Read Naturally®

Rationale & Research

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Read Naturally Rationale

The Read Naturally® program provides a method to improve reading fluency. Fluency is the ability to read like you speak—accurate reading of connected text, at a conversational rate, with appropriate prosody or expression (Hudson, Lane, & Pullen, 2005). Most struggling readers have fluency problems and spend little time reading. The Read Naturally program combines three powerful strategies for improving fluency: teacher modeling, repeated reading, and progress monitoring.

Struggling Readers Often Have Fluency Problems

Picture in your mind one of your struggling readers. Turn on the audio portion of your brain and listen to that student read. You would probably describe that student's reading as word-by-word, halting, slow, and laborious. Students with these characteristics associated with their reading have a fluency problem. Educators often describe reading problems in terms of fluency, indicating that teachers know fluency is an important component of good reading. Research demonstrates a strong correlation between fluency and reading comprehension (Armstrong, 1983; Breznitz, 1987; Fuchs, Fuchs, Hosp, & Jenkins, 2001; Knupp, 1988; Lesgold, 1985). Consequently, teachers need to develop the fluency of their students.

Struggling Readers Do Not Read Enough

Students become fluent readers by reading (Allington, 1983). Yet in our elementary schools, students read an average of only seven to eight minutes a day (U.S. Department of Education). Struggling readers read even less—hardly enough time to become proficient at something as difficult as learning to read. Struggling readers cannot or will not independently read the books in classroom libraries. When asked to read quietly, they sometimes pretend to read. Often these students cannot read the basals and anthologies in use in their classroom. Also, poor fluency is a self-perpetuating problem. Struggling readers read so few words during their instructional and independent reading time that the gap between them and their peers continually widens.

What Struggling Readers Need to Become Fluent

Struggling readers need a safe, structured, and highly motivating opportunity to engage in reading on a daily basis. Research supports **teacher modeling**, **repeated reading**, and **progress monitoring** as ways to involve struggling readers in the act of reading in order to improve their fluency and accelerate their reading achievement.

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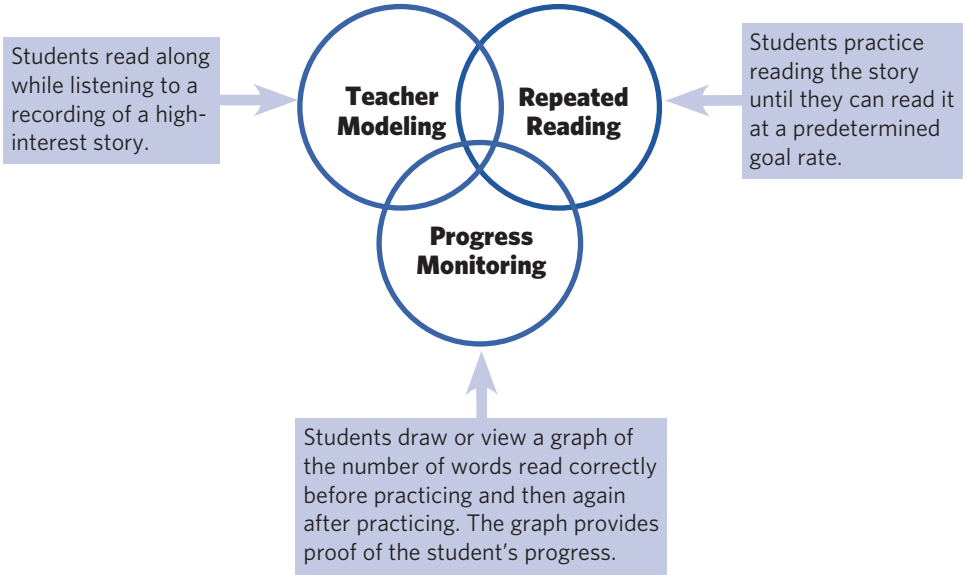
Teacher modeling improves the reading fluency of students (Daly & Martens, 1994; Eldredge & Quinn, 1988; Heckelman, 1969; Kuhn & Stahl, 2003; McAllister, 1989; Reitsma, 1988; Skinner, Logan, Robinson, & Robinson, 1997). Teacher modeling consists of a proficient reader modeling good, correct reading for a less able reader. Examples of this strategy are dyad reading, echoic reading, NIM (neurological impress method), and choral reading.

Repeated reading also improves fluency (Dowhower, 1987; Knupp, 1988; Koskinen & Blum, 1984; Kuhn & Stahl, 2003; LaBerge & Samuels, 1974; Larking, 1988; O'Shea, Sindelar, & O'Shea, 1985; Rashotte & Torgeson, 1985; Richek & McTague, 1988). With this strategy, the student reads a story of 100 to 200 words many times until able to read it fluently.

