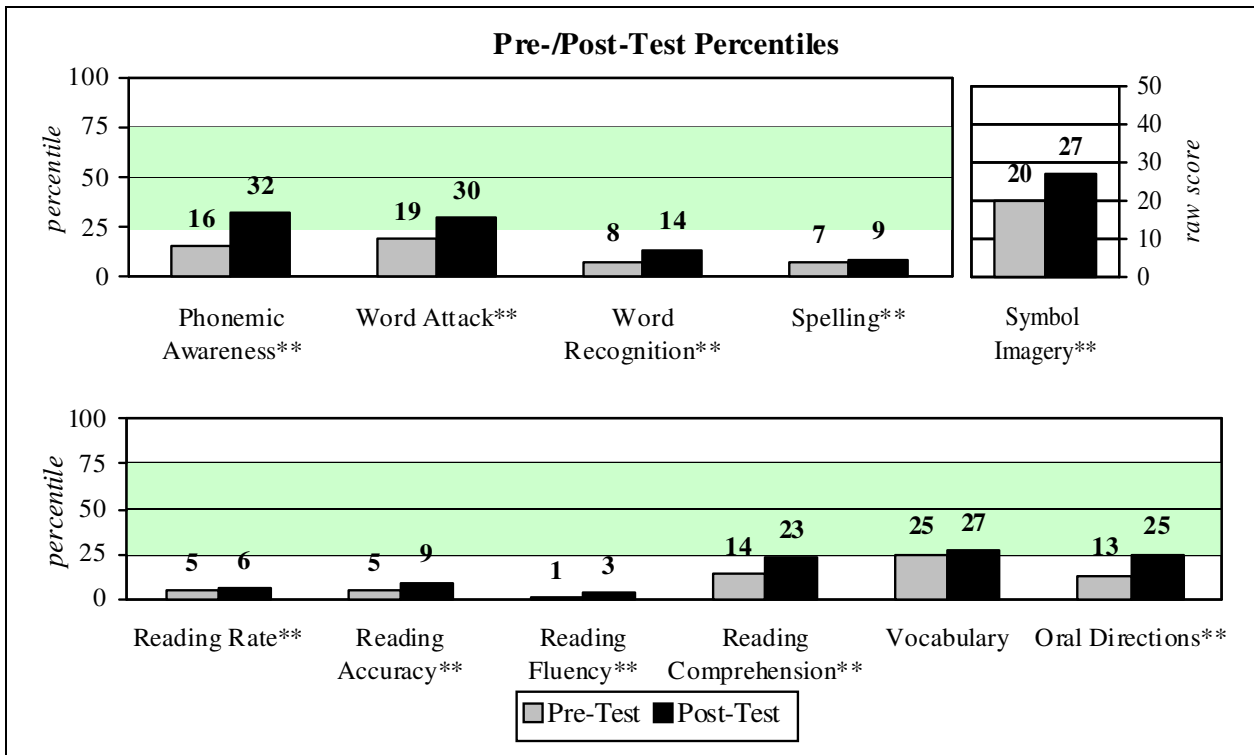
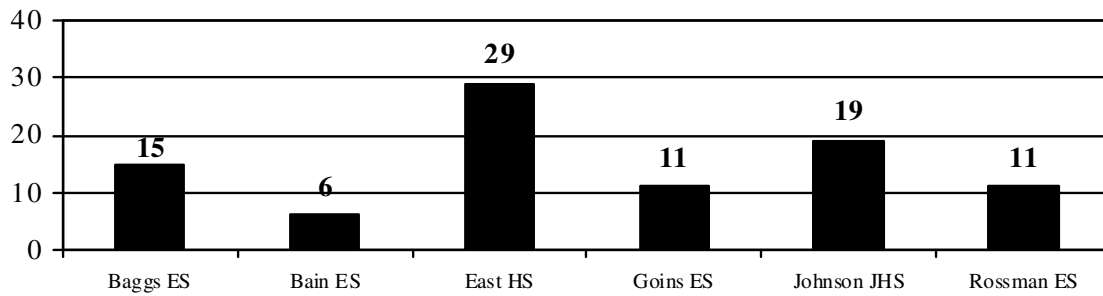
Post Instruction Results (Special Education Students)  
 Laramie County School District #1  
 End-of-Year, 2007 – 08

**Decoding**  
**Demographics and Instruction**

Number of Students	91
Females	32%
Males	68%

Average Age & Range	13.3	7.8 to 19.7
Average Grade Level & Range	7	2 to 12
Average Hours of Instruction & Range	111	20 to 211

