
RESEARCH SUPPORTING
Reading Horizons
IN CORRECTIONAL SETTINGS

*Reading Horizons helps students in
correctional settings make quick gains in
reading. Research proves it.*

ACKNOWLEDGMENTS

This summary of studies was developed through the combined work of several individuals.

We are particularly indebted to each site that implemented the Reading Horizons program and agreed to collect and share student outcome data. Without their willingness and efforts, this summary of studies would not have been possible.

The RISE Institute for Literacy provided valuable insights throughout the compilation of the research.

Additionally, we would like to recognize the contribution of Holly A. Hyte, a representative of the independent educational research firm Clear Insight for guidance in the tasks of data analysis and interpretation of outcomes. We would also like to recognize the Reading Horizons representatives who supported the data collection efforts across several research sites and who worked to extend product use to communities who will benefit from the systematic Reading Horizons approach.

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Reading Horizons®

IN CORRECTIONAL SETTINGS

Overview of the Reading Horizons Approach

Reading Horizons is a program designed to help struggling readers and English Language Learners develop skills that make reading automatic, fluent, meaningful, and enjoyable. The Reading Horizons methodology (formerly known as Discover Intensive Phonics) delivers engaging, explicit, systematic phonics instruction through a multisensory approach based on Orton-Gillingham principles. Instruction is cumulative and organized in a sequence that enhances learning and simplifies teaching. Each sound of the English language is explicitly taught along with the letter(s) that represent the sound. Five Phonetic Skills are taught to help students recognize short and long vowel patterns in words and syllables. Two Decoding Skills are presented to show students how to decode multisyllabic words.

The multisensory approach used with the Reading Horizons methodology enhances learning and memory by engaging auditory, visual, and kinesthetic modalities simultaneously during instruction. A unique marking system is employed to draw student attention to the features and patterns of English as well as to give visual cues for pronunciation. Throughout the course of instruction, students are provided with engaging activities for practice and application of the skills learned.

Reading Horizons Elevate® is used as a literacy curriculum in both juvenile detention and adult correctional education settings. The *Reading Horizons Elevate*® program correlates with the five pillars of effective reading instruction as identified by the National Reading Panel (National Institute of Child Health and Human Development [NICHD] in 2000). (See the Reading Horizons Research Base White Paper for more detailed information at www.ReadingHorizons.com/RESEARCH.)

Research Proving the Effectiveness of the Reading Horizons Approach

Reading Horizons recognizes the importance of conducting research to demonstrate the validity of its methodology and effectiveness of its products. Reading Horizons research has been conducted over the last two decades in a variety of educational settings. The following studies provide a summary of results from just a few of these settings and represent diverse student populations. Ongoing research relating to Reading Horizons methodology and products continues, as true research requires a continual process.

CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION
PERRAULT CORRECTIONS CENTER
HUGHES YOUTH CORRECTIONS
MILLINGTON YOUTH CENTER

CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION

Summary of Findings

TYPE OF STUDY

Pre-/Post-

TYPE OF SCHOOL

Rehabilitation and corrections

POPULATION OF STUDENTS

Rehabilitation and corrections, linguistically diverse (ELL)

GRADE LEVEL

Adult education

LENGTH OF DATA COLLECTION

3 years

LOCATION

Western United States, Pacific Region

NUMBER OF SITES

19 of 23 correctional facilities participated in data collection

NUMBER OF STUDENTS

2,500 inmates; pre- and post- scores gathered on 400 participants

READING HORIZONS MATERIALS

Interactive software

ASSESSMENT TOOLS

Wide Range Achievement Test (WRAT); Test of Adult Basic Education (TABE); Word Recognition Assessment in Reading Horizons interactive software; participant surveys

Inmates reading below a fourth-grade level received instruction in Reading Horizons. Forty percent of inmates in the program gained more than 3.5 grade levels in their reading skills. Ninety-five percent of inmates said they thought the software helped them learn to read better.