Finally, **daily monitoring of student progress** improves student achievement (Schunk, 1982). Monitoring increases student involvement in the learning process and promotes teacher awareness of each student's progress. By communicating goals and expectations, a teacher can increase students' academic achievement (Althoff, Linde, Mason, Nagel, & O'Reilly, 2007). In addition, providing students with feedback on their progress toward short- and long-term goals has been shown to increase students' performance (Conte & Hintze, 2000). When students are given specific goals, they demonstrate significantly higher self-efficacy (Schunk & Rice, 1988). Progress monitoring rewards students for their efforts by showing evidence of their progress and motivates them to keep reading. When performance data is graphed, both teachers and students can easily monitor progress (Fuchs & Fuchs, 1986a, 1986b; Fuchs, Fuchs, Hamlett, Walz, & Germann, 1993; Fuchs, Fuchs, Hamlett, & Whinnery, 1991).

Combining teacher modeling, repeated reading, and progress monitoring creates a powerful tool to improve the reading fluency of struggling readers:

Combining Three Powerful Strategies for Improving Fluency



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Who Needs Fluency Training?

Students who read slowly and laboriously need to improve their fluency. If a student's average words-correct-per-minute score from two or three unpracticed readings of grade-level material is 10 or more words below the 50th percentile, the student likely needs a fluency-building intervention. You can use the table on the next page to determine which students need to work on fluency.

Tools for Comparison: Oral Reading Fluency Norms

Dr. Jan Hasbrouck and Dr. Gerald Tindal published the results of an extensive study of oral reading fluency in 2005. The results of their study are published in a technical report entitled "Oral Reading Fluency: 90 Years of Measurement," which is available on the University of Oregon's website:

brtprojects.org/oral-reading-fluency-90-years-of-measurement-technical-report-no-33

The table on the next page provides the oral reading fluency rates for students in grades 1 through 8 as determined by the data. You can use this information to draw conclusions and make decisions about the oral reading fluency of your students. Students scoring 10 or more words below the 50th percentile likely need a fluency-building intervention.

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Hasbrouck-Tindal Oral Reading Fluency Norms (2005)

Grade	Percentile	Fall WCPM*	Winter WCPM*	Spring WCPM*	AWI** (words growth per week)
1	90		81	111	1.9
	75		47	82	2.2
	50		23	53	1.9
	25		12	28	1.0
	10		6	15	0.6
2	90	106	125	142	1.1
	75	79	100	117	1.2
	50	51	72	89	1.2
	25	25	42	61	1.1
	10	11	18	31	0.6
3	90	128	146	162	1.1
	75	99	120	137	1.2
	50	71	92	107	1.1
	25	44	62	78	1.1
	10	21	36	48	0.8
4	90	145	166	180	1.1
	75	119	139	152	1.0
	50	94	112	123	0.9
	25	68	87	98	0.9
	10	45	61	72	0.8
5	90	166	182	194	0.9
	75	139	156	168	0.9
	50	110	127	139	0.9
	25	85	99	109	0.8
	10	61	74	83	0.7
6	90	177	195	204	0.8
	75	153	167	177	0.8
	50	127	140	150	0.7
	25	98	111	122	0.8
	10	68	82	93	0.8
7	90	180	192	202	0.7
	75	156	165	177	0.7
	50	128	136	150	0.7
	25	102	109	123	0.7
	10	79	88	98	0.6
8	90	185	199	199	0.4
	75	161	173	177	0.5
	50	133	146	151	0.6
	25	106	115	124	0.6
	10	77	84	97	0.6

*WCPM = words correct per minute

**AWI = average weekly improvement

AWI is the average words per week growth you can expect from a student. It was calculated by subtracting the fall score from the spring score and dividing the difference by 32, the typical number of weeks between the fall and spring assessments.

Because there is no fall assessment in grade 1, the AWI for grade 1 was calculated by subtracting the winter score from the spring score and dividing the difference by 16, the typical number of weeks between the winter and spring assessments.

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Read Naturally Steps

Select a Story

The student selects a story at the assigned reading level.

Most Read Naturally® levels include 24 high-interest, nonfiction stories. Selecting the correct Read Naturally level for each student ensures that each student can work with material that is appropriate for his or her reading ability. Letting the student select which stories to read puts the student in charge of learning. Since the stories are all at the same reading level, the order in which the student completes the stories is unimportant.

Key Words

The student reads the key words and their definitions, tracking and subvocalizing with the recording.

This is a vocabulary step that teaches the student some of the important words that are used in the story. The student learns how to pronounce the words and what they mean.

Prediction

The student writes a sentence using the title, picture, and key words to predict what the story will say about the topic.

This activity prepares the student to read the story by thinking briefly about the topic before beginning to read. Only a minute or two should be spent on this activity.

Cold Timing

The student orally reads the selected story for the first time for one minute, marking unknown words.

This step establishes a baseline for measuring the student's improvement. Marking unknown words makes the student aware of words and phrases to pay particular attention to during the read along step.

Graph the Cold-Timing Score

The student or computer graphs the number of words read correctly in the one-minute timing.

Cold-timing scores are typically marked in blue, and hot-timing scores are typically marked in red. Using a consistent color for the cold- and hot-timing scores helps the student and teacher to quickly see the line of progress on a graph.

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Read Along

The student reads along while listening to a recording of the story, usually three times. The student should quietly subvocalize as he or she reads.