**Number of Students by School**



\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

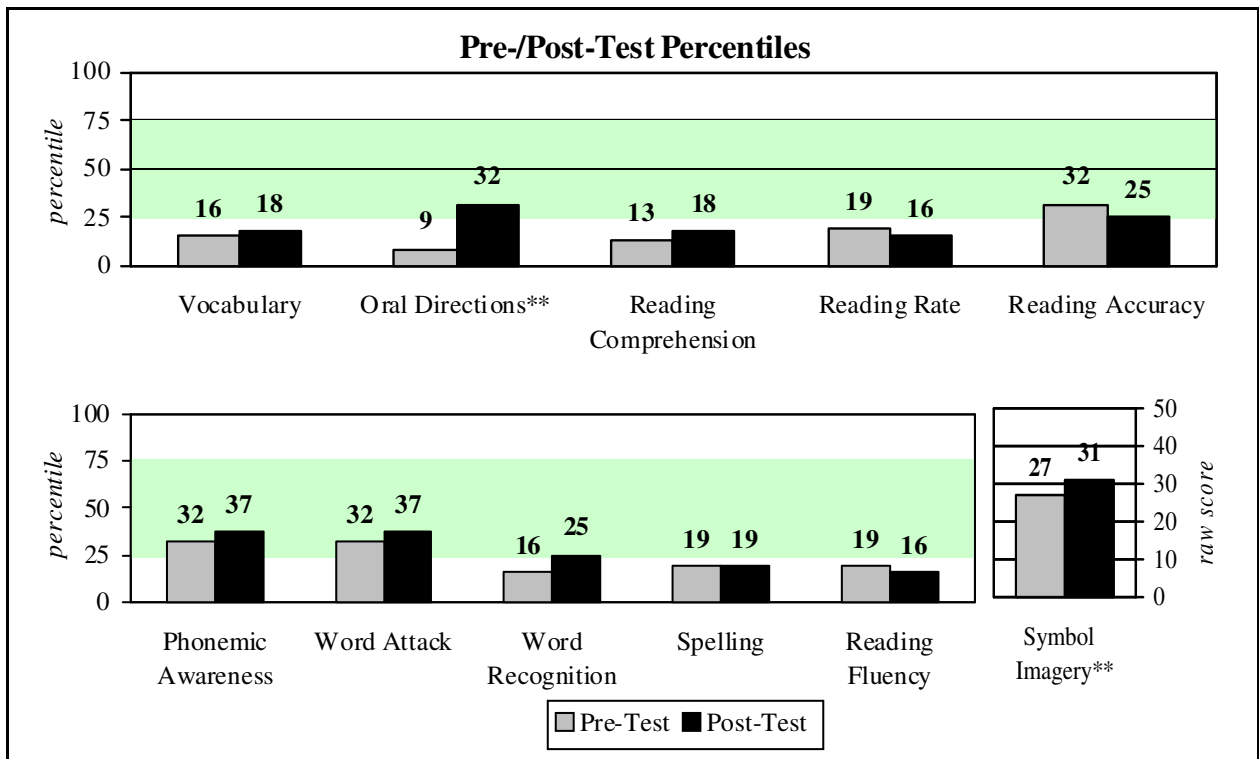
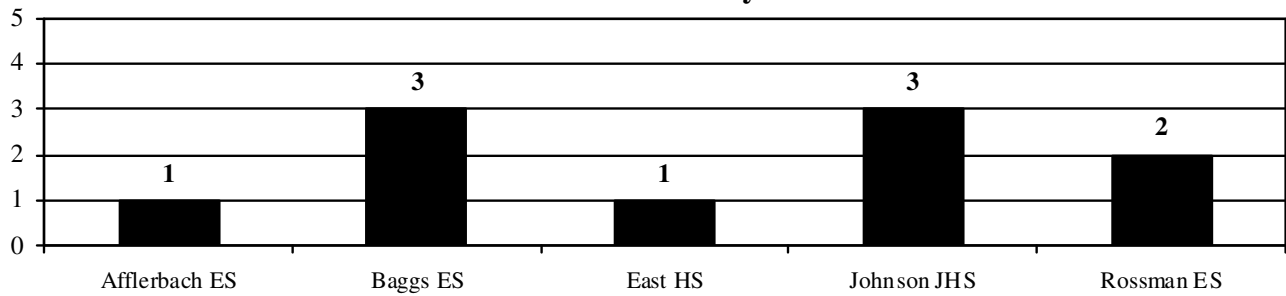
Post Instruction Results (Special Education Students)  
 Laramie County School District #1  
 End-of-Year, 2007 – 08