Background

California State University conducted a three-year project investigating inmate literacy. Project leads reviewed 24 literacy programs and then selected Reading Horizons interactive software for use in the project.

Resources

Reading Horizons interactive software, California State University project resources, educational programs and computer labs on site.

Implementation

Inmates were pre-tested and then placed in one of two intervention groups: reading at or above fourth-grade level/reading below fourth-grade level. All inmates who scored below a fourth-grade reading level on the formative assessment received Reading Horizons instruction. Additionally, many inmates reading above a fourth-grade level received Reading Horizons instruction. To measure growth, post-tests were administered six months after pre-tests. Pre- and post-test scores on the Wide Range Achievement Test were obtained from 19 of 23 facilities for 400 inmates, representing 16% of all inmates receiving Reading Horizons instruction. Additionally, 21 inmates were selected to participate in a social validity survey.

Outcomes

A weighted average was calculated and yielded a 2.1 grade level increase in participant reading scores, measured by the Wide Range Achievement Test (WRAT) (Visual 1).

Visual 1				
PER-SITE AVERAGE SCORES ON THE WRAT BEFORE AND AFTER READING HORIZONS INSTRUCTION				
SITE	PRE-TEST	POST-TEST	GAIN	PARTICIPANTS (n=400)*
FACILITY 1	5.2	8.1	2.9	48
FACILITY 2	~	~	~	~
FACILITY 3	5.7	9.8	4.1	10
FACILITY 4	~	~	~	~
FACILITY 5	~	~	~	~
FACILITY 6	2.1	4.3	2.2	1
FACILITY 7	8.4	9.5	1.1	38
FACILITY 8	5.5	5.9	0.4	25
FACILITY 9	2.4	3.4	1	1
FACILITY 10	7.9	9.5	1.6	11
FACILITY 11	5.3	7.7	2.4	36
FACILITY 12	2.2	4.4	2.2	10
FACILITY 13	2.6	4.9	2.3	4
FACILITY 14	5.7	8.2	2.5	39
FACILITY 15	3.7	6.7	3	12
FACILITY 16	3.6	5.5	1.9	67
FACILITY 17	5.1	7.5	2.4	35
FACILITY 18	4.5	5	0.5	24
FACILITY 19	7.3	11.3	4	21
FACILITY 20	4	3.4	-0.6	3
FACILITY 21	3.7	5	1.3	11
FACILITY 22	~	~	~	~
FACILITY 23	2.1	4.2	2.1	4
AVERAGE	5.2	7.3	2.1 grades†	
*Several sites reported that more inmates participated in the program; however, pre-/post-test scores were submitted only for this number of participants.				
~ Four facilities did not submit data.				
†Weighted average (Note: when site average and number of participants at each site are available, a weighted average can be calculated to find the average participant gain).				

Gains for inmates of selected ethnic backgrounds were reported. Inmates of Hispanic ethnicity made the greatest gains, followed by inmates of black ethnicity (Visual 2).