This is the teacher-modeling step, which helps the student build word recognition and accuracy and encourages proper pronunciation, expression, and phrasing. The Read Naturally stories are read at a pace that allows the student to actually read along.

Practice

The student practices reading the story without audio support several times until able to read at the predetermined goal rate. The student times each practice.

The practice step is the fluency-building step. Reading the passage over and over allows the student to master the story. Timing each practice keeps the student motivated.

Answer the Quiz Questions

The student answers questions about the story—five questions in Sequenced levels 1.0 through 2.5 and gradually increases to nine questions in Sequenced levels 5.6 through 8.0.

Answering questions encourages the student to read for comprehension and helps ensure that the student understands the story. Because most of the questions in each series follow a particular pattern, over time the teacher can see which types of questions are difficult for the student.

Retell

The student writes a retell by writing a specific number of ideas learned from a story, writing for a specific amount of time, or writing a summary.

This is another way to encourage the student to think about the ideas in the story, not just the words. If you allow the student a specific amount of time to write retells, you can have them graph how many words were written during the allotted time to show progress.

Pass

The teacher times the student reading the story, counting errors. To pass, the student must read the story at the goal rate, make three or fewer errors, read with good expression, and answer all of the questions correctly.

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Graph the Hot-Timing Score

The student or computer graphs the number of words read correctly in the pass timing.

The hot-timing score is marked as a red bar above the blue bar for the cold-timing score. Seeing progress motivates the student to continue improving and increases self-esteem.

Word List

In the Phonics Series, instead of the retell step, the student practices the word list until he or she can read a predetermined number of words in one minute. The student then tries to pass the word list by reading it for his or her teacher.

Select a Story

The student selects a new story and completes the steps again.

Note: The Read Naturally steps differ slightly when using Read Naturally Live. For example, students do not need to color in their own graphs, since the program does the graphing for them.

After the student completes 12 stories in a level, the teacher and student decide whether the student should continue in the same level with the same goal, adjust the reading-rate goal, or move to more difficult reading material.

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Evidence-Based Studies

A university researcher reviewed a number of research studies examining the effectiveness of the Read Naturally intervention program and found substantial evidence to support the use of the Read Naturally Strategy under the Every Student Succeeds Act (ESSA, 2015).

Danielle Dupuis, Ph.D., Assistant Director for Research and Assessment at the University of Minnesota's Center for Applied Research and Educational Improvement found that two studies provide **strong evidence** for the effectiveness of the Read Naturally Strategy, four studies provide **moderate evidence** of Read Naturally's effectiveness, and three other studies provide **promising evidence**.

Danielle Dupuis's complete report is available on the Read Naturally website:

readnaturally.com/dupuis

Dr. Dupuis also found that multiple other studies show that the Read Naturally Strategy is an effective intervention, but those studies do not meet the definition of "evidence based" due to methodological flaws in the studies' designs, not because Read Naturally was ineffective for the students in the studies.

Strong Evidence for the Read Naturally Strategy

Christ, T. J., & Davie, J. (2009). Empirical evaluation of Read Naturally effects: A randomized control trial.

The Christ & Davie study showed effect sizes of .66 for fluency with the Grey Oral Reading Test–Fourth Edition: Fluency (GORT 4: Fluency) and .66 for accuracy with the GORT 4: Accuracy. *(See page 12.)*

Arvans, R. (2010). Improving reading fluency and comprehension in elementary students using Read Naturally.

At the end of the eight-week Arvans study, the Read Naturally group had a large effect size of .81 for fluency. The control group had a moderate effect size of .57 for fluency. This effect size difference of .24 in eight weeks is significant, especially if extrapolated over a school year. *(See page 14.)*

Moderate Evidence for the Read Naturally Strategy

Tucker, C. & Jones, D. (2010). Response to intervention: Increasing fluency, rate, and accuracy for students at risk for reading failure.

The Tucker & Jones study showed effect sizes of .51 for rate with the GORT 4: Rate, .87 for accuracy with the GORT 4: Accuracy, and .75 for fluency with the GORT 4: Fluency. *(See page 16.)*

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Heistad, D. (2005). The effects of Read Naturally on fluency and reading comprehension: A supplemental service intervention (four-school study).

In this four-school study, Read Naturally students showed an effect size for reading comprehension of .38 on the Minnesota Comprehensive Assessments (MCA). *(See page 17.)*

Heistad, D. (2008). The effects of Read Naturally on grade 3 reading: A study in the Minneapolis Public Schools.

In this study of third graders in the Minneapolis Public Schools, students using Read Naturally showed reading gains that were statistically greater than students in a control group, based on student scores on the Northwest Achievement Levels Test and Read Naturally's benchmark assessment for oral reading fluency. *(See page 19.)*

Graves, A. W., Duesbery, L., Pyle, N. B., Brandon, R. R., & McIntosh, A. S. (2011). Two studies of Tier II literacy development: Throwing sixth graders a lifeline.

In the Graves study, students who received a combined intervention package of Read Naturally, Corrective Reading or Rewards, and Daybrook made statistically significant gains in oral reading fluency and passage comprehension compared to a control group. *(See page 21.)*

Promising Evidence for the Read Naturally Strategy

Mesa, C. (n.d.). First-grade students, South Forsyth County, GA.

