LINDAMOOD-BELL

EST. 1986

LEARNING CENTER
RESULTS
2008-2019

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Introduction

Over the course of more than three decades, Lindamood-Bell has been honored to work with tens of thousands of children and adults. Through our founders' programs, our sensory-cognitive instructional methodologies, and evidence-based research findings, we offer a theoretically sound, brain-based literacy foundation for learning, helping our students achieve their potential.

Our students include struggling readers who are just starting to learn the phonetic and orthographic structure of English (sounds and letters) and those who are not "getting" what they read or hear. We serve a diverse population of students, such as students who speak English as a second language, those who have been previously diagnosed with language-based disabilities, including dyslexia, developmental delays, or autism, and those who simply wish to excel. Our continued success in addressing the varied needs of these individuals is due to our comprehensive approach to individualized diagnosis and evidence-based research on sensory-cognitive instruction.

The enclosed data summary highlights the results of our internal accountability reporting on the work we do in our Learning Centers and Lindamood-Bell Academy. As we address the needs of the individuals we serve, we continue to support and participate in scientifically based studies of our founders' programs. Our goal is to utilize and continually improve upon state-of-the-science diagnosis and instruction toward literacy development, setting forth a standard for world-class literacy instruction.

Sincerely,

Paul Worthington
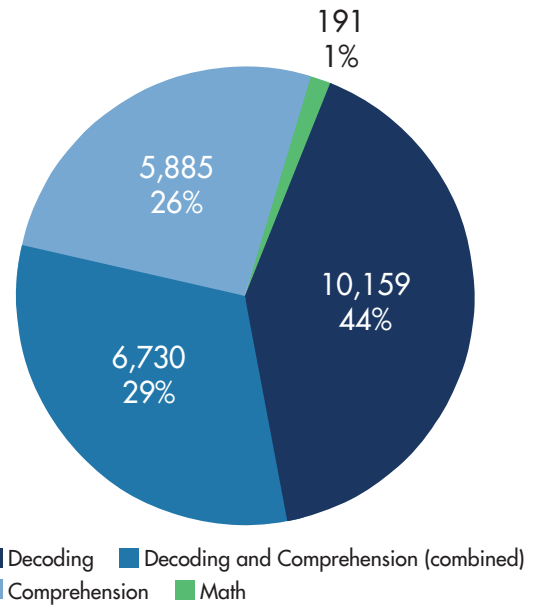Director of Research and Development

Lindamood–Bell® Learning Centers

From 2008 to 2019, Lindamood–Bell® Learning Centers has assessed 28,647 students. Of the 28,647 students, 26,106 received over twenty hours of instruction in one or more of our sensory–cognitive programs (Seeing Stars, Visualizing and Verbalizing, On Cloud Nine, Talkies, and/or Lindamood Phoneme Sequencing).

Note: For the categorical reporting found herein, the numbers of students reported on will be somewhat less due to the analysis being based on the number of students with a complete testing battery specific to the program of instruction being analyzed.

Learning Focus of Instruction
n = 26,106

- 191 1%
- 5,885 26%
- 10,159 44%
- 6,730 29%

■ Decoding ■ Decoding and Comprehension (combined)
■ Comprehension ■ Math

Student Profiles

The tables below show the distribution of the ages and grades of more than 26,000 students who received instruction at our Learning Centers from 2008 to 2019.

Ages of Our Students
n = 26,105

AGE / NUMBER OF STUDENTS

AGE	NUMBER OF STUDENTS
3-5	559
6	1670
7	3227
8	3822
9	3622
10	3191
11	2523
12	1969
13	1514
14	1170
15	799
16	535
17	395
18-72	1109

10,590 Female

15,503 Male
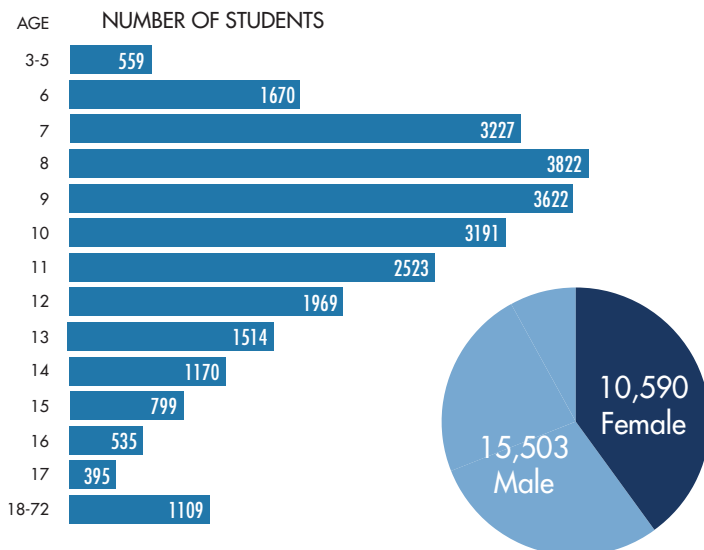
Grade Levels of Our Students
n = 26,108

GRADE LEVEL	NUMBER OF STUDENTS
Pre-K–2nd	8117
3rd–5th	10040
6th–8th	4963
9th–12th	2090
College–Adult	865
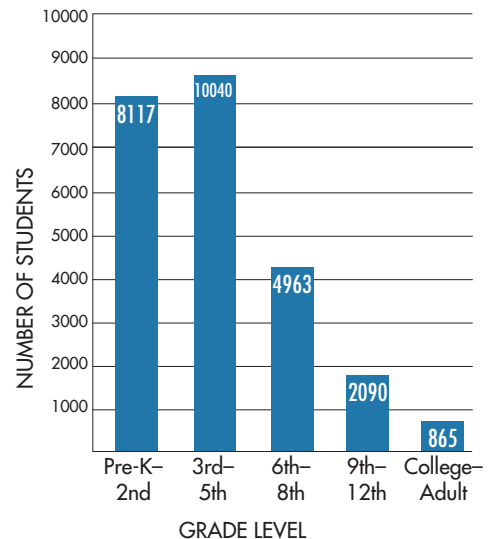
Many individuals have sought help from their school districts and other reading instruction providers before seeking help from Lindamood–Bell. Individuals who reported...

- receiving special education services: 36%
- receiving remedial reading help at school: 27%
- repeating a grade: 10%
- being identified as Gifted: 6%

Learning Ability Evaluation

Each student receives a Learning Ability Evaluation to determine his or her areas of strength and weakness in reading, spelling, comprehension, and math.

| Test	Task
Symbol Imagery	Image and manipulate orthographic and phonemic patterns
Phonemic Awareness	Perceive sounds in isolation and within words
Word Attack	Read a list of progressively difficult nonsense words
Word Recognition	Read a list of progressively difficult real words
Spelling	Spell a list of progressively difficult real words
Vocabulary	Select one picture from four that matches a spoken word
Word Opposites	Say the opposite of a verbally provided word
Math Computation	Solve problems from basic arithmetic fractions to basic algebra
Math Story Problems	Read and solve simple to complex story problems that require computation
Paragraph Reading Rate, Accuracy, and Fluency	Read paragraphs aloud

Percentiles

One of the most common ways test publishers provide results is through the use of percentiles. A percentile score is a ranking (1 to 99) among people of the same age range. For example, if a student scores at the 75th percentile, he or she scores as well or better than 75% of people the same age. The following can be used to interpret percentiles:

Percentiles	Range	Definition
Below 25th	Below Normal	Weakness
25th – 36th	Within Normal	Moderate Difficulty
37th – 62nd	Within Normal	Adequate Ability
63rd – 74th	Within Normal	Ease
At or above 75th	Above Normal	Strength

Standard scores (see Standard Scores below) are averaged and converted to percentiles based on a normal distribution of a given age of the population. For example, an average standard score of 100 for a group of students is equivalent to the 50th percentile.

Standard Scores

A standard score is a raw score that has been transformed to a common scale (mean of 100 and standard deviation of 15) so comparisons can be made. Standard score changes are used to determine the magnitude of change from pre- to retest. Each student's retest standard score is subtracted from the pretest score to get a change score, and all of those scores are averaged to get an average standard score change. While there is no definitive interpretation, researchers generally agree that a standard score change of practical significance ranges from 3.0 to 4.5 points.

Average Standard Score Changes

Small   Medium   Large
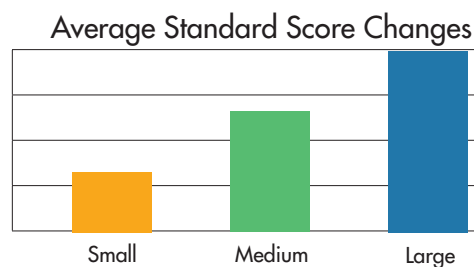
Analyzing Learning Progress

Pre- to retest results that are deemed statistically significant ($p \leq .05$), not due to chance, are noted with an asterisk. For accurate psychometric comparative analysis, paired *t* tests are performed on standard scores.

Students with Prior Diagnoses

Overall, approximately 43% of Lindamood-Bell students reported having received a diagnosis prior to Lindamood-Bell instruction.

- Attention Deficit Hyperactivity Disorder
- Multiple Diagnoses
- Dyslexia
- Specific Learning Disability
- Autism Spectrum Disorder
- Speech or Language Impairment
- Central Auditory Processing Disorder
- Hyperlexia

Number and Percentage of Students by Prior Diagnosis
n = 11,300

Diagnosis	Number	Percentage
ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)	6262	24%
DYSLEXIA	4690	18%
MULTIPLE DIAGNOSES	4508	17%
SPECIFIC LEARNING DISABILITY	2237	9%
AUTISM SPECTRUM DISORDER	2045	8%
SPEECH OR LANGUAGE IMPAIRMENT	1855	7%
CENTRAL AUDITORY PROCESSING DISORDER	1836	7%
HYPERLEXIA	116	0.4%
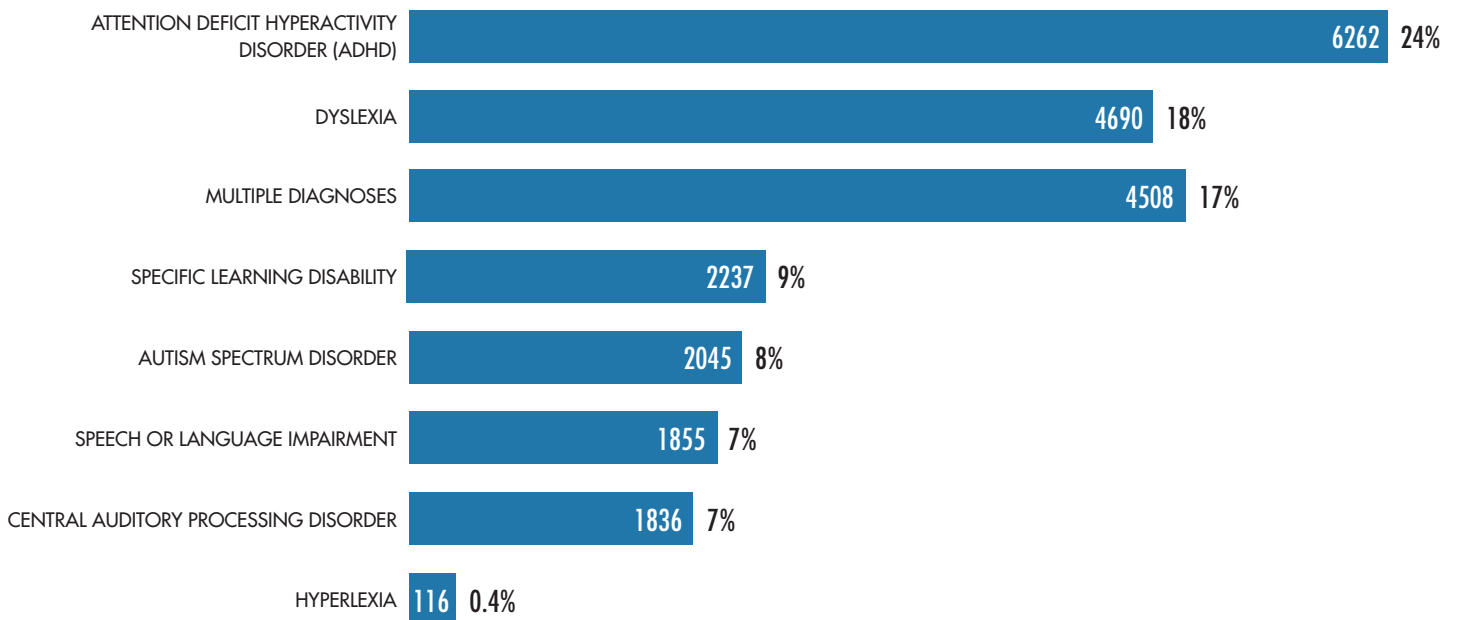
Note: The 11,300 students are out of the 26,106 students with over twenty hours of Lindamood-Bell instruction in one or more of our sensory-cognitive programs.

57% of students did not have a prior diagnosis.