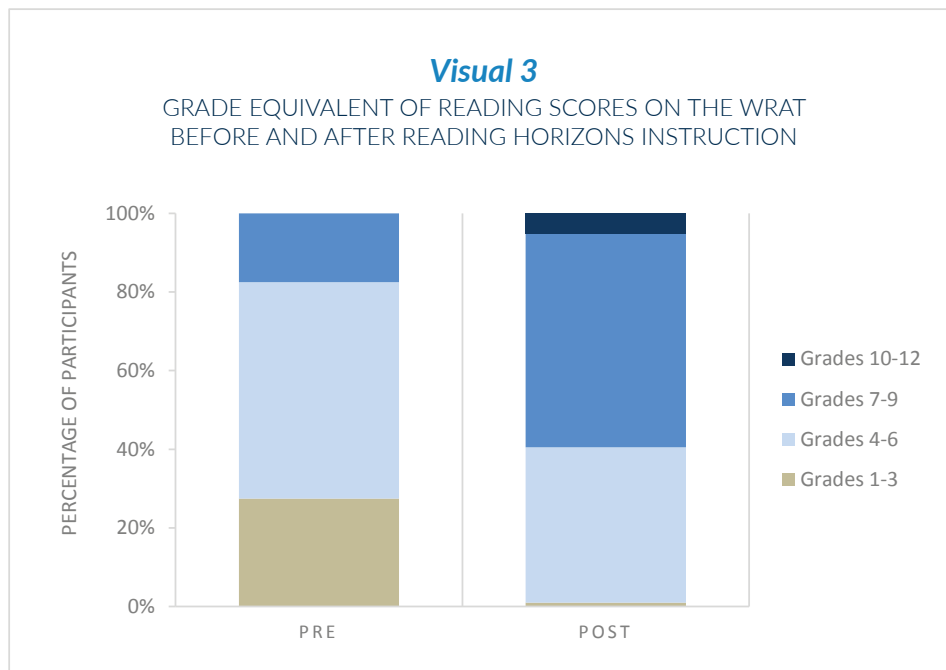
Visual 2
GRADE GAINS AFTER READING HORIZONS INSTRUCTION,
REPORTED PER ETHNICITY, AS MEASURED BY THE WRAT

RACIAL & ETHNIC BACKGROUND	PARTICIPANTS (n=400)*	PRE-TEST	POST-TEST	GAIN
AMERICAN INDIAN	1	4.2	4.2	0
ASIAN	6	4	6	2
WHITE	17	4.2	5.7	1.5
OTHER	31	5.5	5.9	0.4
BLACK	74	4.9	6.6	1.7
HISPANIC	270	5.4	7.8	2.4
AVERAGE		5.2	7.3	2.1

*Several sites reported that more inmates participated in the program; however, pre-/post-test scores were submitted only for this number of participants.

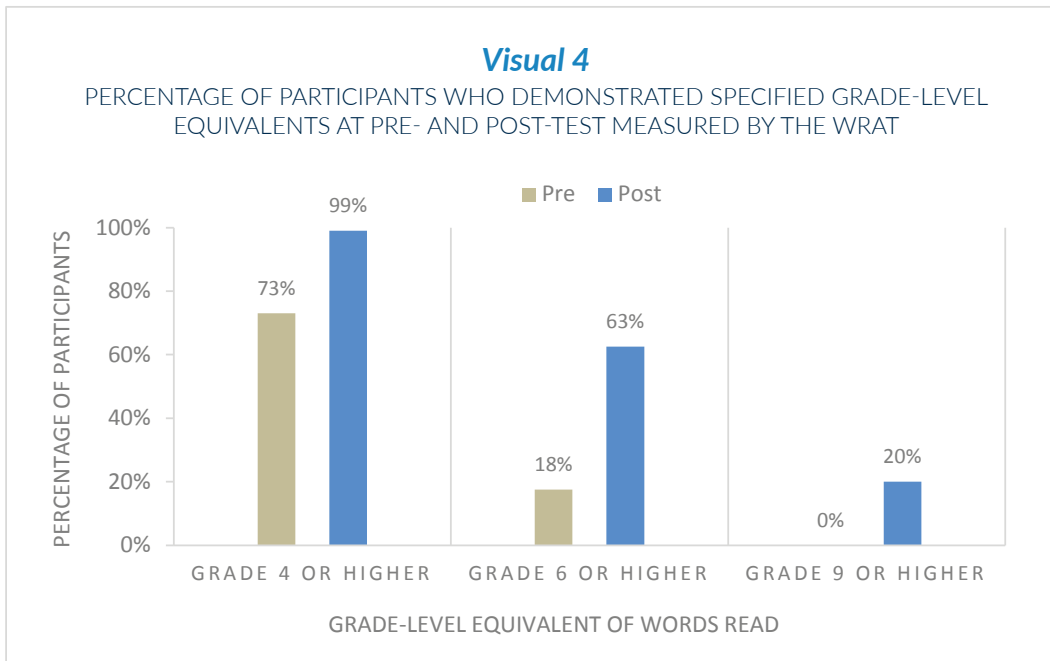
Note: Due to the small number of participants in some ethnic groups in this study, caution must be taken in generalizing outcomes to others who match the demographic.