In the Mesa study, first graders using the Read Naturally Strategy had significantly greater gains in fluency and comprehension than a control group who did not use Read Naturally. *(See page 23.)*

Wright, S. (2006). The effects of Read Naturally on students' oral reading fluency and reading comprehension.

In the Wright study, students using the Read Naturally Strategy had greater gains in fluency and comprehension than students in a matched control group. *(See page 25.)*

Read Naturally, Inc. (1997). Second-grade students, Elk River, MN.

In the Elk River study, second-grade students who used the Read Naturally Strategy over 12 weeks increased their reading fluency by an average of 92 percent, compared to a control group that made an average gain of 38 percent over the same period. *(See page 27.)*

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Christ, T. J., & Davie, J. (2009).

Empirical evaluation of Read Naturally effects: A randomized control trial.

University of Minnesota, Minneapolis, MN

The complete results for this study are available on the Read Naturally website:
www.readnaturally.com/uminn

A study by researchers at the University of Minnesota found that students using Read Naturally SE had 39 percent greater gains in fluency than students in a control group. The study was lead by Theodore Christ, Ph.D., an associate professor in the University's Department of Educational Psychology. Read Naturally SE is a computer-based intervention designed to improve reading accuracy and fluency.

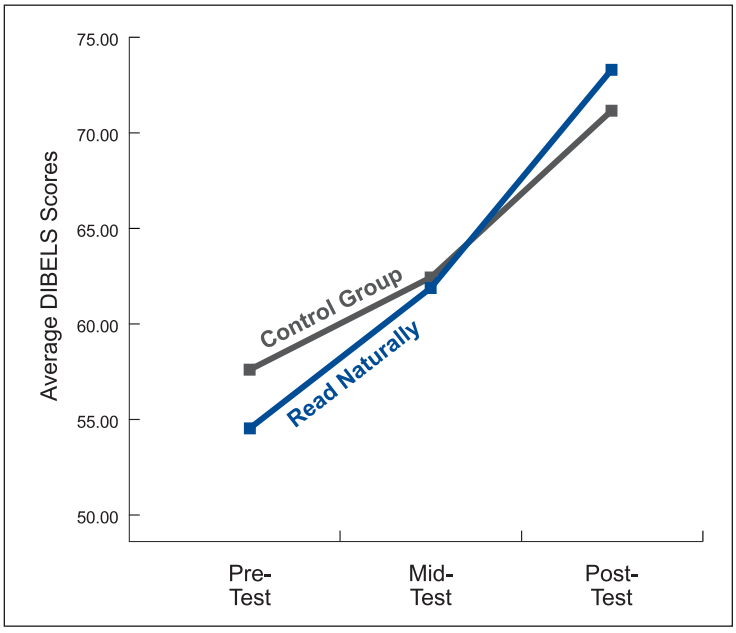
The study was a randomized control trial that was conducted in late 2008 and early 2009 across six schools with 109 low-performing students in third grade. Those students assigned to the Read Naturally group received intervention instruction for 30 minutes per day, five days a week, for 10 weeks. Students in the control group received normal classroom reading instruction with no supplemental fluency instruction.

Multiple standardized measures of reading accuracy and fluency indicated that students in the Read Naturally group outperformed students in the control group on all measures of accuracy and fluency.

The study examined the students' fluency gains using results from Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessments. The Read Naturally students gained, on average, 1.53 words correct per minute (WCPM) per week compared to 1.10 WCPM per week for students in the control group—39 percent greater gains for students in the Read Naturally group.

The following chart illustrates that the DIBELS average for the Read Naturally group was below that of the control group at pre-test, and after 10 weeks of intervention, the Read Naturally students outperformed those in the control group.

Chart Comparing Average DIBELS Scores Over the Course of the 10-Week Study



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Students in the Read Naturally group gained, on average, .40 WCPM more than students in the control group. The magnitude of improvement should be compared to typical growth and expected levels of achievement among third-grade students. Published estimates of typical growth in third grade approximate 1.2 WCPM among students in general education and .58 WCPM among students in special education. Students are expected to exceed 100 WCPM by the end of the third grade if they are to be successful on large-scale, state-wide assessments. A sustained additional improvement of .40 WCPM across the academic year is substantial. Assuming a typical growth rate of approximately 1.20 WCPM per week, a 39 percent improvement would result in improved growth to 1.68 WCPM per week, which is a cumulative gain of 14.4 more words read correct across 36 weeks.

These results were not specific to DIBELS measures. After accounting for pre-test levels of performance, the students in the Read Naturally group scored one to two standard score units better on most standardized measures of fluency and accuracy after 10 weeks of intervention. If extrapolated across the school year, those gains would translate to approximately three to seven standard score units of improved performance for those students within the Read Naturally group compared to the control group. Such improvements would be substantial.

The observed gains for the experimental group were obtained with minimal resources. Teacher and personnel time is one of the most valuable resources in schools. The Read Naturally intervention was implemented with minimal support. Teachers received the recommended training in the Read Naturally strategy and completed the Read Naturally SE Self-Study course to supplement them in the software implementation. Individual teachers were able to supervise their groups of students while the students received individualized instruction from Read Naturally SE.