**Comprehension  
 Demographics and Instruction**

Number of Students	10
Females	20%
Males	80%

Average Age & Range	13.2	10.8 to 17.9
Average Grade Level & Range	7	3 to 12
Average Hours of Instruction & Range	111	67 to 137

**Number of Students by School**



\* significant (p-value ≤ .05)  
 \*\* highly significant (p-value ≤ .01)

# Test Descriptions and Interpretation Guide

## Test Descriptions

An extensive battery of nationally normed, standardized tests is administered to students. These measures are used to diagnostically assess and determine appropriate instruction as well as analyze learning gains. The following tests are used:

### ***Peabody Picture Vocabulary Test-IV (PPVT-IV)***

This test assesses receptive oral vocabulary and can be used as a screening test of general verbal ability for native English speakers or as a screening of English proficiency for non-native speakers of English. The individual must select one picture from among four to match an orally presented word.

### ***Detroit Tests of Learning Aptitude-2 (DTLA-2)***

#### *Oral Directions subtest:*

This subtest assesses the ability to mark visual material after oral directions have been given in entirety. This is a highly complex task involving linguistic and abstract knowledge as well as visual, motor, and memory capacities. The following is an example from the test: "Draw a line from one star to the other star that does not touch the triangle. Do it now."

### ***Woodcock Reading Mastery Tests-Revised (WRMT-R)***

#### *Word Attack subtest:*

The Word Attack subtest assesses the ability to decode nonsense words composed of one to four syllables. This provides information about the individual's ability to phonetically process unfamiliar words.

### ***Wide Range Achievement Test-Revised/4 (WRAT-4)***

This test assesses academic progress in three areas: word recognition, written spelling, and arithmetic computation. Typically, two of the three subtests are given: word recognition and spelling.

#### *Reading subtest:*

The individual is asked to name letters and to read words ranging from simple to complex multi-syllable. This provides information regarding the individual's word recognition ability.

#### *Spelling subtest:*

The individual spells letters and real words that are presented orally. The words range from simple one-syllable to complex multi-syllable. This provides information about the individual's spelling readiness and/or written spelling ability.

### ***Gray Oral Reading Test-4 (GORT-4)***

The GORT-4 uses multiple-choice questions to obtain a score for reading comprehension in addition to scores for rate, accuracy, contextual reading fluency, and overall reading quotient.

### ***Lindamood® Auditory Conceptualization Test-3 (LAC-3)***

The LAC-3 is an individually administered, norm-referenced assessment that measures an individual's ability to perceive and conceptualize speech sounds using a visual medium. The LAC-3 also measures the cognitive ability to distinguish and manipulate sounds, which success in reading and spelling requires. New categories that relate to multisyllabic processing have been added.

### ***Symbol Imagery Test***

This test assesses an individual's ability to recall and manipulate orthographic patterns. Items are presented visually and orally and require a verbal response. The test measures use of *symbol imagery*, the ability to visualize letter sequences and letter-phoneme relationships. Symbol imagery is a sensory-cognitive function related to decoding skills such as word recognition, spelling, phonemic awareness, and fluency. Until norming is completed, this test is used for comparison of pre-test and post-test changes. Preliminary data indicates high correlation to other decoding measures.

## Interpretation Guide

### Instructional Focus

Students are individually assessed and diagnosed and subsequently receive instruction in either the Seeing Stars<sup>®</sup> program, the Visualizing and Verbalizing<sup>®</sup> program, or a combination of the Seeing Stars<sup>®</sup> and Lindamood Phoneme Sequencing<sup>®</sup> programs.

*Decoding* competency is primarily measured by: Phonemic Awareness, Word Recognition, Spelling, Word Attack, Reading Rate, Reading Accuracy, and Reading Fluency. The Seeing Stars<sup>®</sup> and Lindamood Phoneme Sequencing<sup>®</sup> programs are the related programs.

*Comprehension* related measures include: Reading Comprehension, Vocabulary and Oral Directions. The Visualizing and Verbalizing<sup>®</sup> program is the related program.