Comparison of data before and after Reading Horizons instruction shows movement from reading skills at lower grade equivalents to higher grade equivalents by participants on the WRAT (Visual 3).



Visual 4 depicts word reading outcomes in more detail:

- Participants who demonstrated reading skills at or above a fourth-grade reading level increased from 73% before Reading Horizons instruction to 99% after Reading Horizons instruction. In other words, 110 participants were reading below a fourth-grade level before Reading Horizons, and after Reading Horizons instruction, only four participants were.
- Before Reading Horizons instruction, less than 20% of participants demonstrated reading skills at or above a sixth-grade level. After Reading Horizons instruction, more than 60% of participants were reading at least a sixth-grade level as measured by the WRAT.
- None of the participants were reading at or above a ninth-grade level at pre-test. After Reading Horizons instruction, 20% of participants were reading at a ninth-grade level or above.



Social validity survey:

- 95% of participants said they thought the software on the computer helped them read better.
- 90% of participants said they were comfortable working on the computer.
- 90% of participants felt that their work on the computer helped them to understand English better.

PERRAULT CORRECTIONS CENTER

Summary of Findings

TYPE OF STUDY

Pre-/Post-

TYPE OF SCHOOL

Corrections

POPULATION OF STUDENTS

*Rehabilitation and corrections,
linguistically diverse (ELL)*

GRADE LEVEL

Adult education

LENGTH OF DATA COLLECTION

15 months

LOCATION

*Midwestern United States,
East North Central Region*

POPULATION OF CITY

180,297

NUMBER OF STUDENTS

107 participants

READING HORIZONS MATERIALS

*Direct instruction and
interactive software*

ASSESSMENT TOOLS

Unknown

Residents who received Reading Horizons instruction improved their scores, on average, from a fourth- to a sixth-grade reading level.

Background

A rehabilitation and correctional facility received a grant to improve their educational services for residents and selected Reading Horizons for implementation in their program. For the term of the grant, the goal was to serve 63 residents. Throughout the time of data collection, 264 residents lived in the facility and 107 participated in the Reading Horizons program (40.5%). Therefore, the number of residents who participated exceeded the estimation for the grant.

Resources

Reading Horizons direct instruction and interactive software.

Implementation

Based on need, residents participated in an Adult Basic Education (ABE) or General Educational Development (GED) class. Reading Horizons was used in the ABE class. Scores reported are based on student performance in the ABE class only. Scores were recorded prior to residents beginning the program and again at the end of their time in the facility or at program completion. Although the name of the assessment tool used to measure progress was not included in the study, four skill areas were assessed: reading comprehension, reading vocabulary, spelling, and English. Eighteen ABE class participants (16.8% of the students) had earned a high school diploma or GED prior to entering the facility. Thirty-one participants (28.9%) began the program reading at or below a third-grade level and received a tutor in addition to participating in the ABE class. On average, students spent 3.4 months in the ABE class.

Outcomes

- 28% of participants who entered the program without a diploma/GED improved their reading skills to a level that enabled them to transition from the ABE class to the GED class.
- 16.8% of participants who had earned a diplomas/GED prior to entry into the facility but had performed low enough on the pre-test to require ABE-level instruction also demonstrated sufficient improvement to transition from the ABE class to the GED class.
- Participants gained an average of nearly 2.2 grade levels in reading comprehension after Reading Horizons instruction (Visual 1).
- Reading vocabulary scores increased an average of nearly one grade level (Visual 1).
- Participants increased their spelling scores by an average of 1.22 grade levels during their short time in the program (Visual 1).
- In the areas of reading comprehension, reading vocabulary, and spelling, the average entrance scores were below sixth-grade level. After Reading Horizons instruction, the average scores for participants were above sixth-grade level (Visual 1).
- Following Reading Horizons instruction, English scores increased an average of nearly one grade level (Visual 2).