The National Center on Intensive Intervention (NCII) has posted a review of the Christ study, which shows that Read Naturally has statistically significant and academically meaningful effects on both reading fluency and accuracy. The review is available on the NCII website:

intensiveintervention.org/chart/academic-intervention-chart/13654

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Arvans, R. (2010). Improving reading fluency and comprehension in elementary students using Read Naturally.

Arvans Study Compared to Christ & Davie Study

The complete results of this study are available at:

search.proquest.com/docview/305031916

An analysis of the Arvans study reveals that the Read Naturally group's fluency gains were quite significant. At the end of the eight-week study, the Read Naturally group had a large effect size of .81 for fluency. The control group had a moderate effect size of .57 for fluency. This effect size difference of .24 in eight weeks is significant, especially when extrapolated over a school year.

The Arvans study may also be analyzed using the Hasbrouck-Tindal Oral Reading Fluency Norms. According to these averages, third-grade students at the 50th percentile have an average weekly improvement in fluency of 1.1 words correct per minute (WCPM). An analysis conducted on the Arvans dataset estimates that the performance of the Read Naturally group would be significantly greater than this (1.43 WCPM per week).

Technical Analysis of the Arvans Study

Ethan R. Van Norman, M.A., performed an analysis of the Arvans study that is similar to what appeared in the Christ and Davie study (2009). In the Christ and Davie study, the authors first calculated a slope estimate from three time points for each student in the control group and the Read Naturally group. The slope estimate represented the number of words read correct per minute (WCPM) improvement per week. The mean and standard deviation of slopes were then calculated for each group. The percent of improvement of the Read Naturally group in relation to the control group was calculated. After this, the authors used the percent of improvement and applied it to an aggressive rate of growth (1.50 WCPM improvement per week). That value and 1.50 were then multiplied by 36 (the typical number of weeks in a school year). The difference between these two values was interpreted as a hypothetical effect if the Read Naturally intervention was delivered across an entire school year.

Similarly, on the Arvans dataset, slope estimates were calculated for each student from two observations eight weeks apart. The mean slope value for the Read Naturally group was 2.92 WCPM improvement per week (SD = 1.54) compared to the control group, which had a mean slope estimate of 2.24 (SD = 2.36). The .68 difference in mean slope for the Read Naturally group represents a 30% improvement over the control group. Assuming an aggressive rate of growth of 1.50 WCPM for typical students, a 30% increase would translate to a 1.95 rate of growth for Read Naturally students. Extended across 36 weeks, this represents a net increase of 70 WCPM for a Read Naturally student, compared with a 54 WCPM increase for a non-Read Naturally student.

Although not ideal, slope estimates from two time points have been used to summarize growth in previous CBM-R research studies. See:

readnaturally.com/christ-silberglitt

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Ethan R. Van Norman also did an analysis on the Arvans dataset to extrapolate growth using normative values. For third-grade students, weekly growth estimates for students in the 50th percentile typically approximate 1.10 WCPM per week. Assuming that the Read Naturally group has a 30% improvement over the control group and the intervention is delivered for 36 weeks, a student in the 50th percentile, on average, would improve at a rate of 1.43 WCPM per week. After 36 weeks, this would translate to a 51 WCPM improvement for a Read Naturally student and a 40 WCPM improvement for a non-Read Naturally student. This is a substantial difference.

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Tucker, C. & Jones, D. (2010).

Increasing fluency, rate, and accuracy for students at risk for reading failure.

RTI Study of Fourth-Grade Students in Massachusetts

The full journal article is available on the Read Naturally website:
readnaturally.com/tucker-jones

A study by two university researchers demonstrated that students who received Read Naturally instruction as a supplementary intervention made substantially greater gains in fluency, accuracy, and rate than students in a control group.

The study by Christine Tucker, Ed.D., of Walden University, and Don Jones, Ed.D., of Texas A&M University – Kingsville was published in the National Forum of Educational Administration and Supervision Journal (Volume 28, Number 1) under the title, "Response to Intervention: Increasing Fluency, Rate, and Accuracy for Students at Risk for Reading Failure."

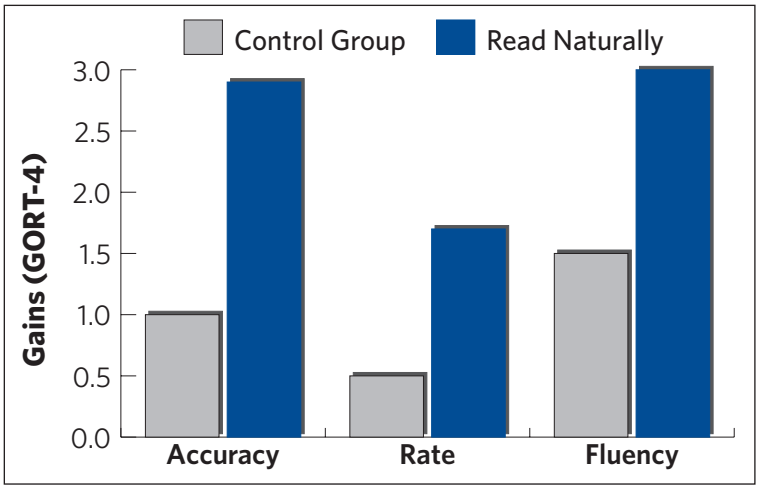
The purpose of the study was to investigate the effect of response to intervention (RTI) by determining the impact of specialized instruction on reading fluency skills with fourth graders who were identified as at risk for reading failure.