### Interpretation of Scores

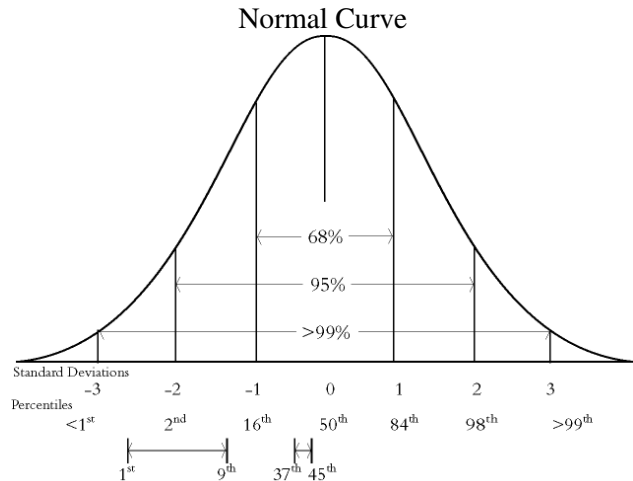
Results are reported in aggregate for all tests where the sample size is ten students or more. When there are fewer than ten the scores are reported on an individual basis.

One of the most common ways test publishers provide results is through the use of *percentile scores*, which allow for direct comparison to other tests on the same scale. A percentile score is a ranking (1 to 99) between people of the same age range. For example, if a student scores at the 75<sup>th</sup> percentile, he scores as well or better than 75% of the people his age.

Aggregate percentiles in this report are derived from average *standard scores*. The standard scores are based on a distribution with a mean of 100 and a standard deviation of 15.

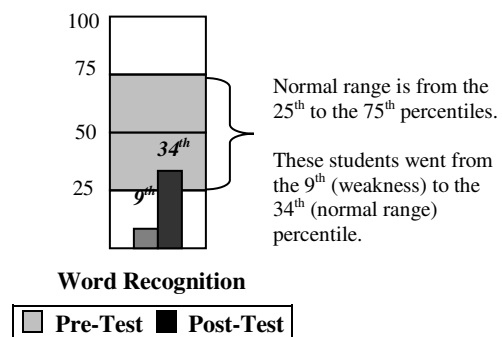
While standard scores reflect change evenly at different points on the curve, changes in percentile points do not. A change from the 1st to the 9th percentile equates to a change

of 13 standard points as does a change from the 50<sup>th</sup> to the 81<sup>st</sup> percentile.



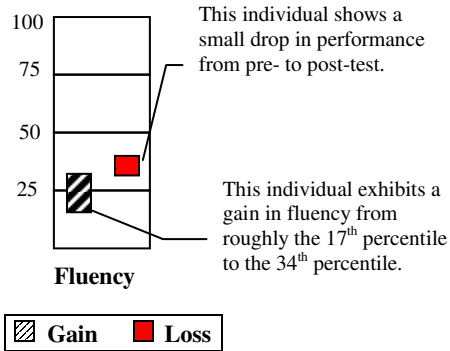
An often misunderstood term is *statistical significance*. Aggregate student gains are tested for statistical significance using paired t-tests. Significance does not measure the size of the gains, rather the variability and if the gain were likely due to chance. Statistically significant results are noted as either \* p-value  $\leq .05$  or highly significant \*\* p-value  $\leq .01$ .

The following is an example of a pre- and post-test percentile chart:



### Individual Percentile Gain Plots

When the sample size is less than ten students, pre- and post-test percentiles are reported as a bar covering their range of movement for the generally recognized five main components of reading.



Pre- and post-test percentiles for the full battery are provided for each individual in table format.

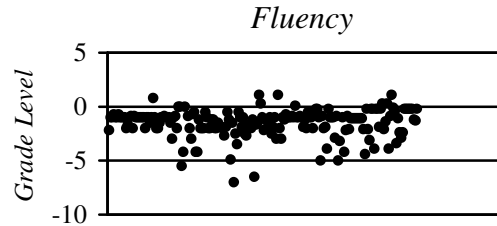
In addition, percentiles can be split into *quartiles*, or fourths, to further assist with interpretation. The following table is a general guideline for interpreting percentiles and their related quarters:

Percentile Range	Quartile(s)	Below, Within or Above Normal Range	General Definition
Up to the 25 <sup>th</sup>	1 <sup>st</sup> or Lower	Below	Weakness
25 <sup>th</sup> to the 36 <sup>th</sup>	2 <sup>nd</sup> & 3 <sup>rd</sup> or Inter	Within	Moderate Difficulty
37 <sup>th</sup> to the 62 <sup>nd</sup>		Within	Adequate Ability
63 <sup>rd</sup> to the 75 <sup>th</sup>		Within	Ease
Above the 75 <sup>th</sup>	4 <sup>th</sup> or Upper	Above	Strength

Quartile cutoffs are at the 25<sup>th</sup> percentile (1<sup>st</sup> quartile), 50<sup>th</sup> percentile (2<sup>nd</sup> quartile), and the 75<sup>th</sup> percentile (3<sup>rd</sup> quartile). Movement from one quarter to the next also means that a quartile cutoff has been surpassed.