Decoding

Results of Students Who Received Decoding Instruction Only
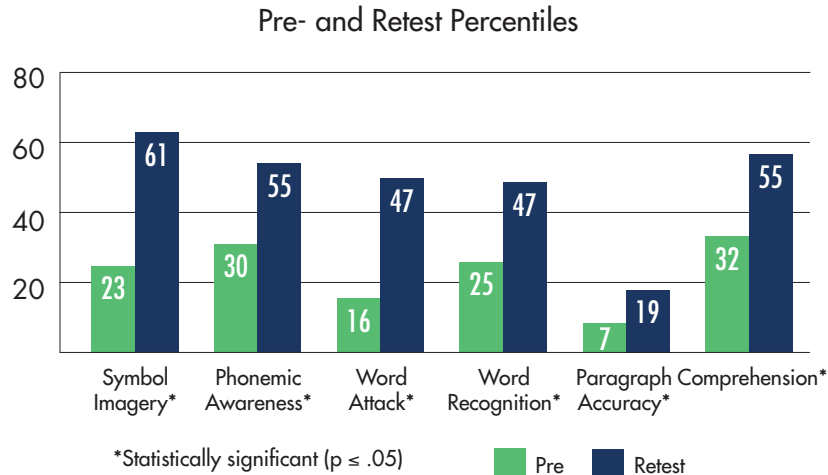
Pre- and Retest Percentiles

	Symbol Imagery*	Phonemic Awareness*	Word Attack*	Word Recognition*	Paragraph Accuracy*	Comprehension*
Pre	23	30	16	25	7	32
Retest	61	55	47	47	19	55

*Statistically significant (p ≤ .05)   ■ Pre   ■ Retest

Average Standard Score Changes

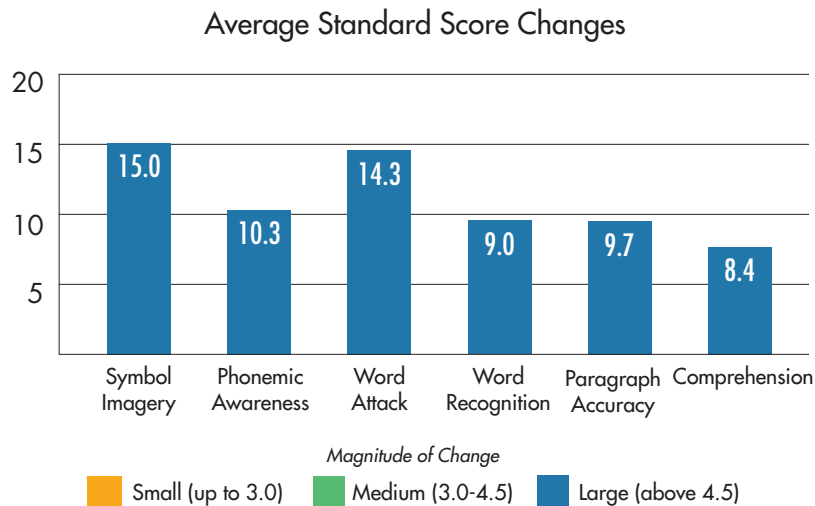| Symbol Imagery	Phonemic Awareness	Word Attack	Word Recognition	Paragraph Accuracy	Comprehension
15.0	10.3	14.3	9.0	9.7	8.4

Magnitude of Change
■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood–Bell Instruction Implemented: Seeing Stars

Years: 2008–2019

Number of Students: 8,698

Average Age: 9.6

Average Hours of Instruction: 107.3

Results: On average, students who received Seeing Stars® instruction for decoding issues achieved significant improvements in reading. They made large (statistically significant) standard score changes on all measures. Additionally, the 22-point percentile increase in Word Recognition puts these students within the normal range (25th–75th percentile). While the largest average standard score change can be seen on the Symbol Imagery measure, it is important to note the large average standard score change in reading Comprehension as an artifact of their improvement in reading. Students' gains in decoding resulted in a great improvement in comprehension, the only reason to decode.

Comprehension

Results of Students Who Received Comprehension Instruction Only
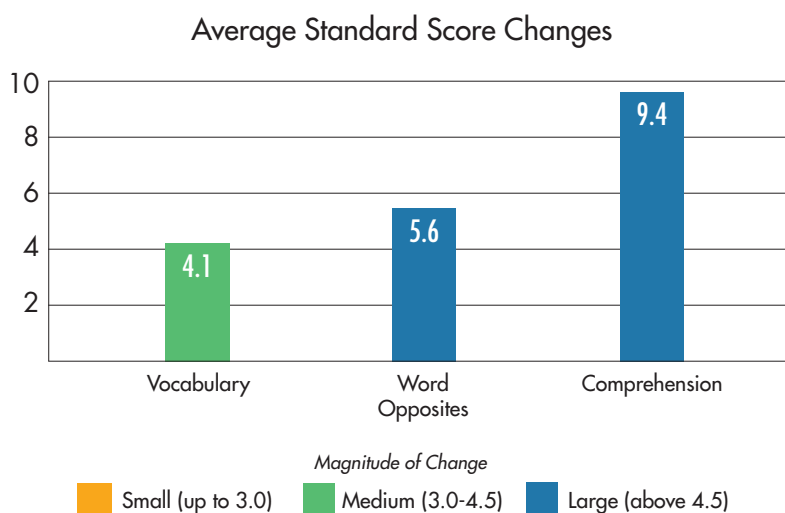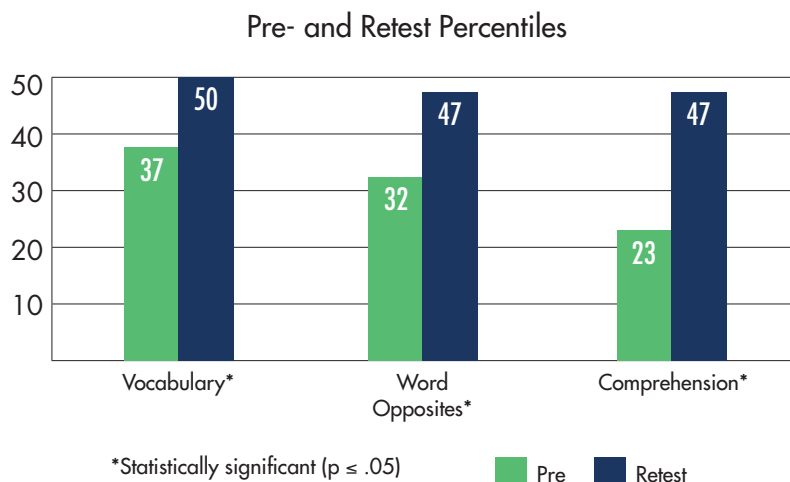
Pre- and Retest Percentiles

	Vocabulary*	Word Opposites*	Comprehension*
Pre	37	32	23
Retest	50	47	47

*Statistically significant (p ≤ .05)

Average Standard Score Changes

Vocabulary	Word Opposites	Comprehension
4.1	5.6	9.4

Magnitude of Change

Small (up to 3.0) Medium (3.0-4.5) Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Visualizing and Verbalizing

Years: 2008–2019 **Average Age:** 12.4

Number of Students: 5,633 **Average Hours of Instruction:** 101.5

Results: On average, students who received Visualizing and Verbalizing® instruction achieved significant improvements in areas associated with language comprehension. They made large (statistically significant) standard score changes on two of the three measures. Additionally, the 24-point percentile increase in Comprehension puts these students well within the normal range (25th–75th percentile).

Decoding & Comprehension (Combined)

Results of Students Who Received Both Decoding and Comprehension Instruction
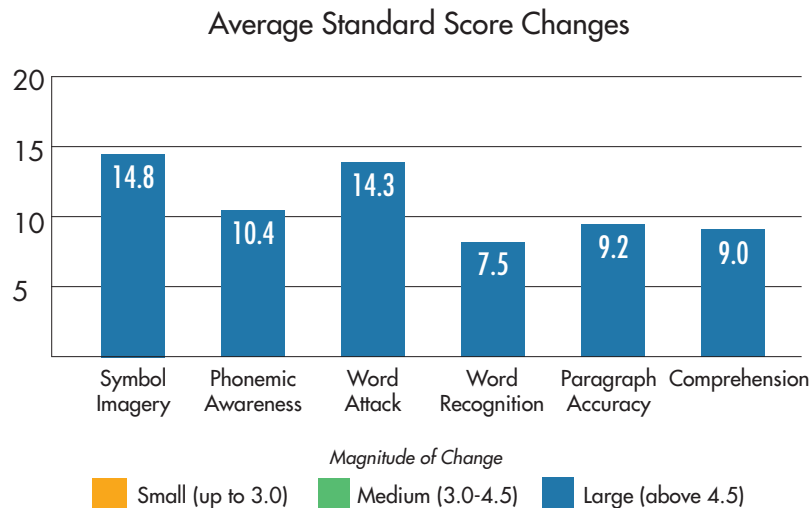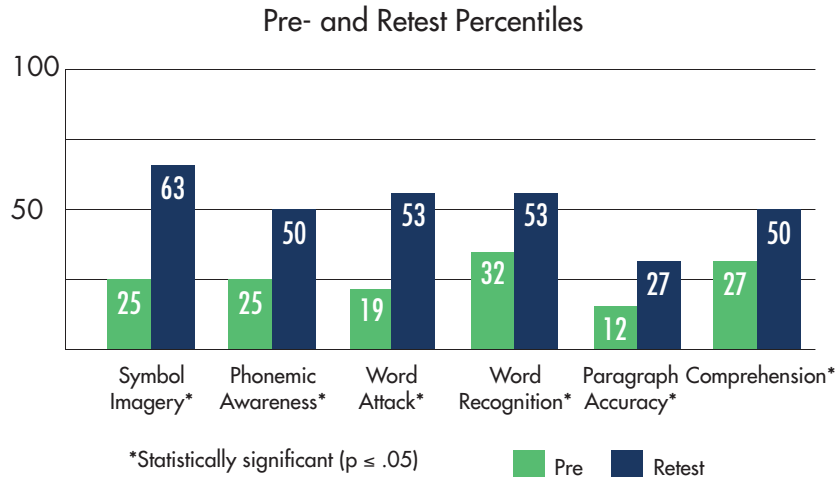
Pre- and Retest Percentiles

	Symbol Imagery*	Phonemic Awareness*	Word Attack*	Word Recognition*	Paragraph Accuracy*	Comprehension*
Pre	25	25	19	32	12	27
Retest	63	50	53	53	27	50

*Statistically significant (p ≤ .05)

■ Pre   ■ Retest

Average Standard Score Changes

Symbol Imagery	Phonemic Awareness	Word Attack	Word Recognition	Paragraph Accuracy	Comprehension
14.8	10.4	14.3	7.5	9.2	9.0

Magnitude of Change

■ Small (up to 3.0)   ■ Medium (3.0–4.5)   ■ Large (above 4.5)

Summary

Lindamood–Bell Instruction Implemented: Seeing Stars and Visualizing and Verbalizing

Years: 2008–2019   **Average Age:** 11.3

Number of Students: 5,983   **Average Hours of Instruction:** 139.1

Results: On average, students who received Seeing Stars combined with Visualizing and Verbalizing instruction achieved significant improvements in reading and comprehension. They made large (statistically significant) standard score changes on all measures. Although the large average standard score gain on the Word Recognition measure is notable, it is equally if not more important to note the large average standard score gains in Paragraph Reading Accuracy and Comprehension.

Math

Results of Students Who Received More than 45% of Their Hours in Math Instruction

Pre- and Retest Percentiles

	Computation*	Story Problems*
Pre	16	27
Retest	47	47

*Statistically significant (p ≤ .05)

■ Pre ■ Retest

Average Standard Score Changes

	Computation	Story Problems
	13.7	8.0

Magnitude of Change

■ Small (up to 3.0) ■ Medium (3.0-4.5) ■ Large (above 4.5)
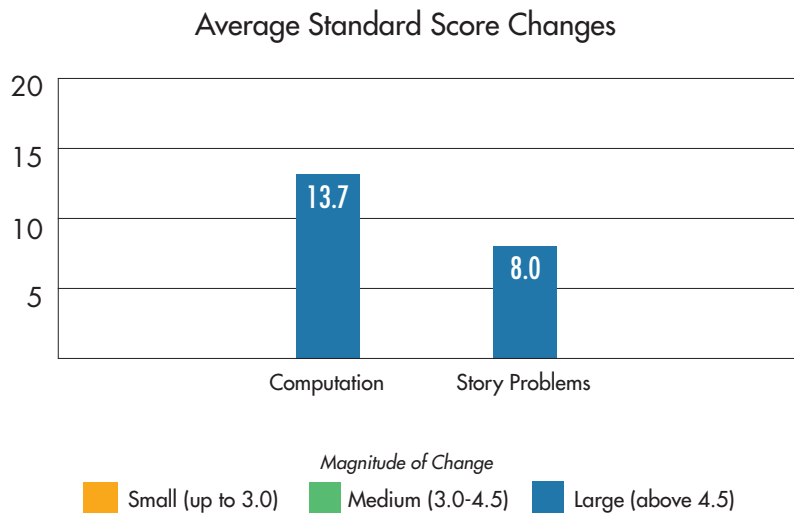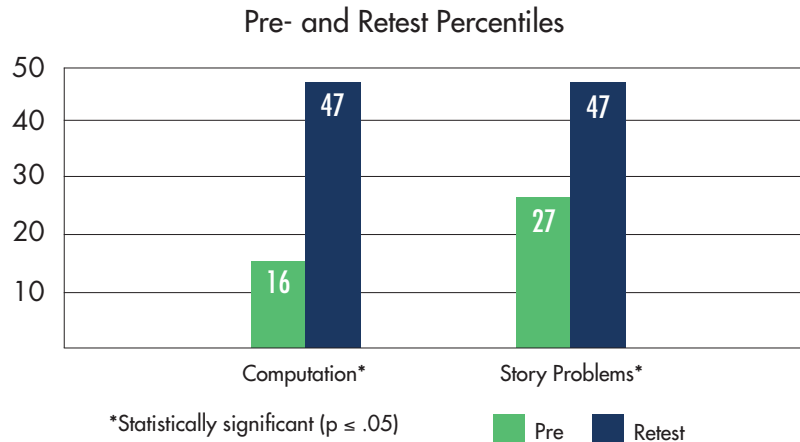
Summary