The randomized control trial compared two groups of students, half of whom received Read Naturally instruction, 30 minutes a day, 4 days a week, in addition to general reading instruction, and half of whom received only general reading instruction.

Study Results

After 10 weeks, the Read Naturally students demonstrated greater pretest-to-posttest gains in reading accuracy, rate, and fluency than the control group students, as measured by the Gray Oral Reading Test Fourth Edition (GORT-4). All results were statistically significant ($p < .05$). The effect size for accuracy was moderate ($d = .68$), for rate was large ($d = 1.12$), and for fluency was large ($d = 1.03$).

The following chart summarizes the average gains for students in the two groups.



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Heistad, D. (2005).

The effects of Read Naturally on fluency and reading comprehension: A supplemental service intervention.

Four-School Study, Minneapolis, MN

The complete study is available on the Read Naturally website:
readnaturally.com/4schools

A study of four Minneapolis schools showed that students in Read Naturally programs had significantly greater reading gains than their peers who did not use Read Naturally. The study was based on data collected in Spring 2003 through Spring 2004. Throughout the 2003–2004 school year, one group of students used Read Naturally ME and SE, while one group did not.

A total of 156 students from four Minneapolis schools were included in the study. Each Read Naturally student was matched with a student who was not in a Read Naturally program but had comparable baseline test scores and demographics. The demographic criteria were grade, English language learner status, special education status, free or reduced price lunch status, racial/ethnic category, home language, and gender.

Students who received Read Naturally instruction had improved performance on state-wide tests at statistically significant levels, and a larger proportion of those students met proficiency standards for No Child Left Behind (NCLB) compared to the matched students in the control group. That is, 43% of the Read Naturally students scored at Level 3 or above on the state test (that is, met NCLB standards) compared to 27% of the students in the control group.

This study, known as the Heistad study, demonstrates Read Naturally's long-term impact on comprehension. The National Center on Intervention Intervention (NCII) reported that the Heistad study showed a moderate effect size of .39 on the Minnesota Comprehensive Assessments (MCA) and .24 on the Northwest Achievement Levels Test (NALT). The NCII website provides a summary table of the effect sizes for the Heistad study:
intensiveintervention.org/chart/academic-intervention-chart/13653

The students were evaluated using three assessments—the Northwest Achievement Levels Test (NALT), the Minnesota Comprehensive Assessments (MCA), and Read Naturally's *Reading Fluency Monitor*.* The test results are shown below.

Average Scores on Three Reading Assessments

		Control Group	Read Naturally
Northwest Achievement Levels Test	Baseline (Spring 2003)	184.6	184.6
	Final (Spring 2004)	192.9	195.4
	Increase	8.3	10.8
Minnesota Comprehensive Assessments		1307.3	1366.4
Reading Fluency Monitor Assessments	Fall 2003	63.7	63.1
	Winter 2004	73.9	82.0
	Spring 2004	86.9	90.6
	Increase	23.2	27.5

**Reading Fluency Monitor* has been replaced by Benchmark Assessor Live.

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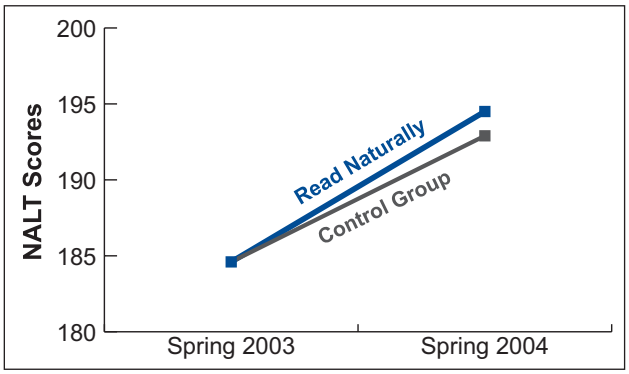
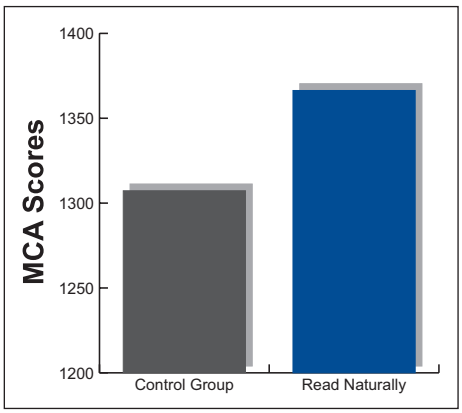
A comparison of the students' NALT pre-test scores in Spring 2003 with their test scores in Spring 2004 showed that, on average, the Read Naturally students had gains of 10.8 compared to gains of only 8.3 by students not in a Read Naturally program.