### Individual Differential Plots

The individual differential plots show how far below or above grade or age equivalency each individual performed for the generally recognized five main components of reading.



To achieve a grade equivalency of 3.0, one would have answered the same number of correct responses on the test as was the average of all third graders at the beginning of the year. The learning curve for some of the skills is much steeper in the early grades, making grade equivalency changes much different for 3<sup>rd</sup> to 4<sup>th</sup> grade than 8<sup>th</sup> to 9<sup>th</sup>. However, scores within one grade above and below one's actual grade level are generally considered to be the normal range of performance.

### Symbol Imagery (SI™) Test

Average pre-test raw scores, which are the total number of correct responses, are provided for Symbol Imagery. The total possible raw score for Symbol Imagery is 50. The following table shows the recommended minimum raw score by grade level; based on pre-norming information:

K	1st	2nd	3rd	4th	5th	6th	7 <sup>th</sup> — Adult
5	11	15	20	23	27	28	32

## Instructional Programs

The owners and directors of Lindamood-Bell have authored programs that develop sensory-cognitive functions, which are recognized as being essential to spoken and written language competence. The sensory cognitive functions and related programs that are the focus of this report are as follows:

### ***Decoding Focus***

#### *(Phoneme Awareness and Symbol Imagery)*

Phoneme awareness and symbol imagery are primary sensory-cognitive functions that enable individuals to auditorily perceive and visually image sounds and letters within words. These abilities underlie fast and accurate word attack, word recognition, paragraph reading, and spelling skills. Individuals with intact phoneme awareness and symbol imagery usually learn to read and spell with ease. However, weakness in these functions interferes with the ability to self-correct and read and spell accurately and rapidly.

Phoneme awareness and symbol imagery are stimulated through the application of the Lindamood Phoneme Sequencing® (LiPS®)

and the Seeing Stars® for Symbol Imagery (SI™) programs.

### ***Comprehension Focus***

#### *(Concept Imagery)*

Concept imagery is the ability to visualize the gestalt (whole) from language that is read or heard. This ability underlies oral and written language comprehension, problem solving, following oral directions, and critical thinking. Individuals with well developed concept imagery can quickly create imaged gestalts in their minds and, consequently, are able to process the “big picture.”

However, weakness in concept imagery prevents individuals from comprehending oral and written language, including higher order thinking skills such as understanding the main idea, making inferences, drawing conclusions, predicting, problem solving, and performing other reasoning tasks.

Concept imagery is stimulated through the application of the Visualizing and Verbalizing for language Comprehension and Thinking® (V/V®) program.

## Recommendations

### Program Workshops

#### **Schedule additional Lindamood-Bell® workshops**

Seeing Stars® and a Visualizing and Verbalizing® workshop should be scheduled for instructional staff who have not previously participated and for staff and involved school and district leaders. A Leadership Orientation should be provided for school and district leaders directly supporting and/or involved in the Lindamood-Bell® implementation.

### Professional Development

#### **Provide additional Lindamood-Bell® Consulting support**

Given the current level of implementation in both classrooms and intensive intervention, more direct coaching support is necessary. Many instructional staff have yet to utilize the programs consistently and with program fidelity, especially classroom teachers. Teachers would benefit from more frequent coaching visits and weekly mentor meetings provided by Lindamood-Bell® consultants. This would increase program quality and effectiveness, and ultimately help schools reach capacity and sustainability more quickly.

### Intensive Intervention

#### **Increase instructional hours**

Students have been referred for instruction based on poor performance. In order to increase students' language processing skills, Lindamood-Bell recommends a *minimum* of 100-120 hours of cumulative instruction. For most schools this means providing at least 90 minutes of daily instruction in small, homogeneous groups. This year, the intensive intervention schedule included seven schools providing 60-90 minutes of instruction for most groups.