Lindamood–Bell Instruction Implemented: On Cloud Nine Math

Years: 2008–2019   **Average Age:** 11.5

Number of Students: 454   **Average Hours of Instruction:** 101.9
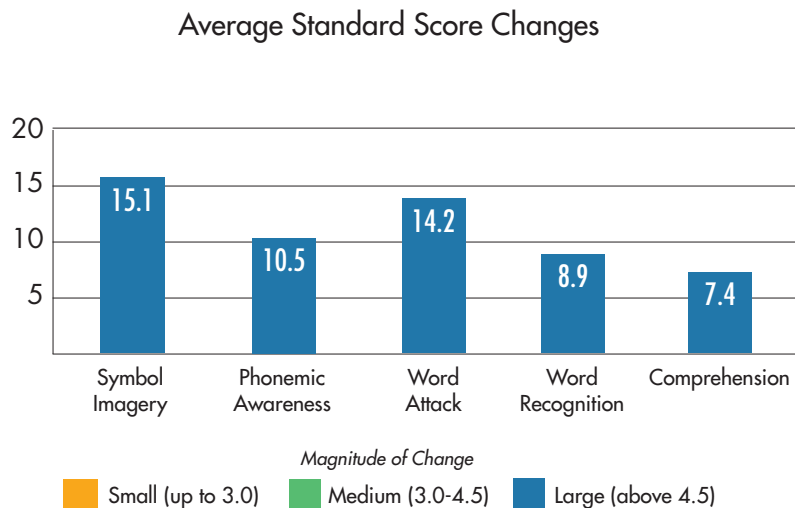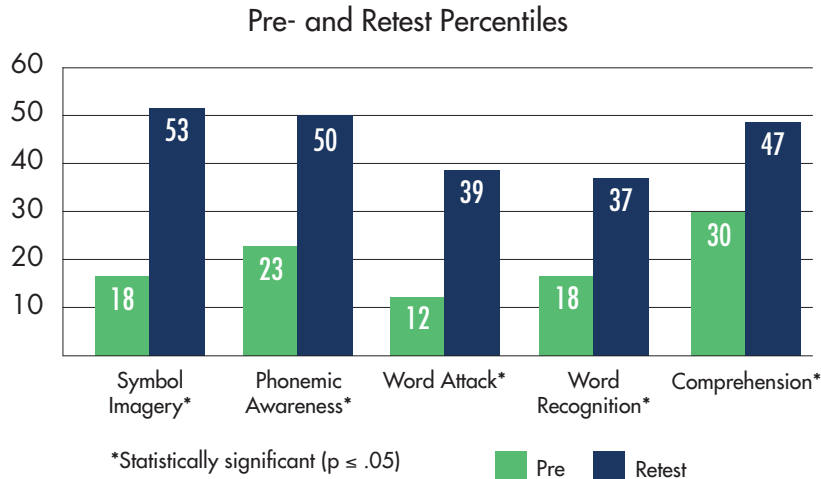
Results: On average, students who received all or most of their instruction in On Cloud Nine® Math achieved significant improvements in math. They made large (statistically significant) standard score changes on both measures. Additionally, the 31–point percentile increase in Computation puts these students within the normal range (25th–75th percentile).

Attention Deficit Hyperactivity Disorder (ADHD)

Students with a Prior ADHD Diagnosis Who Received Decoding Instruction Only

Pre- and Retest Percentiles

	Symbol Imagery*	Phonemic Awareness*	Word Attack*	Word Recognition*	Comprehension*
Pre	18	23	12	18	30
Retest	53	50	39	37	47

*Statistically significant (p ≤ .05)

Average Standard Score Changes

Symbol Imagery	Phonemic Awareness	Word Attack	Word Recognition	Comprehension
15.1	10.5	14.2	8.9	7.4

Magnitude of Change

Small (up to 3.0) Medium (3.0-4.5) Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Seeing Stars

Years: 2008–2019   **Average Age:** 10.2

Number of Students: 1,705   **Average Hours of Instruction:** 117.5

Results: On average, students with a prior ADHD diagnosis with decoding difficulties who received Seeing Stars instruction achieved significant improvements in reading. They made large (statistically significant) standard score changes on all measures. Additionally, a 19-point percentile increase in Word Recognition and a 17-point percentile increase in Comprehension puts these students within the normal range (25th–75th percentile).

Attention Deficit Hyperactivity Disorder (ADHD)

Students with a Prior ADHD Diagnosis Who Received Comprehension Instruction Only

Pre- and Rettest Percentiles

	Vocabulary*	Word Opposites*	Comprehension*
Pre	39	34	23
Retest	50	47	45

*Statistically significant (p ≤ .05)

■ Pre   ■ Retest

Average Standard Score Changes

Vocabulary	Word Opposites	Comprehension
4.2	5.2	8.7

Magnitude of Change

■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)
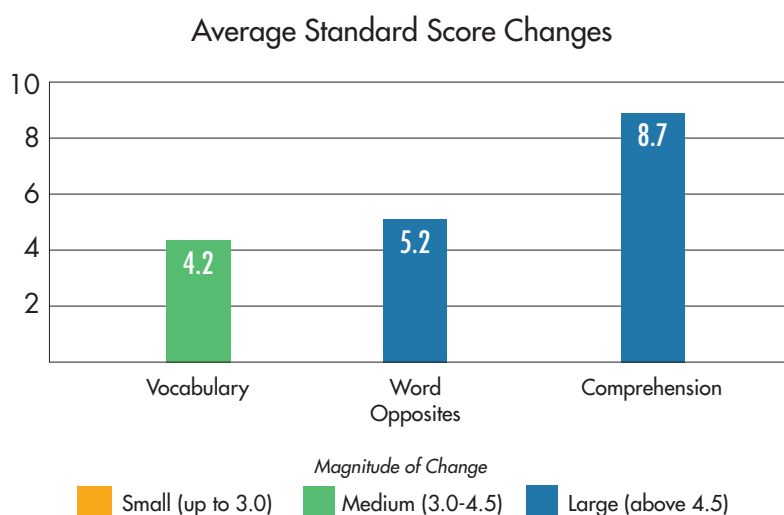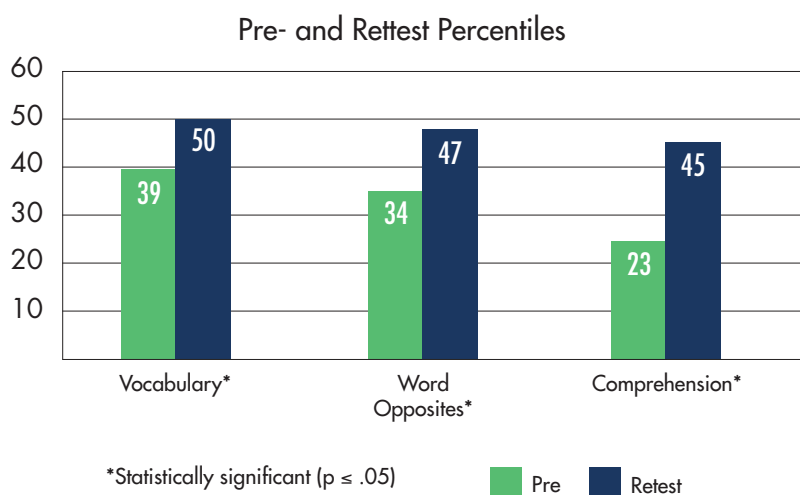
Summary

Lindamood–Bell Instruction Implemented: Visualizing and Verbalizing

Years: 2008–2019   **Average Age:** 12.8

Number of Students: 1,347   **Average Hours of Instruction:** 106.0

Results: On average, students with ADHD diagnosis with language comprehension difficulties who received Visualizing and Verbalizing instruction achieved significant improvements in comprehension. They made large (statistically significant) standard score changes on two of the three measures. Additionally, the 22-point percentile increase in Comprehension put these students within the normal range (25th–75th percentile).

Attention Deficit Hyperactivity Disorder (ADHD)

Students with a Prior ADHD Diagnosis Who Received Decoding and Comprehension (Combined) Instruction
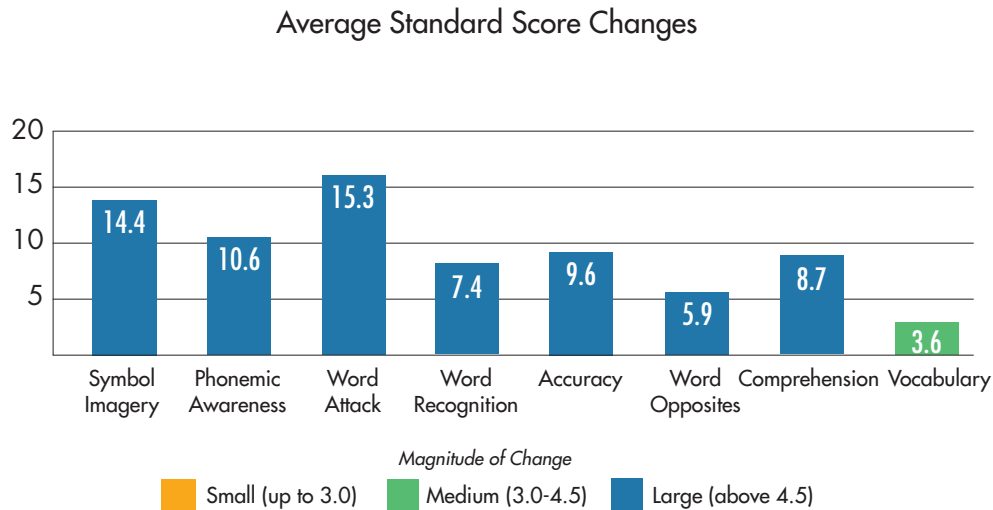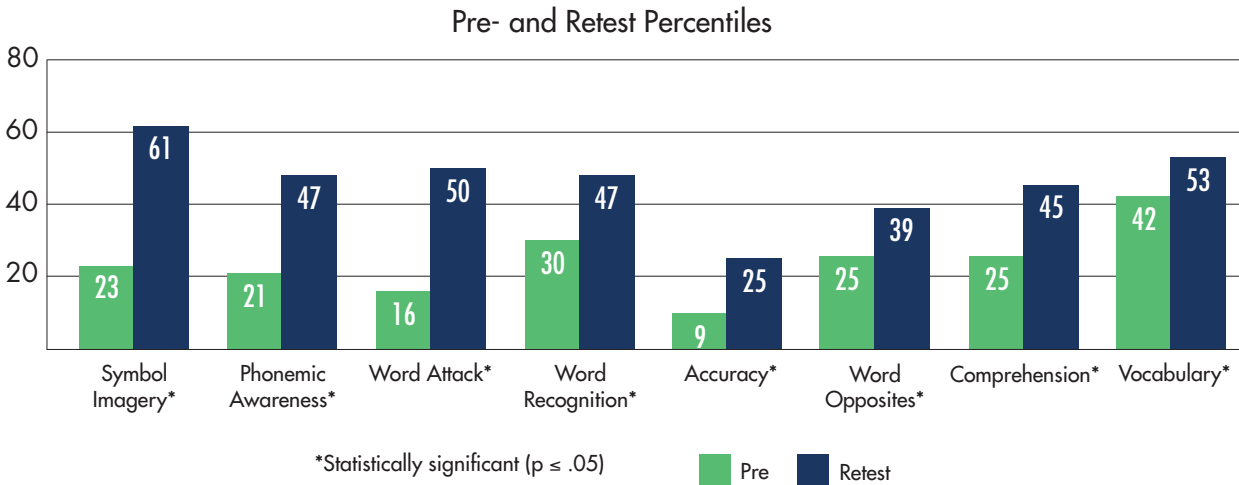
Pre- and Retest Percentiles

Measure	Pre	Retest
Symbol Imagery*	23	61
Phonemic Awareness*	21	47
Word Attack*	16	50
Word Recognition*	30	47
Accuracy*	9	25
Word Opposites*	25	39
Comprehension*	25	45
Vocabulary*	42	53

*Statistically significant (p ≤ .05) ■ Pre ■ Retest

Average Standard Score Changes

Measure	Change
Symbol Imagery	14.4
Phonemic Awareness	10.6
Word Attack	15.3
Word Recognition	7.4
Accuracy	9.6
Word Opposites	5.9
Comprehension	8.7
Vocabulary	3.6

Magnitude of Change
■ Small (up to 3.0) ■ Medium (3.0-4.5) ■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Seeing Stars and Visualizing and Verbalizing

Years: 2008–2019

Number of Students: 1,402

Average Age: 11.7

Average Hours of Instruction: 144.9

Results: Students with a prior ADHD diagnosis who had decoding, along with language comprehension difficulties, received both Seeing Stars and Visualizing and Verbalizing instruction. These students achieved significant improvements in decoding and comprehension. They made large (statistically significant) standard score changes on seven of the eight measures. Additionally, the 17-point percentile increase in Word Recognition and 20-point percentile increase in Comprehension puts these students within the normal range (25th–75th percentile).