Visual 1			
GRADE-EQUIVALENT READING SCORES BEFORE AND AFTER READING HORIZONS INSTRUCTION			
	PRE-TEST	POST-TEST	GAIN
READING COMPREHENSION	4.6	6.79	2.19
READING VOCABULARY	5.12	6.1	0.98
SPELLING	5.18	6.4	1.22
TOTAL	4.96	6.43	1.47

Visual 2			
GRADE-EQUIVALENT SCORES IN ENGLISH BEFORE AND AFTER READING HORIZONS INSTRUCTION			
	PRE-TEST	POST-TEST	GAIN
ENGLISH	4.47	5.39	0.93

HUGHES YOUTH CORRECTIONS

Summary of Findings

Every participant demonstrated gains as measured by the Reading Horizons assessment.

TYPE OF STUDY

Pre-/Post-

TYPE OF SCHOOL

Juvenile corrections

POPULATION OF STUDENTS

Rehabilitation/Corrections

GRADE LEVEL

Secondary

LENGTH OF DATA COLLECTION

7 months

LOCATION

*Western United States,
Pacific Region*

POPULATION OF CITY

536,978

NUMBER OF STUDENTS

14 students

READING HORIZONS MATERIALS

*Direct instruction and
interactive software*

ASSESSMENT TOOLS

*Word Recognition Assessment in
the Reading Horizons software*

Background

A youth corrections facility conducted a pilot study to investigate the effectiveness of Reading Horizons interactive software. More youth participated in Reading Horizons instruction than were included in the reported outcomes.

Resources

Reading Horizons interactive software.