#### **Increase the daily amount of instruction**

Lindamood-Bell's research and results demonstrate that students achieve more significant gains in reading and comprehension skills when the instruction is provided on a more intensive basis. It is also important to consider the grade level deficits in reading and comprehension and differentiate instruction accordingly. It is recommended that students, based on the learning profile and need, receive a minimum of ninety minutes of instruction per day. Further, the more instruction time scheduled per day may reduce the length of the instructional cycle which could allow schools to provide Lindamood-Bell® instruction to the equivalent number of students, or even more, during the course of the school year.

#### **Provide additional intensive intervention for some students**

Many students exhibit deficits in multiple areas of reading and comprehension, yet only received intensive intervention focusing on one area of deficit to maximize program effectiveness (e.g., decoding or comprehension). Some students also need additional

instruction in the same area based on their overall learning profile and need. For students performing below the normal range (below the 25<sup>th</sup> percentile) in areas of reading and/or comprehension, it is recommended they receive additional intensive intervention.

### **Increase the number of at-risk students receiving intensive intervention**

The Laramie County School District has a high percentage of students in need of language and literacy intervention based on the percentage of students not proficient on the PAWS testing (at-risk students). Assigning more staff to instruction and/or revising the current intensive intervention schedule may increase the number of students receiving instruction. Schools have a better likelihood to affect school-wide student achievement and achieve Adequate Yearly Progress (AYP) if they address the needs of a higher percentage of at-risk students.

## **Classroom Instruction**

### **Expand Lindamood-Bell<sup>®</sup> instruction in classrooms.**

Lindamood-Bell<sup>®</sup> instruction in all classrooms should be a focus for a school-wide implementation of the programs. Classroom implementation of the programs can effectively develop reading and comprehension skills that would enhance the effectiveness of the school's core curriculum and reduce the need for future intervention with at-risk students. Additionally, consistent classroom implementation further benefits students who are receiving or have received intensive intervention and need ongoing support.

To maximize program implementation on a school-wide level, and to provide instruction in language processing skills for all students, it is recommended that the programs be implemented consistently in all classrooms based on the following model:

- **Seeing Stars<sup>®</sup>** (For phonics, phonemic awareness, and fluency development) — in Kindergarten-3<sup>rd</sup> grade classes, 15 to 30 minutes, daily,
- **Visualizing and Verbalizing<sup>®</sup>** (For comprehension and vocabulary development) — in Kindergarten-5<sup>th</sup> grade classes, 15 to 30 minutes daily, and
- **Visualizing and Verbalizing<sup>®</sup> application to all content** — For Kindergarten to 12<sup>th</sup> grade, daily and consistent application of program methodology throughout curricula.

## **Certification**

### **Identify candidates for Lindamood-Bell's Consultant Certification Program**

To provide consistent quality instruction and sustain the programs with fidelity, at least one candidate from each participating school should be identified to participate in the Consultant Certification Program. The school should consider the candidate's ability, once certification is complete, to manage the school-wide (or district-wide) implementation of the Lindamood-Bell<sup>®</sup> model, to include: daily coaching and mentoring for intensive intervention staff and classroom teachers, (b) program pacing for each small group of students, (c) monitoring the assessment, diagnosis, and grouping for all students

in intensive intervention, (d) monitoring the quality and integrity of the Lindamood-Bell® programs throughout the school, and (e) providing regular mentor meetings and ongoing professional development with the school staff.

### **Increase professional development for certification candidates**

Candidates for Lindamood-Bell's Consultant Certification Program should receive additional professional development and be available to participate in additional workshops to meet all certification requirements.

## **Miscellaneous**

### **Maintain program fidelity**

Each of the instructional programs is a research-based approach to systematically developing cognitive functions necessary for either reading, comprehension, or mathematics. Each program has a specific sequence of tasks that, when taught in order, contribute to improving student proficiency. Altering, omitting or using the steps as a set of isolated strategies will impact outcomes on student achievement.

### **Provide state reading test proficiency reports**

Lindamood-Bell's Research & Development Department can provide analysis that includes measurement of student progress and growth on state achievement tests. A data-sharing protocol could be established that would allow for more detailed analysis than is currently possible.

### **Expand Lindamood-Bell's approach additional schools**

The success of the schools currently implementing the Lindamood-Bell® design suggests that students at other district schools would benefit. This includes both elementary and secondary sites.

### **Explore conducting formal research with Lindamood-Bell**

Lindamood-Bell's Research & Development department has collaborated with many districts to institute a variety of studies including randomized control trials, quasi-experimental and post hoc analyses that further examine instructional efficacy.



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