Dyslexia

Students with a Prior Dyslexia Diagnosis Who Received Decoding Instruction Only
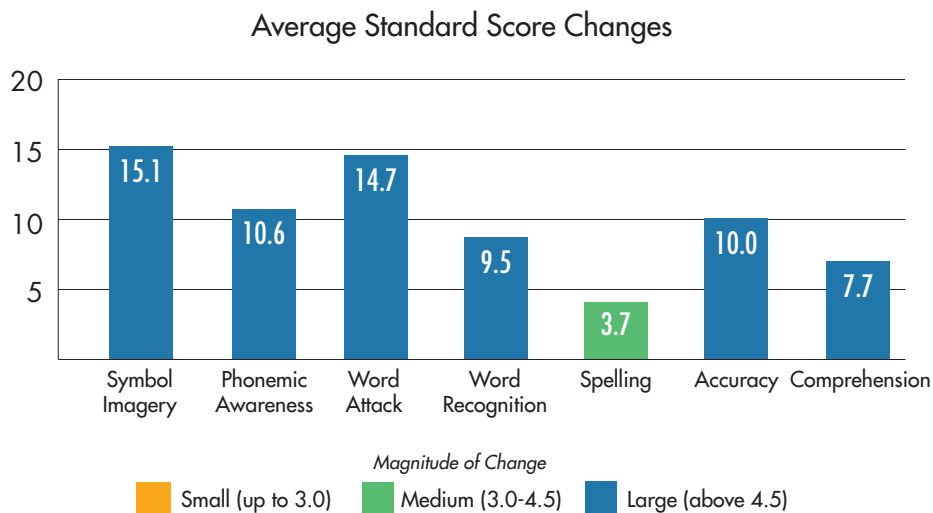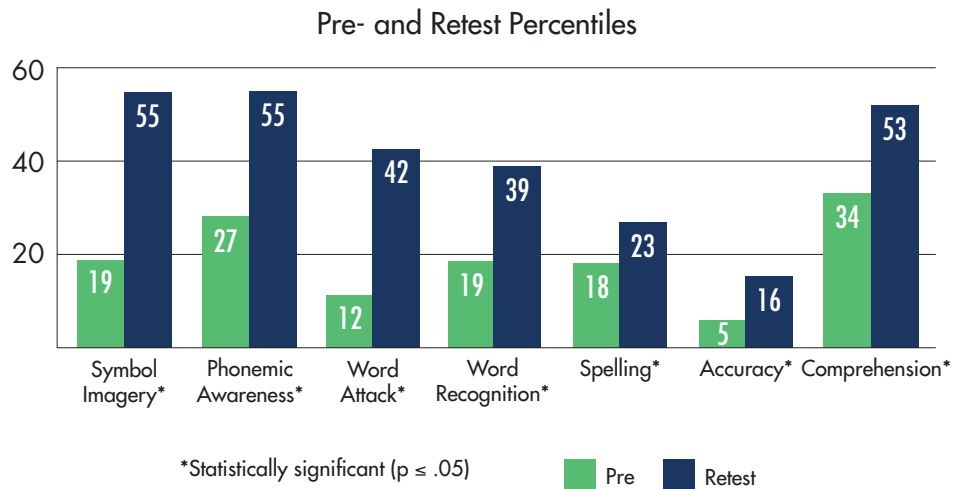
Pre- and Retest Percentiles

	Symbol Imagery*	Phonemic Awareness*	Word Attack*	Word Recognition*	Spelling*	Accuracy*	Comprehension*
Pre	19	27	12	19	18	5	34
Retest	55	55	42	39	23	16	53

*Statistically significant (p ≤ .05)   ■ Pre   ■ Retest

Average Standard Score Changes

Symbol Imagery	Phonemic Awareness	Word Attack	Word Recognition	Spelling	Accuracy	Comprehension
15.1	10.6	14.7	9.5	3.7	10.0	7.7

Magnitude of Change
■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood–Bell Instruction Implemented: Seeing Stars

Years: 2008–2019   **Average Age:** 10.2

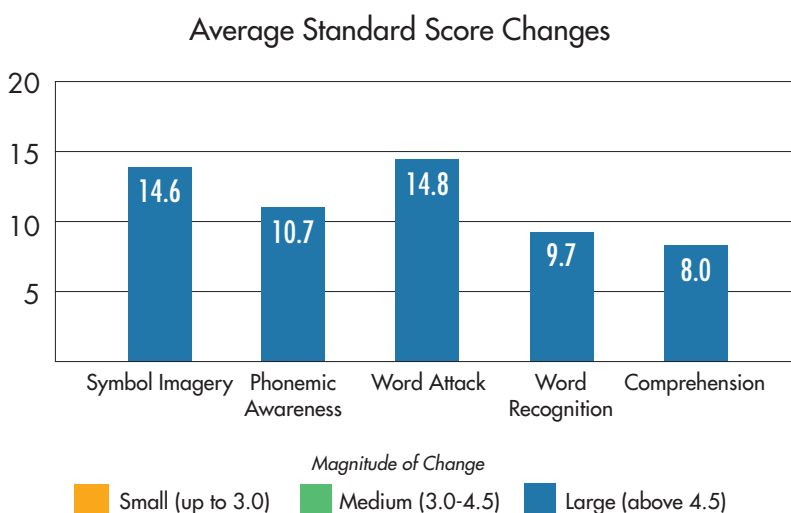**Number of Students:** 2,101   **Average Hours of Instruction:** 119.4

Results: On average, students with a prior Dyslexia diagnosis who received Seeing Stars instruction achieved significant improvements in reading. They made large (statistically significant) standard score changes on six of the seven measures. The 20-point percentile increase in Word Recognition put these students well within the normal range (25th–75th percentile). The large average standard score change in Reading Accuracy should also be noted.

Specific Learning Disability (SLD)

Students with a Prior SLD Diagnosis Who Received Decoding Instruction Only

Pre- and Retest Percentiles

Measure	Pre	Retest
Symbol Imagery*	12	42
Phonemic Awareness*	18	42
Word Attack*	7	32
Word Recognition*	10	25
Comprehension*	21	39

*Statistically significant (p ≤ .05)   ■ Pre ■ Retest

Average Standard Score Changes

Measure	Change
Symbol Imagery	14.6
Phonemic Awareness	10.7
Word Attack	14.8
Word Recognition	9.7
Comprehension	8.0

Magnitude of Change
■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Seeing Stars

Years: 2008-2019   **Average Age:** 10.6
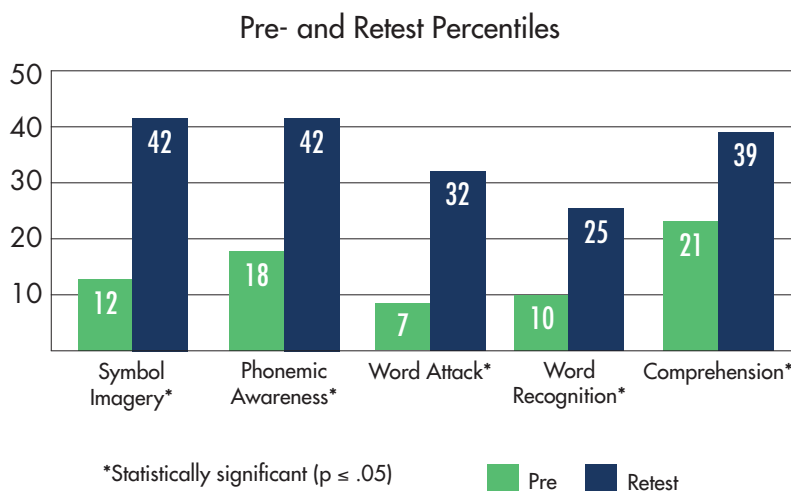
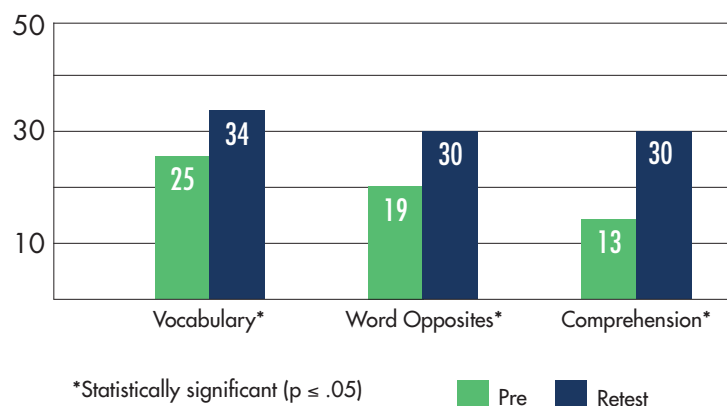**Number of Students:** 696   **Average Hours of Instruction:** 123.2

Results: On average, students with a prior SLD diagnosis who received Seeing Stars instruction achieved significant improvements in reading. They made large (statistically significant) standard score changes on all measures. Additionally, the 15-point percentile increase in Word Recognition and the 18-point increase in Comprehension puts these students within the normal range (25th–75th percentile).
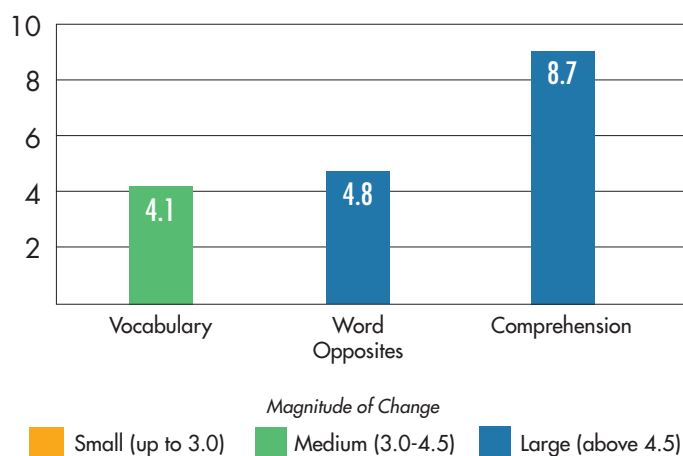
Specific Learning Disability (SLD)

Students with a Prior SLD Diagnosis Who Received Comprehension Instruction Only

Pre- and Retest Percentiles

Measure	Pre	Retest
Vocabulary*	25	34
Word Opposites*	19	30
Comprehension*	13	30

*Statistically significant (p ≤ .05)

Legend: ■ Pre ■ Retest

Average Standard Score Changes

Measure	Change
Vocabulary	4.1
Word Opposites	4.8
Comprehension	8.7

Magnitude of Change

■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Visualizing and Verbalizing

Years: 2008–2019   **Average Age:** 13.9
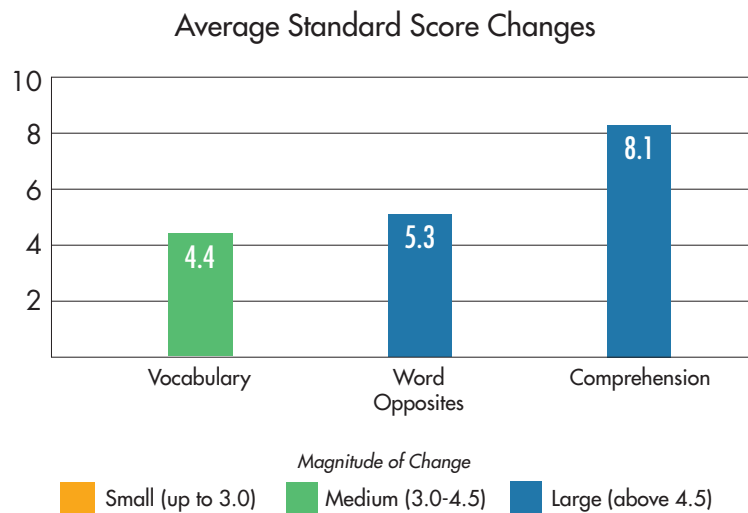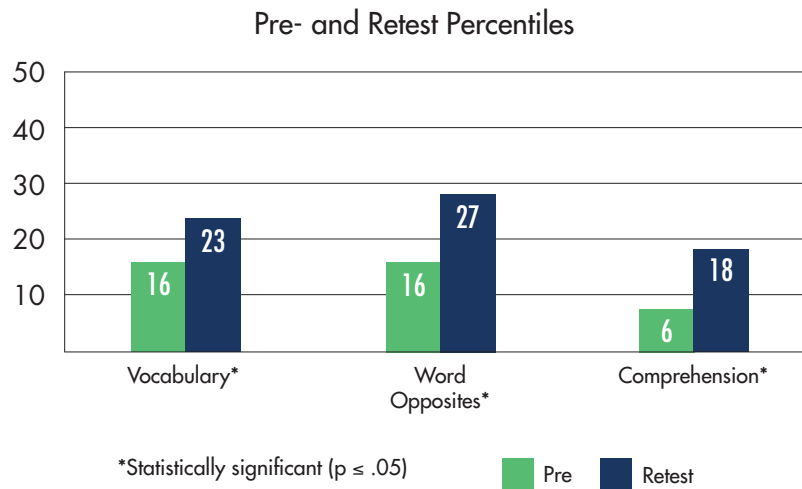
Number of Students: 343   **Average Hours of Instruction:** 111.7

Results: On average, students with a prior SLD diagnosis who received Visualizing and Verbalizing instruction achieved significant improvements in reading. They made large (statistically significant) standard score changes on two of the three measures. Additionally, the 17-point percentile increase in reading Comprehension put these students within the normal range (25th–75th percentile).