Average Scores on the Northwest Achievement Levels Test



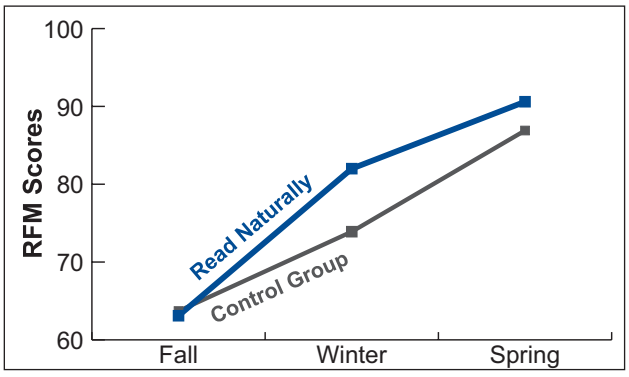
A comparison of 44 matched pairs of students with MCA scores in grades 3 and 5 showed that students in the Read Naturally program had an average score of 1366.4 compared to an average score of 1307.3 for the control group.

Average Scores on the Minnesota Comprehensive Assessments



A comparison of the *Reading Fluency Monitor* scores for 78 matched pairs of students from all four schools (grades 3, 4, and 5) showed that the Read Naturally students increased their scores on benchmark passages by an average of 27.5 points compared to an average increase of 23.2 points for the control group.

Average Reading Fluency Monitor *Scores*



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Heistad, D. (2008).

The effects of Read Naturally on grade 3 reading: A study in the Minneapolis Public Schools.

Third-Grade Students, Minneapolis, MN

The complete study is available on the Read Naturally website:
readnaturally.com/grade3

A study of third-grade students in the Minneapolis Public Schools showed that students using Read Naturally had greater reading gains than comparable students who did not use Read Naturally. The study was based on data collected during the 2003–2004 school year. Throughout the school year, one group of students used Read Naturally Masters Edition (ME) and Read Naturally SE, while one group did not.

A total of 44 third-graders from three Minneapolis schools were included in the study. Each Read Naturally student was matched with a student who was not in a Read Naturally program but had comparable baseline test scores and demographics. The demographic criteria were grade, English language learner status, special education status, free or reduced price lunch status, racial/ethnic category, home language, and gender.

The students were evaluated using three assessments—the Northwest Achievement Levels Test (NALT), the Minnesota Comprehensive Assessments (MCA), and Read Naturally's *Reading Fluency Monitor*.* The test results are shown below. The NALT and RFM results are deemed to be statistically significant, but the MCA results are not, due to the small sample size.

Average Scores on Three Reading Assessments

		Control Group	Read Naturally
Northwest Achievement Levels Test	Baseline (Spring 2003)	178.5	178.4
	Final (Spring 2004)	187.7	192.3
	Increase	9.2	13.9
Minnesota Comprehensive Assessments		1331.4	1363.2
Reading Fluency Monitor Assessments	Fall 2003	49.3	48.7
	Winter 2004	64.5	71.5
	Spring 2004	76.3	85.1
	Increase	27.0	36.4

A comparison of the students' NALT pre-test scores with their final test scores in Spring 2004 showed that, on average, the Read Naturally students had gains of 13.9 points compared to gains of only 9.2 by students not in a Read Naturally program.

**Reading Fluency Monitor* has been replaced by Benchmark Assessor Live.

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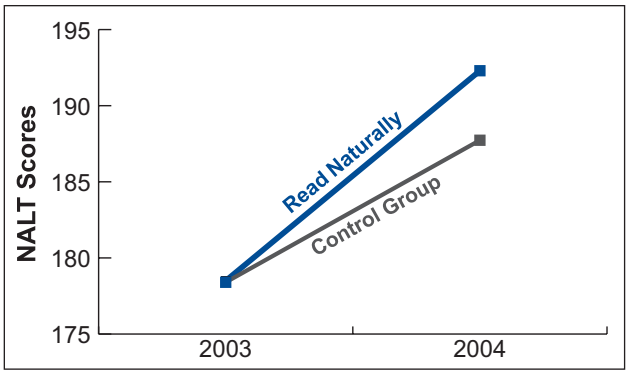
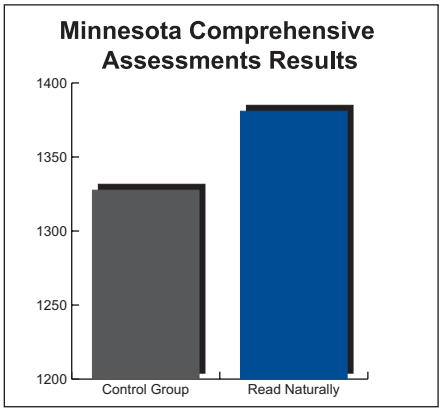
Average Scores on the Northwest Achievement Levels Test