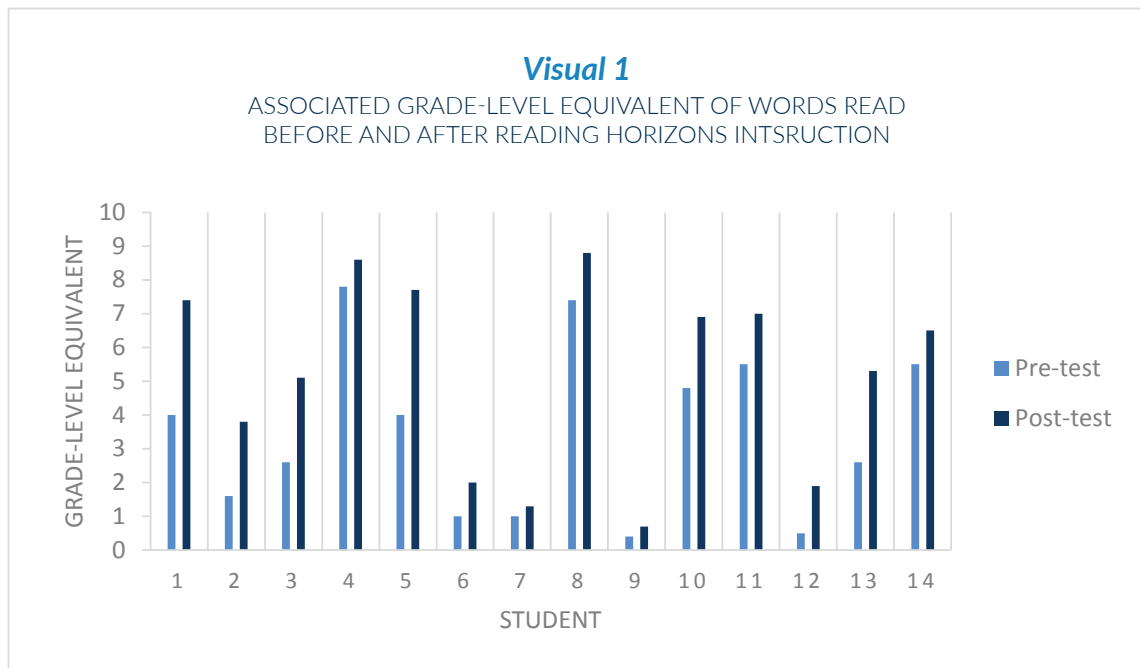
Implementation

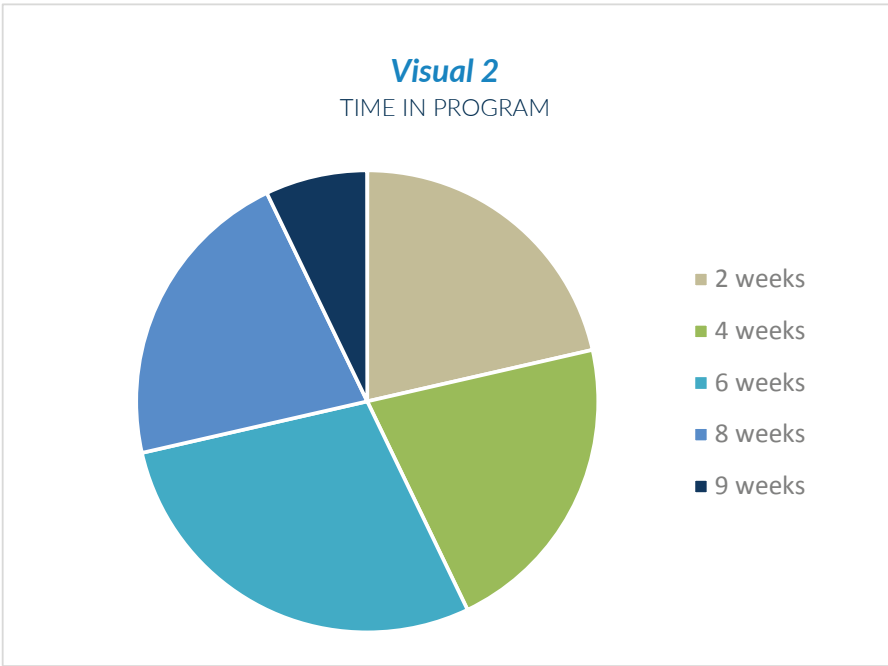
Pre- and Post-test scores were gathered using the Reading Horizons assessment in the software. In this assessment, word lists of increasing difficulty are read, and scores are based on corresponding grade equivalents. Levels on the test range from 0.0 to 12.0. Outcomes were reported for fourteen participants. Not all participants had completed the Reading Horizons program at post-test.

Outcomes

Outcomes for fourteen youth whose specific scores were reported:

- Every participant demonstrated gains as measured by the Reading Horizons assessment (Visual 1).
- Participants had been in the Reading Horizons program an average of five weeks (range: 2-9 weeks) (Visual 2).
- On average, participants demonstrated gains of 1.74 levels (range: 0.3 – 3.7).





Outcomes for all youth who participated in the pilot:

- Reported outcomes of fourteen participants represent students at various levels of progression in the Reading Horizons program; however, upon broader analysis of all youth in the facility who completed the Reading Horizons program, gains of three or four levels in a period of six weeks to two months were demonstrated.
- During the pilot, educators observed that students who had given up hope of a better future gained powerful motivation as they learned to read.

MILLINGTON YOUTH CENTER

Summary of Findings

TYPE OF STUDY

Pre-/Post-

TYPE OF SCHOOL

Residential treatment center

POPULATION OF STUDENTS

Special needs;
linguistically-diverse (ELL);
challenging behavior

GRADE LEVEL

Middle and high school/
adolescent, ages 12-18

LENGTH OF DATA COLLECTION

5 months

LOCATION

Western United States,
Mountain Region

POPULATION OF CITY

104,449

NUMBER OF STUDENTS

29 students

READING HORIZONS MATERIALS

Interactive software

ASSESSMENT TOOLS

Word Recognition Assessment
and Most Common Words
Assessment in the Reading
Horizons software

Medical and educational needs of participants had been a barrier to their academic progress. Use of Reading Horizons interactive software with this population of students contributed to ability to read words of increasing difficulty and an ability to read more words on lists of Most Common Words.