Autism Spectrum Disorder (ASD)

Students with a Prior ASD Diagnosis Who Received Comprehension Instruction Only

Pre- and Retest Percentiles

	Vocabulary*	Word Opposites*	Comprehension*
Pre	16	16	6
Retest	23	27	18

*Statistically significant (p ≤ .05)   ■ Pre   ■ Retest

Average Standard Score Changes

	Vocabulary	Word Opposites	Comprehension
	4.4	5.3	8.1

Magnitude of Change

■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Visualizing and Verbalizing

Years: 2008–2019

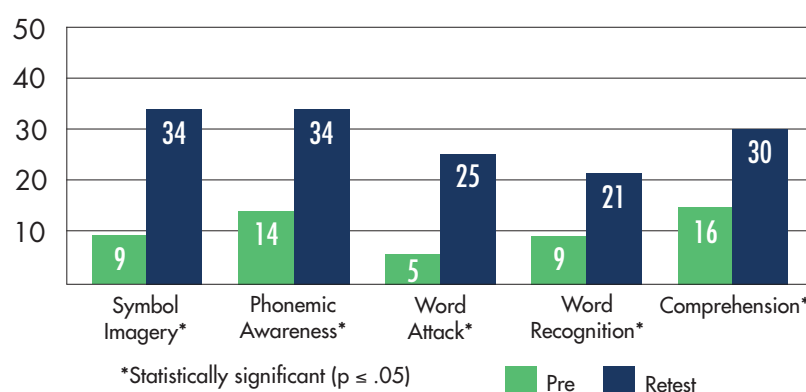**Average Age:** 11.9

Number of Students: 871

Average Hours of Instruction: 131.9

Results: On average, students with a prior ASD diagnosis who received Visualizing and Verbalizing instruction achieved significant improvements in comprehension, a major deficit for many students with ASD. They made large (statistically significant) standard score changes on two of the three measures.
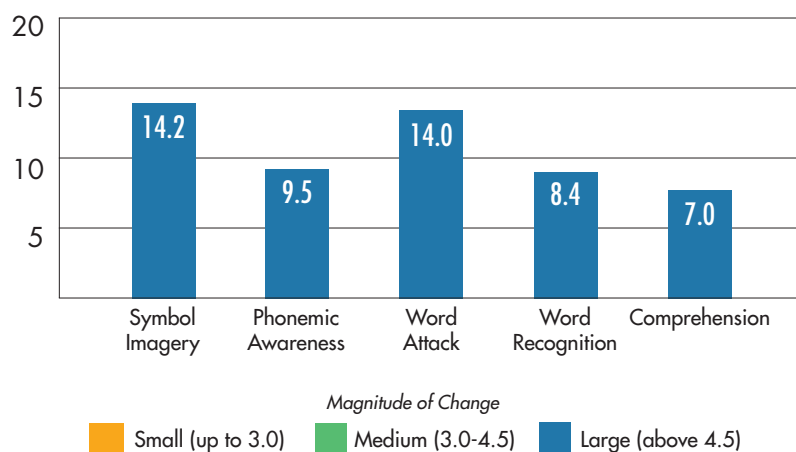
Speech or Language Impairment (SLI)

Results of Students with a Prior SLI Diagnosis Who Received Decoding Instruction Only

Pre- and Retest Percentiles

Measure	Pre	Retest
Symbol Imagery*	9	34
Phonemic Awareness*	14	34
Word Attack*	5	25
Word Recognition*	9	21
Comprehension*	16	30

*Statistically significant (p ≤ .05)

■ Pre ■ Retest

Average Standard Score Changes

Measure	Change
Symbol Imagery	14.2
Phonemic Awareness	9.5
Word Attack	14.0
Word Recognition	8.4
Comprehension	7.0

Magnitude of Change

■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Seeing Stars

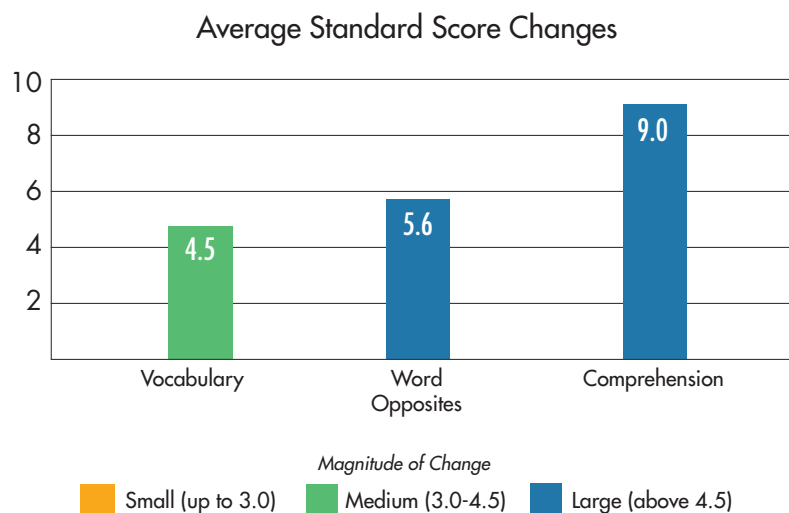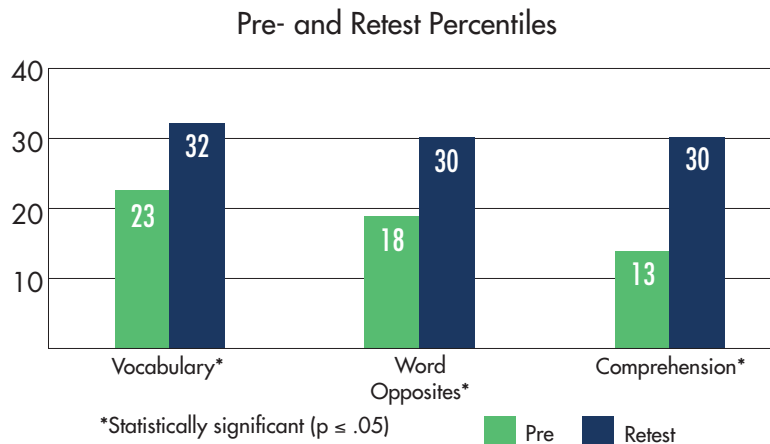**Years:** 2008-2019 **Average Age:** 10.2

Number of Students: 385 **Average Hours of Instruction:** 127.5

Results: On average, students with a prior SLI diagnosis with decoding difficulties who received Seeing Stars instruction achieved significant improvements in reading. They made large (statistically significant) standard score changes on all measures. Additionally, the significant increases in Symbol Imagery, Word Attack, and Word Recognition resulted in reading comprehension to now enter the normal range (25th–75th percentile).

Speech or Language Impairment (SLI)

Students with a Prior SLI Diagnosis Who Received Comprehension Instruction Only

Pre- and Retest Percentiles

	Pre	Retest
Vocabulary*	23	32
Word Opposites*	18	30
Comprehension*	13	30

*Statistically significant (p ≤ .05)

■ Pre   ■ Retest

Average Standard Score Changes

	Magnitude of Change
Vocabulary	4.5
Word Opposites	5.6
Comprehension	9.0

Magnitude of Change

■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Visualizing and Verbalizing

Years: 2008–2019   **Average Age:** 12.3
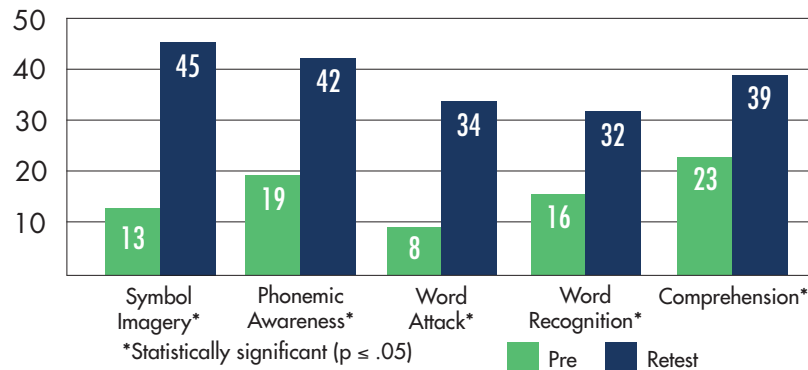
Number of Students: 501   **Average Hours of Instruction:** 119.3

Results: On average, students with a prior SLI diagnosed, coupled with language comprehension difficulties, who received Visualizing and Verbalizing instruction achieved significant improvements in comprehension. They made large (statistically significant) standard score changes on two of the three measures. Additionally, the 17-point percentile increase in Comprehension put these students within the normal range (25th–75th percentile).
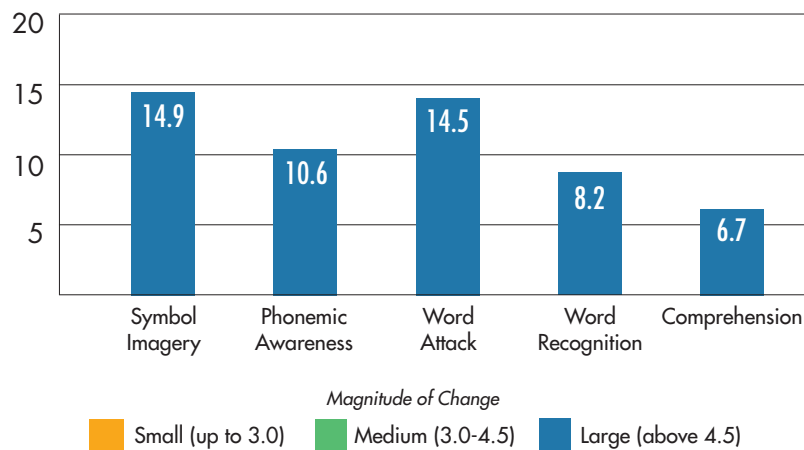
Central Auditory Processing Disorder (CAPD)

Students with a Prior CAPD Diagnosis Who Received Decoding Instruction Only

Pre- and Retest Percentiles

	Symbol Imagery*	Phonemic Awareness*	Word Attack*	Word Recognition*	Comprehension*
Pre	13	19	8	16	23
Retest	45	42	34	32	39

*Statistically significant (p ≤ .05)

Average Standard Score Changes

Symbol Imagery	Phonemic Awareness	Word Attack	Word Recognition	Comprehension
14.9	10.6	14.5	8.2	6.7

Magnitude of Change

Small (up to 3.0) Medium (3.0-4.5) Large (above 4.5)

Summary

Lindamood–Bell Instruction Implemented: Seeing Stars

Years: 2008-2019   **Average Age:** 10.6
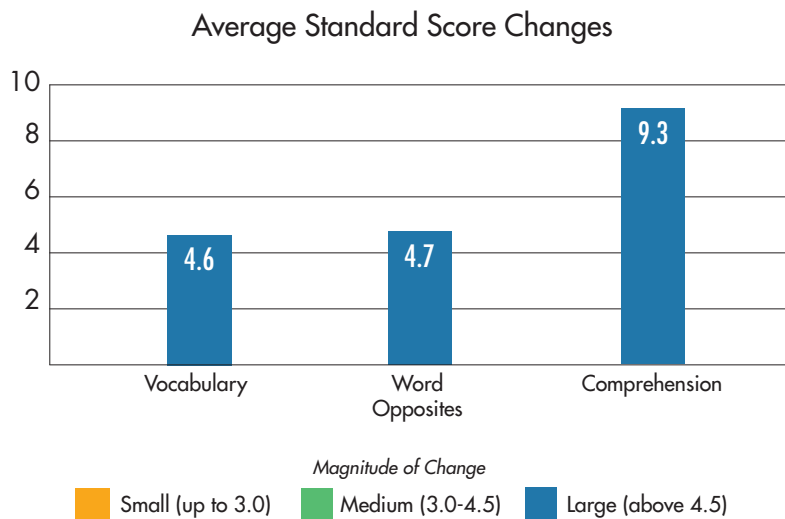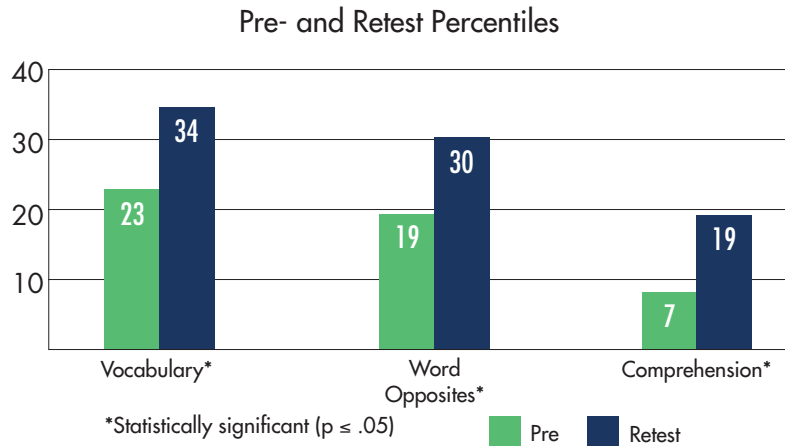
Number of Students: 402   **Average Hours of Instruction:** 122.3

Results: On average, students with a CAPD diagnosis who received Seeing Stars instruction achieved significant improvements in reading. They made large (statistically significant) standard score changes on all measures. The 16–point percentile increase in Word Recognition put these students within the normal range (25th–75th percentile). Additionally, the large average standard score change on the Comprehension measure indicates a strong improvement in understanding what they are reading.