Background

This residential youth facility was established to meet the needs of adolescents with medical issues and academic challenges. The participants in the study were identified with at least one, and frequently a combination, of the following: intellectual disability, low IQ, suicidal, bipolar, ADD, aspergers, conductive hearing loss, fetal alcohol syndrome, speech and language disorder, and low retention. Some students were also linguistically-diverse. Needs resulted in low attendance for some participants. Most participants in the study had a history or reading difficulties and challenging behavior. Most participants began with at least a two grade-level deficit in reading skills.

Resources

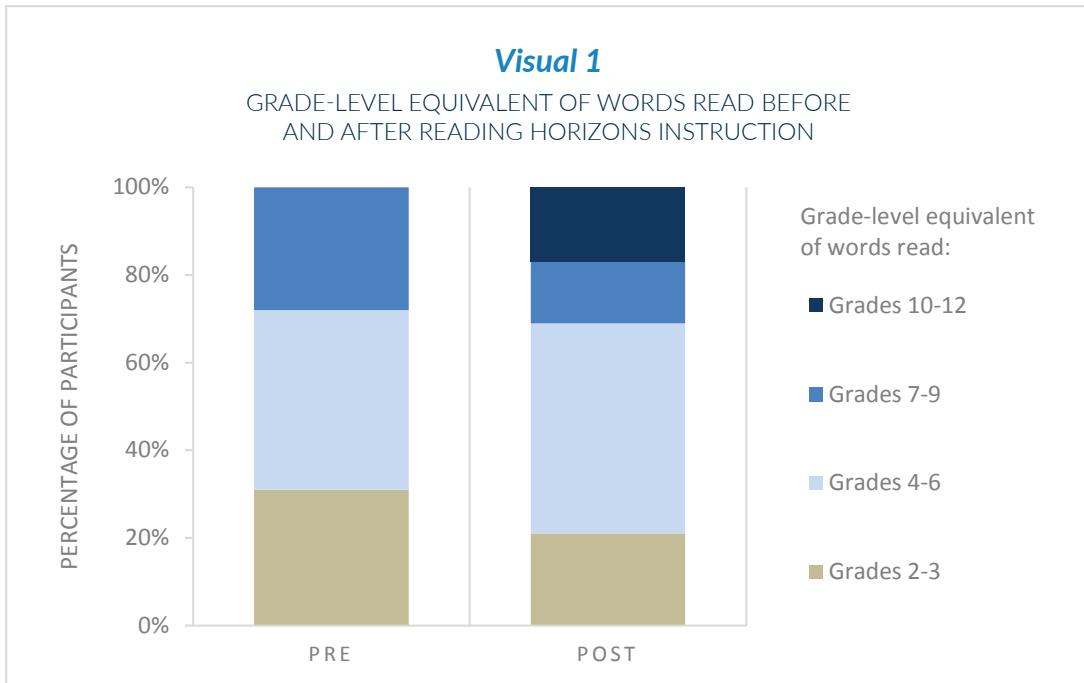
Reading Horizons interactive software.

Implementation

Reading Horizons interactive software was implemented with participants. The Word Recognition Assessment and the Most Common Words Assessment were administered before and after software use. The Word Recognition Assessment provides students an opportunity to read word lists of increasing difficulty and receive a score based on corresponding grade equivalents. Levels on the test range from 0.0 to 12.0. The Most Common Words Assessment score is the percentage of sight words and high-frequency words read correctly on the list.

Outcomes

Comparison of data before and after Reading Horizons instruction shows movement from lower grade-level equivalents to higher grade-level equivalents of words read by participants on the Reading Horizons Word Recognition Assessment (Visual 1).





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