Hyperlexia

Students with a Prior Diagnosis of Hyperlexia Who Received Comprehension Instruction Only

Pre- and Retest Percentiles

Vocabulary*: Pre 23, Retest 34
Word Opposites*: Pre 19, Retest 30
Comprehension*: Pre 7, Retest 19

*Statistically significant (p ≤ .05)

Pre | Retest

Average Standard Score Changes

Vocabulary: 4.6
Word Opposites: 4.7
Comprehension: 9.3

Magnitude of Change

Small (up to 3.0) | Medium (3.0-4.5) | Large (above 4.5)

Summary

Lindamood–Bell Instruction Implemented: Visualizing and Verbalizing

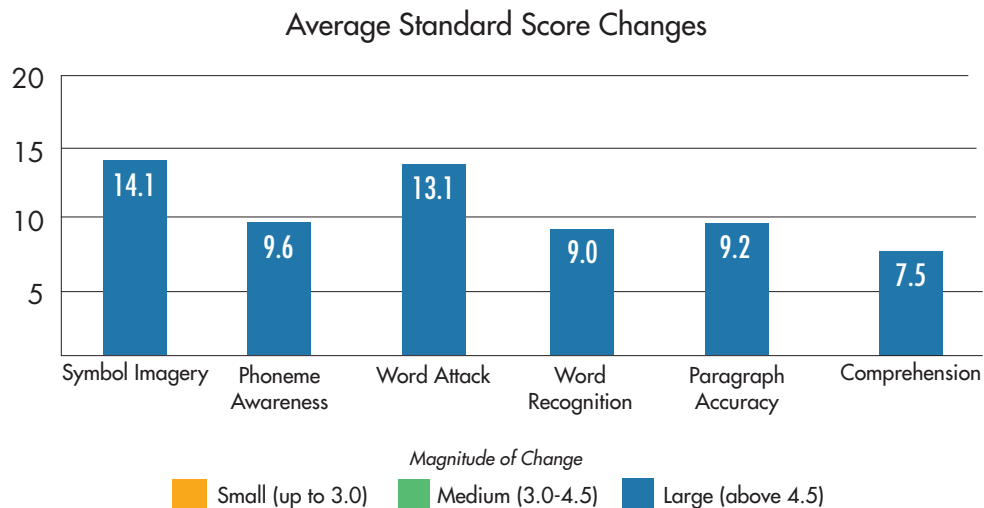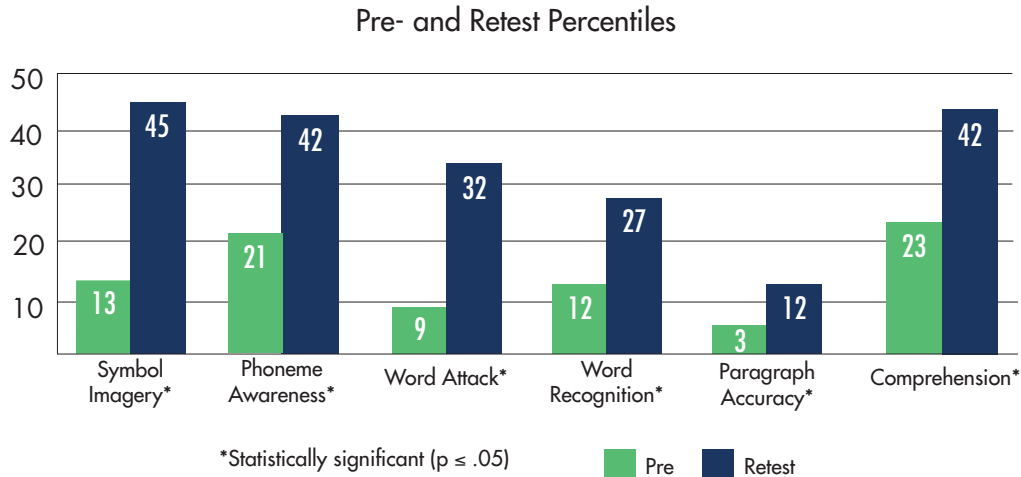**Years:** 2008–2019   **Average Age:** 12.0

Number of Students: 83   **Average Hours of Instruction:** 124.1

Results: On average, students with a prior diagnosis Hyperlexia who received Visualizing and Verbalizing instruction achieved significant improvements in comprehension. They made large (statistically significant) standard score changes on all measures. Additionally, the 12-point percentile increase in receptive (Vocabulary) and expressive (Word Opposites) Vocabulary put these students within the normal range (25th–75th percentile).

Special Education (SPED)

Results of SPED Students Who Received Decoding Instruction Only

Pre- and Retest Percentiles

	Symbol Imagery*	Phoneme Awareness*	Word Attack*	Word Recognition*	Paragraph Accuracy*	Comprehension*
Pre	13	21	9	12	3	23
Retest	45	42	32	27	12	42

*Statistically significant (p ≤ .05)   ■ Pre   ■ Retest

Average Standard Score Changes

Symbol Imagery	Phoneme Awareness	Word Attack	Word Recognition	Paragraph Accuracy	Comprehension
14.1	9.6	13.1	9.0	9.2	7.5

Magnitude of Change

■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Seeing Stars

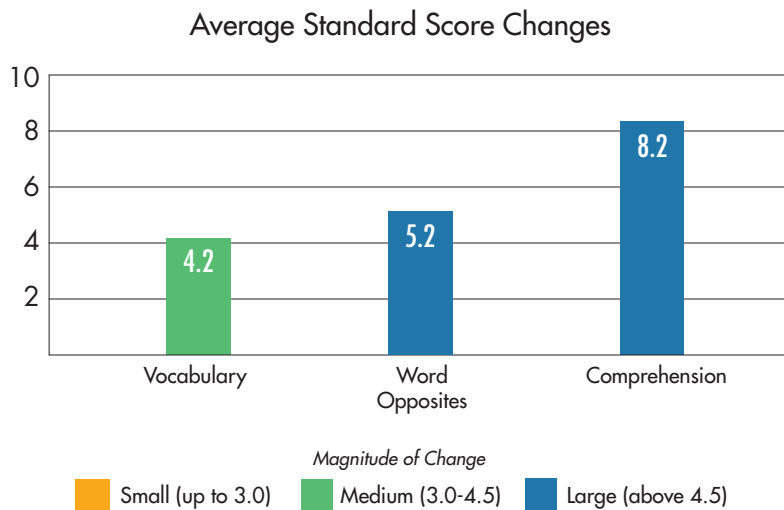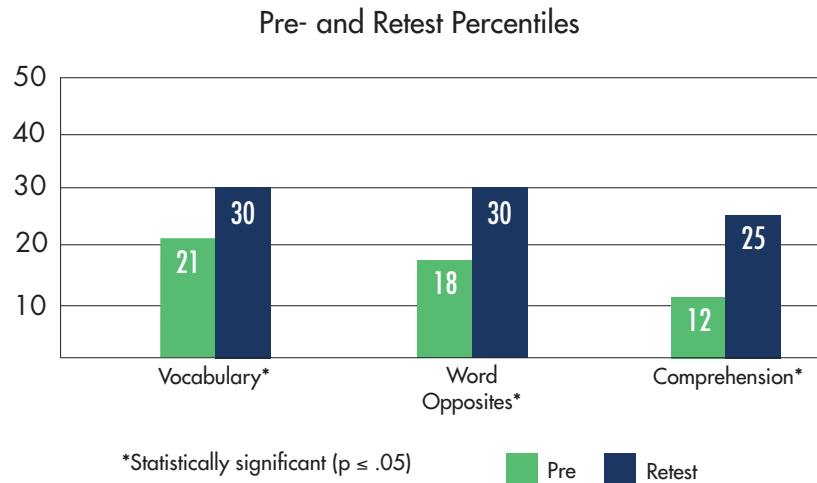**Years:** 2008–2019   **Average Age:** 10.5

Number of Students: 2,150   **Average Hours of Instruction:** 123.2

Results: On average, students receiving Special Education services who received Seeing Stars instruction achieved significant improvements in decoding. They made large (statistically significant) standard score changes on all measures. Additionally, the 15-point percentile increase in Word Recognition and, notably, the 19-point percentile increase in Comprehension puts these students within the normal range (25th–75th percentile).

Special Education (SPED)

Results of SPED Students Who Received Comprehension Instruction Only

Pre- and Retest Percentiles

	Vocabulary*	Word Opposites*	Comprehension*
Pre	21	18	12
Retest	30	30	25

*Statistically significant (p ≤ .05)

■ Pre ■ Retest

Average Standard Score Changes

Vocabulary	Word Opposites	Comprehension
4.2	5.2	8.2

Magnitude of Change

■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Visualizing and Verbalizing

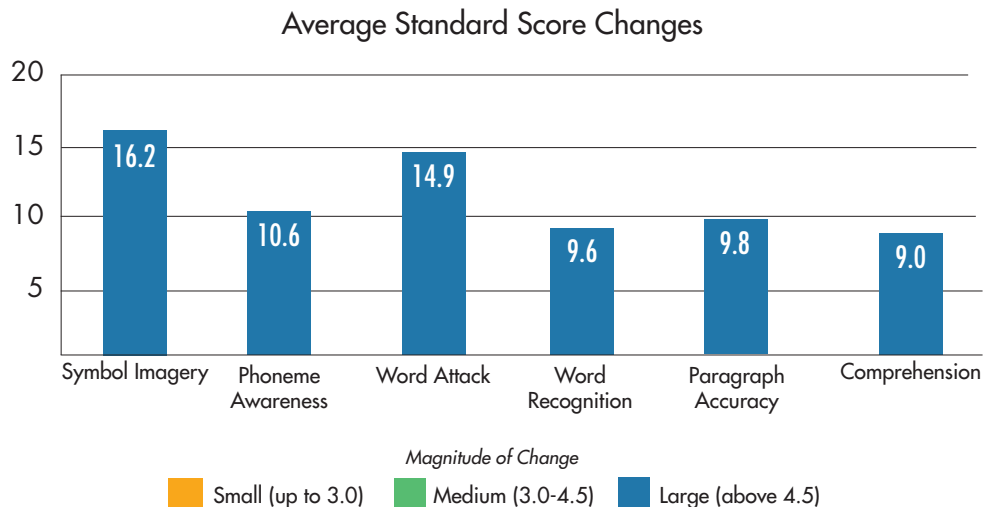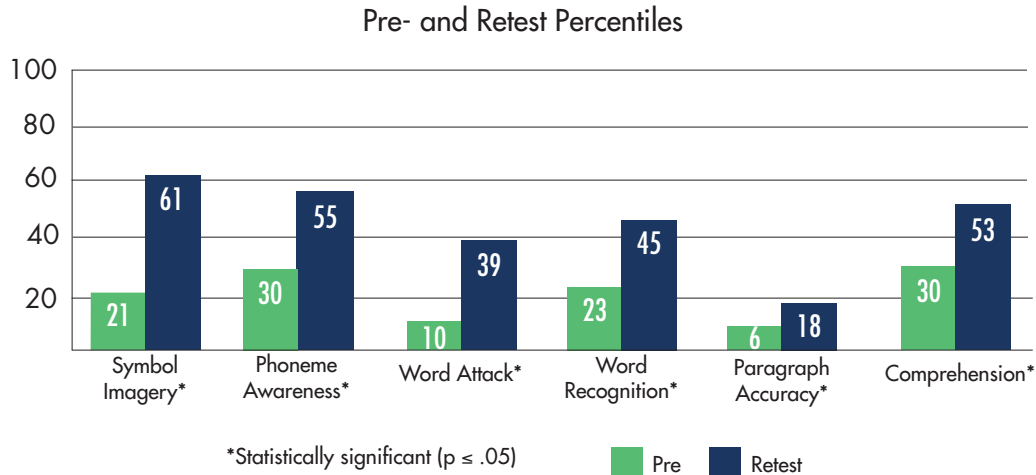**Years:** 2008–2019   **Average Age:** 12.8

Number of Students: 1,655   **Average Hours of Instruction:** 121.6

Results: On average, students receiving Special Education services who received Visualizing and Verbalizing instruction achieved significant improvements in comprehension. They made large (statistically significant) standard score changes on two of the three measures. Additionally, the 13-point percentile increase in language Comprehension, a statistically significant large standard score change, put these students within the normal range (25th–75th percentile).

English as a Second Language (ESL)

Results of ESL Students Who Received Decoding Instruction Only

Pre- and Retest Percentiles

Measure	Pre	Retest
Symbol Imagery*	21	61
Phoneme Awareness*	30	55
Word Attack*	10	39
Word Recognition*	23	45
Paragraph Accuracy*	6	18
Comprehension*	30	53

*Statistically significant (p ≤ .05)   ■ Pre   ■ Retest

Average Standard Score Changes

Measure	Change
Symbol Imagery	16.2
Phoneme Awareness	10.6
Word Attack	14.9
Word Recognition	9.6
Paragraph Accuracy	9.8
Comprehension	9.0

Magnitude of Change
■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood–Bell Instruction Implemented: Seeing Stars
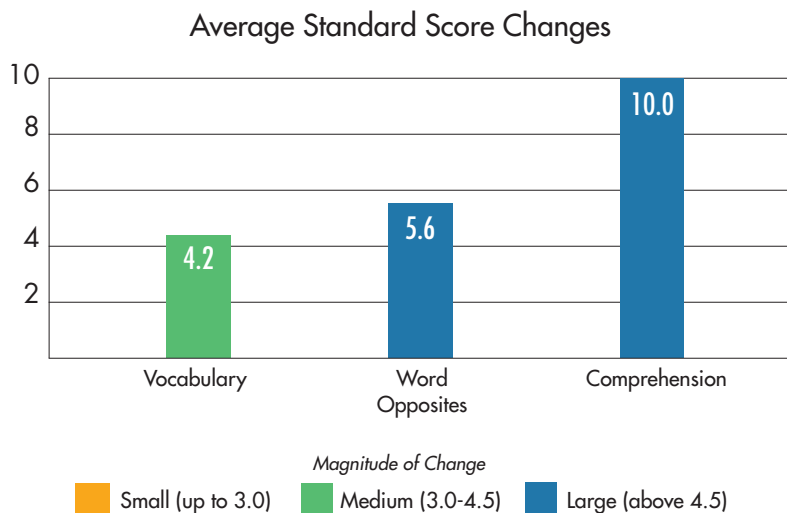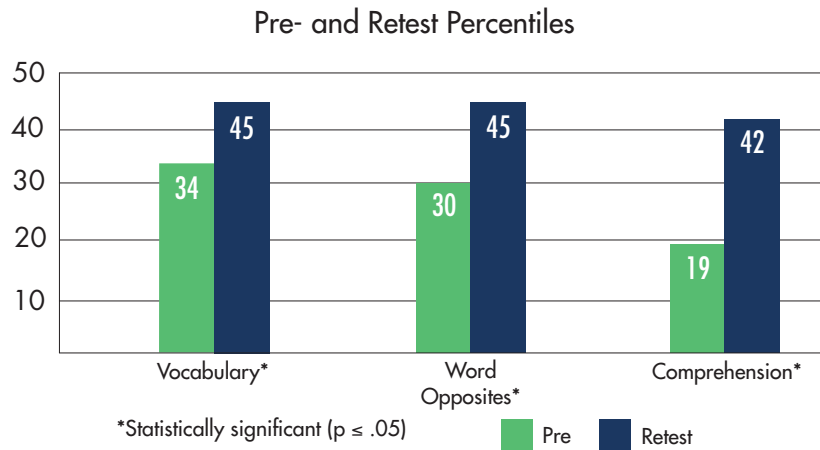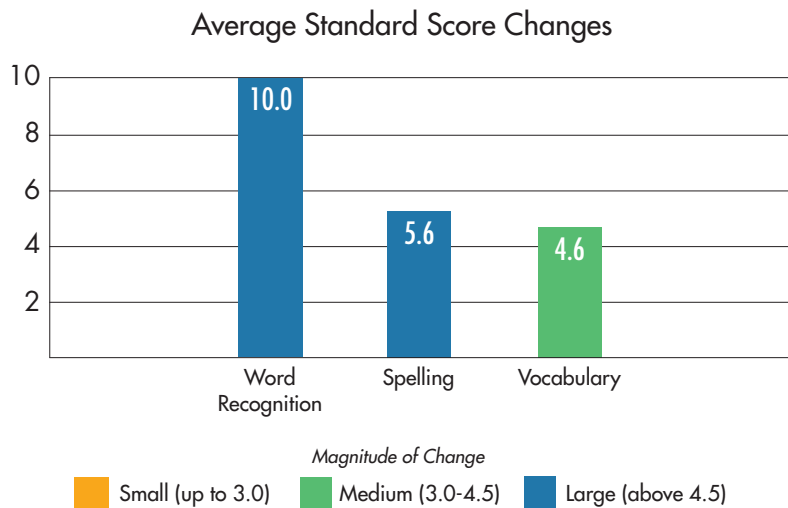
Years: 2008–2019

Average Age: 9.5

Number of Students: 1,877

Average Hours of Instruction: 103.9

Results: On average, ESL students who requested an accelerated approach to develop their decoding skills received instruction in the Seeing Stars program. They achieved excellent improvements on all measures of reading. They made large (statistically significant) standard score changes on all reading measures. As a result of significant improvements in phonological awareness and orthographic awareness (Symbol Imagery), they experienced an average 22-point percentile increase in Word Recognition and a 23-point percentile increase in Comprehension. These increases in their English reading skills put these students well within the normal range (25th–75th percentile).

English as a Second Language (ESL)

Results of ESL Students Who Received Comprehension Instruction Only

Pre- and Retest Percentiles

	Vocabulary*	Word Opposites*	Comprehension*
Pre	34	30	19
Retest	45	45	42

*Statistically significant (p ≤ .05)

Legend: ■ Pre ■ Retest

Average Standard Score Changes

	Vocabulary	Word Opposites	Comprehension
	4.2	5.6	10.0

Magnitude of Change

■ Small (up to 3.0)　■ Medium (3.0-4.5)　■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Visualizing and Verbalizing
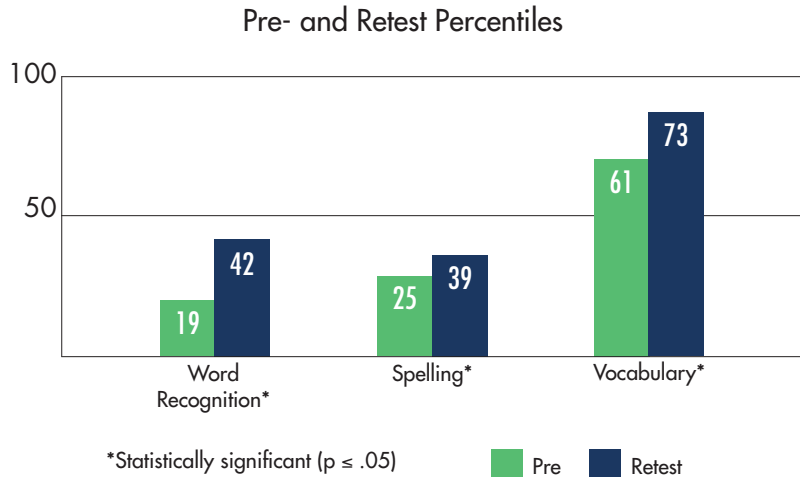
Years: 2008–2019

Average Age: 12.3

Number of Students: 1,284

Average Hours of Instruction: 103.1

Results: On average, ESL students who requested an accelerated approach to increase their vocabulary and comprehension skills received instruction in the Visualizing and Verbalizing program. They achieved excellent improvements in those targeted areas of reading. They made (statistically significant) standard score changes on receptive (Vocabulary) and expressive (Word Opposites) oral vocabulary and reading Comprehension measures. As a result of significant improvements in these students' ability to visualize and verbalize, they experienced an average 23-point percentile increase in reading Comprehension. These increases in their English reading skills put these students well within the normal range (25th–75th percentile).

Pre-Kindergarten

Results of Pre-K Students Who Received Any Program of Instruction

Pre- and Retest Percentiles

Word Recognition*	Pre 19	Retest 42
Spelling*	Pre 25	Retest 39
Vocabulary*	Pre 61	Retest 73

*Statistically significant (p ≤ .05)   ■ Pre   ■ Retest

Average Standard Score Changes

Word Recognition	Spelling	Vocabulary
10.0	5.6	4.6

Magnitude of Change

■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Seeing Stars and Visualizing and Verbalizing

Years: 2008–2019   **Average Age:** 5.5
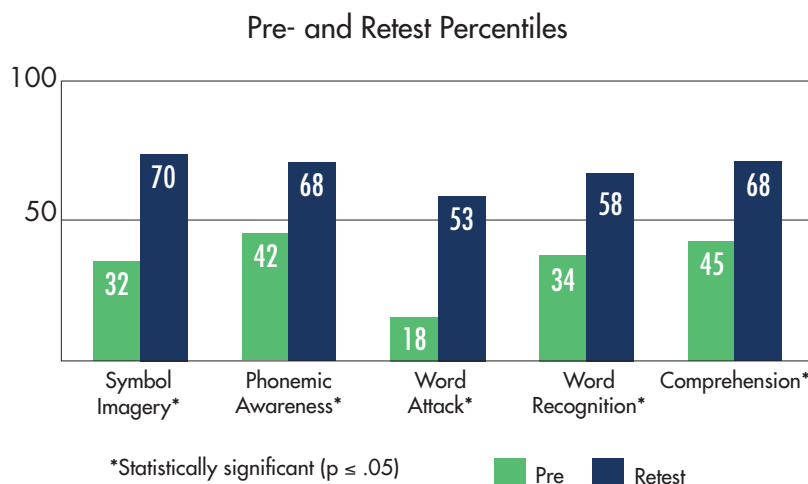
Number of Students: 153   **Average Hours of Instruction:** 95.3

Results: On average, Pre-Kindergarten students who received developmental instruction achieved significant improvements. They made large (statistically significant) standard score changes on two of the three measures. Additionally, the 23-point percentile increase in Word Recognition put these students within the normal range (25th–75th percentile).

Gifted

Results of Gifted Students Who Received Decoding Instruction Only
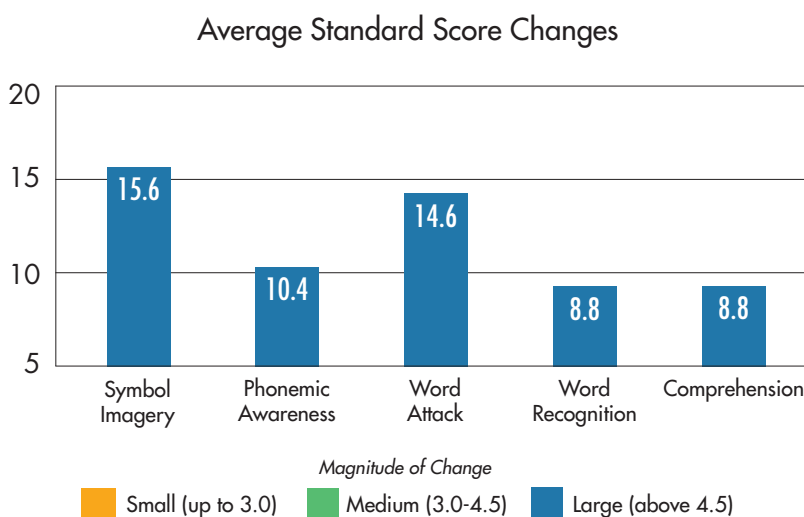
Pre- and Retest Percentiles

Measure	Pre	Retest
Symbol Imagery*	32	70
Phonemic Awareness*	42	68
Word Attack*	18	53
Word Recognition*	34	58
Comprehension*	45	68

*Statistically significant (p ≤ .05)

Pre ■ Retest ■

Average Standard Score Changes

Measure	Change
Symbol Imagery	15.6
Phonemic Awareness	10.4
Word Attack	14.6
Word Recognition	8.8
Comprehension	8.8

Magnitude of Change

■ Small (up to 3.0) ■ Medium (3.0-4.5) ■ Large (above 4.5)

Summary

Lindamood–Bell Instruction Implemented: Seeing Stars

Years: 2008–2019   **Average Age:** 9.9

Number of Students: 517   **Average Hours of Instruction:** 92.4

Results: On average, students categorized as Gifted who received Seeing Stars instruction achieved significant improvements in reading. They made large (statistically significant) standard score changes on all measures.

Middle School

Results of Middle School Students Who Received Comprehension Instruction Only
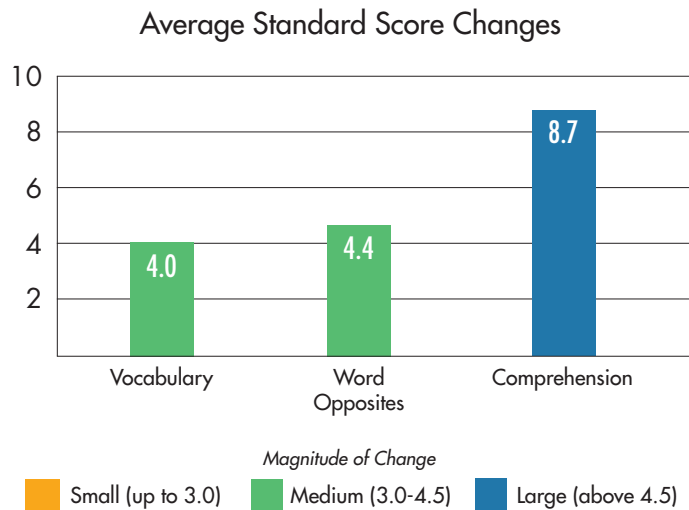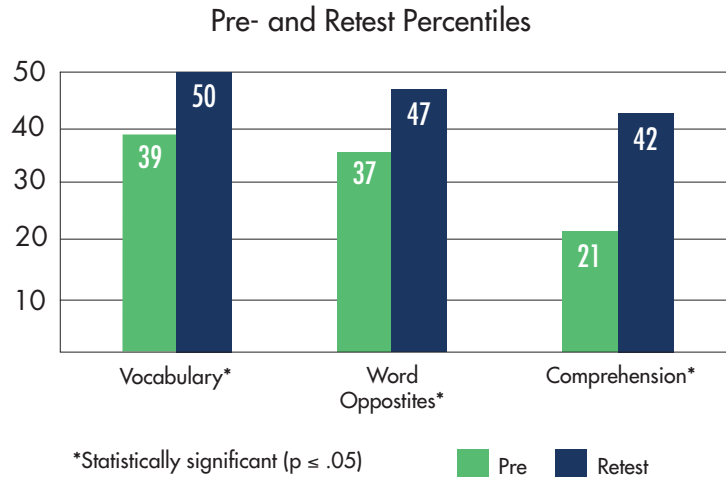
Pre- and Retest Percentiles

	Vocabulary*	Word Oppostites*	Comprehension*
Pre	39	37	21
Retest	50	47	42

*Statistically significant (p ≤ .05)

■ Pre ■ Retest

Average Standard Score Changes

Vocabulary	Word Opposites	Comprehension
4.0	4.4	8.7

Magnitude of Change

■ Small (up to 3.0) ■ Medium (3.0-4.5) ■ Large (above 4.5)

Summary

Lindamood–Bell Instruction Implemented: Visualizing and Verbalizing
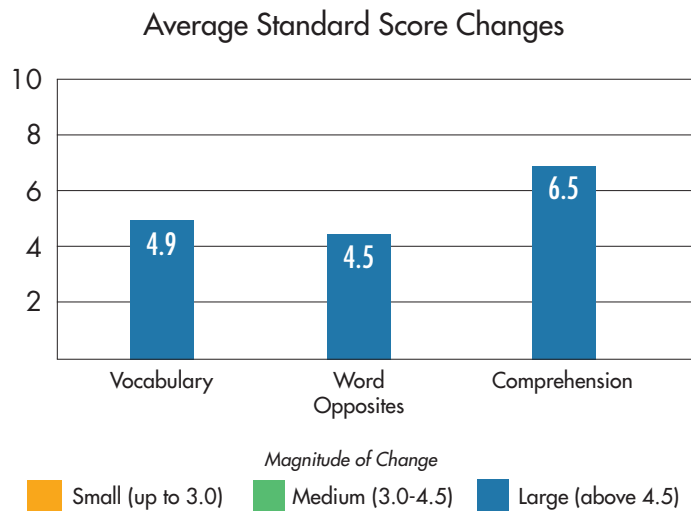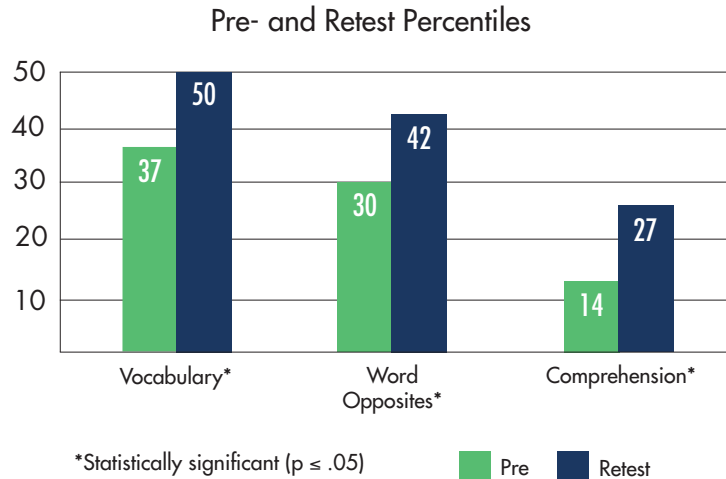
Years: 2008–2019 **Average Age:** 13.1

Number of Students: 1,499 **Average Hours of Instruction:** 103.6

Results: On average, Middle School students who received Visualizing and Verbalizing instruction achieved significant improvements in comprehension. They made large (statistically significant) standard score changes on their language Comprehension measure. Additionally, the 21–point percentile increase in Comprehension put these students within the normal range (25th–75th percentile).

High School

Results of High School Students Who Received Comprehension Instruction Only
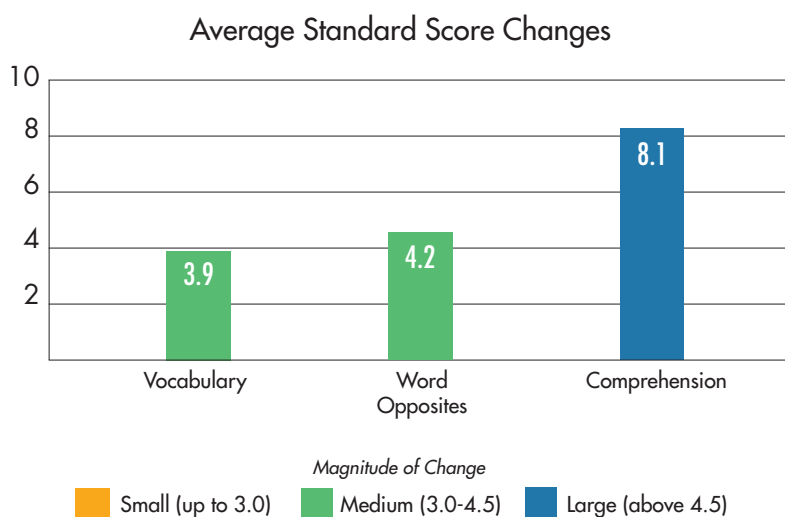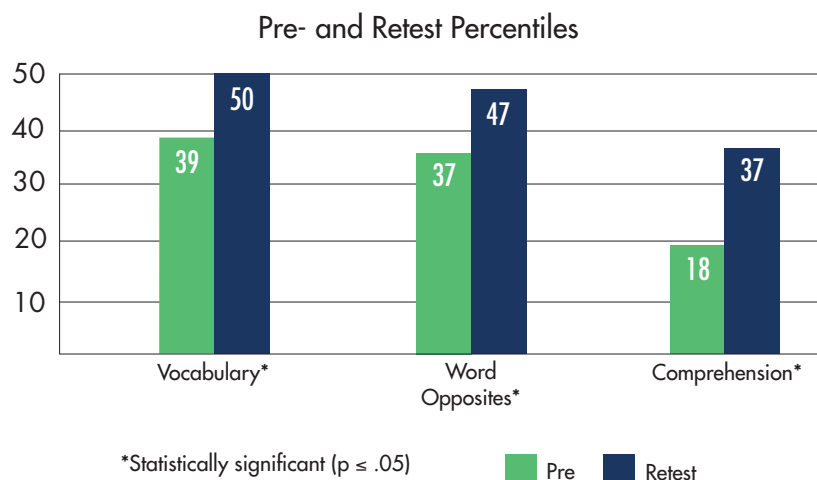
Pre- and Retest Percentiles

Vocabulary*		Word Opposites*		Comprehension*	
39	50	37	47	18	37

*Statistically significant (p ≤ .05)

■ Pre ■ Retest

Average Standard Score Changes

Vocabulary	Word Opposites	Comprehension
3.9	4.2	8.1

Magnitude of Change

■ Small (up to 3.0) ■ Medium (3.0-4.5) ■ Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Visualizing and Verbalizing

Years: 2008–2020   **Average Age:** 16.3
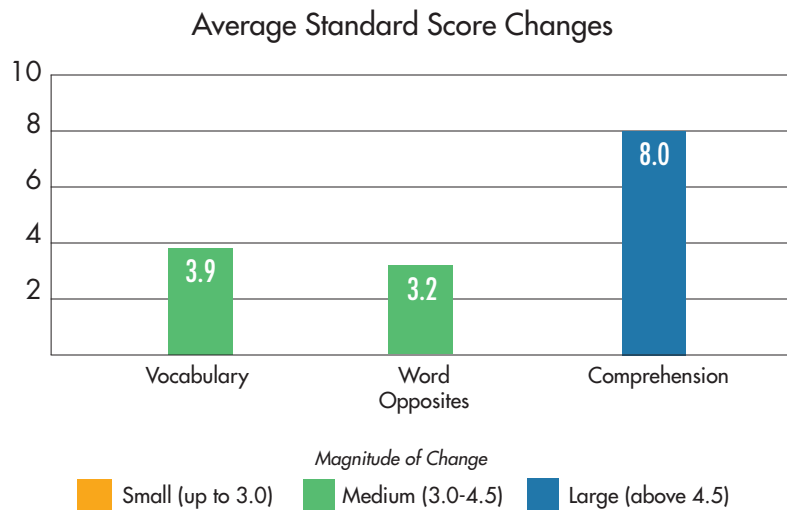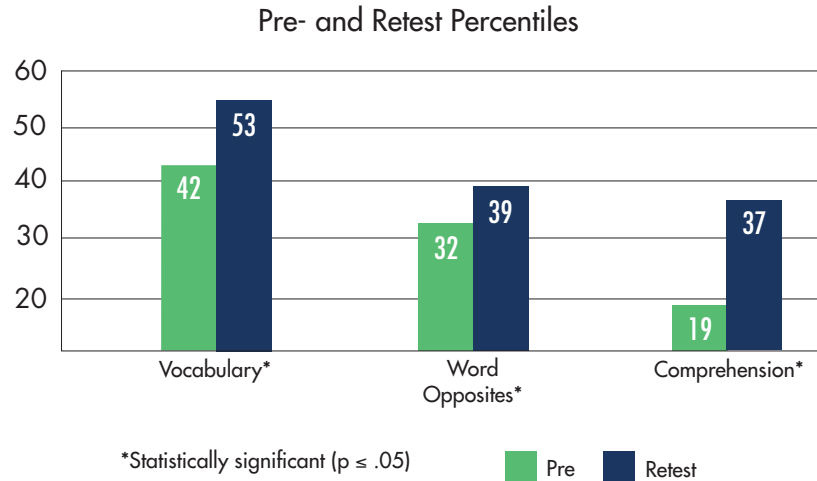
Number of Students: 791   **Average Hours of Instruction:** 102.0

Results: On average, High School students who received Visualizing and Verbalizing instruction achieved significant improvements in comprehension. They made medium (statistically significant) standard score changes on two of the three measures and significantly large growth (a 19-point percentile increase) in language Comprehension. That growth put these students well within the normal range (25th–75th percentile).

College–Aged

Results of College-Aged School Students Who Received Comprehension Instruction Only

Pre- and Retest Percentiles

*Statistically significant (p ≤ .05)   ■ Pre   ■ Retest

Average Standard Score Changes

Magnitude of Change

■ Small (up to 3.0)   ■ Medium (3.0-4.5)   ■ Large (above 4.5)

Summary

Lindamood–Bell Instruction Implemented: Visualizing and Verbalizing

Years: 2008–2019   **Average Age:** 20.2

Number of Students: 159   **Average Hours of Instruction:** 113.0

Results: On average, College–Aged students who received Visualizing and Verbalizing instruction achieved significant improvements in comprehension. They made large (statistically significant) standard score changes on all measures.

Adult

Results of Adult Students Who Received Comprehension Instruction Only

Pre- and Retest Percentiles

Vocabulary*: Pre 42, Retest 53
Word Opposites*: Pre 32, Retest 39
Comprehension*: Pre 19, Retest 37

*Statistically significant (p ≤ .05)
Pre / Retest

Average Standard Score Changes

Vocabulary: 3.9
Word Opposites: 3.2
Comprehension: 8.0

Magnitude of Change
Small (up to 3.0) Medium (3.0-4.5) Large (above 4.5)

Summary

Lindamood-Bell Instruction Implemented: Visualizing and Verbalizing

Years: 2008–2019　　　　　**Average Age:** 36.1

Number of Students: 145　　　　**Average Hours of Instruction:** 100.7

Results: On average, Adult students who received Visualizing and Verbalizing program instruction achieved significant improvements in comprehension. They made medium (statistically significant) standard score changes on two of the three measures, while experiencing a statistically-significant large increase in reading Comprehension. These changes placed them well into the normal range of functioning (25th–75th percentile).

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