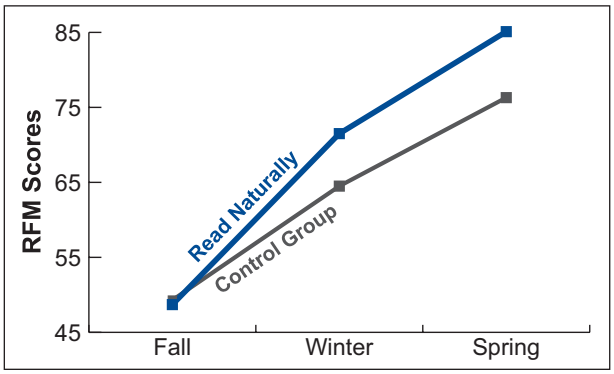
A comparison of 22 matched pairs of students with MCA scores in grade 3 showed that students in the Read Naturally program scored higher than the control group. Specifically, the average score for the Read Naturally students was 1363.2 compared to an average score of 1331.4 for the control group.

Average Scores on the Minnesota Comprehensive Assessments



A comparison of the *Reading Fluency Monitor* scores for 20 third-grade students receiving Read Naturally instruction were compared with 20 matched students from RFM third-grade growth norms. The results showed that the Read Naturally students increased their scores on benchmark passages by an average of 36.4 points compared to an average increase of 27.0 points for the control group.

Average Reading Fluency Monitor *Scores*



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Graves, A. W., Duesbery, L., Pyle, N. B., Brandon, R. R., & McIntosh, A. S. (2011).

Two studies of Tier II literacy development: Throwing sixth graders a lifeline.

San Diego State University, San Diego, CA

The complete study is available at:
jstor.org/stable/10.1086/659036

A study led by Anne Graves of San Diego State University demonstrated that students who received a combined intervention package of Read Naturally, Corrective Reading or Rewards, and Daybrook made statistically significant gains in oral reading fluency and passage comprehension as compared to the control group.

The study by Graves, Duesbery, Pyle, Brandon and McIntosh was published by The University of Chicago Press in The Elementary School Journal (Vol. 111, No. 4, June 2011) under the title, "Two Studies of Tier II Literacy Development: Throwing Sixth Graders a Lifeline."

The purpose of the study was to investigate the effects of Tier I and Tier II instruction on sixth-grade struggling readers. In Study 2 (originally N=60; after attrition N=50), all sixth grade student participants were designated "far below basic" or "below basic" based on the California Language Arts Standards Test at the end of fifth grade. In one-hour time frames over ten weeks, the intervention group received 20 minutes of fluency development and passage comprehension practice (Read Naturally), 20 minutes of word analysis (Corrective Reading or Rewards) and 20 minutes of comprehension and vocabulary development (Daybrook).

Oral Reading Fluency Growth

The authors of the study noted that in their pilot study, Read Naturally produced a significant gain in fluency for sixth graders. Consequently, they implemented Read Naturally again in Studies 1 and 2 as part of the intervention package studied in this report.

In Study 1, the growth in mean ORF scores within the treatment group was 18.1 words per minute (wpm) gain over the ten weeks compared to a gain of 1.1 wpm for the control group.

In Study 2, the treatment group gained 21.6 wpm over the intervention period compared to the control group .2 wpm gain. This represented a significant effect size of .66. Since Read Naturally was the fluency building part of the intervention package, it likely played a significant part in the oral reading fluency gains of the treatment group.

The following table summarizes the average gains in oral reading fluency for students in the two groups in Study 2.

Oral Reading Fluency Growth

	No. of Students	Pre-Test		Post-Test		Change	Effect Size
		Mean	SD*	Mean	SD*		
Treatment	30	88.3	31.2	109.9	33.8	21.6	.66
Control	20	103.2	27.9	103.4	28.2	0.2	0.01

*Standard Deviation

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Gains in Comprehension

In addition, on the passage comprehension of the Woodcock Reading Mastery Tests—Revised revealed a significant difference with the intervention group. Since Read Naturally was a key part of the passage comprehension practice, it likely played a key part in the comprehension gains of the intervention group.

The following table summarizes the average gains in passage comprehension in the two groups, based on results from the Woodcock Reading Mastery Tests—Revised:

Passage Comprehension Growth (Woodcock Reading Mastery Tests—Revised)

	No. of Students	Pre-Test		Post-Test		Change	Effect Size
		Mean	SD*	Mean	SD*		
Treatment	30	24.3	8.2	26.6	6.4	2.3	0.31
Control	20	30.0	8.2	29.1	6.1	0.9	0.12

*Standard Deviation

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Mesa, C. (2003).

First-Grade Students, South Forsyth County, GA

A study in South Forsyth County, Georgia, by Christy Mesa of Piedmont College showed that first graders using Read Naturally SE improved significantly more than their fellow students who did not use the program.

Read Naturally SE had been a successful reading component in the third through fifth grades at the school. As a result, a study was designed to see if this program could be implemented successfully at the first grade level.

The subjects for the study were 12 students in a first grade class at Cumming Elementary School. Six of the students used Read Naturally SE for 45 minutes a day, four days a week. Another six students (the control group) remained in the classroom and continued normal reading activities.

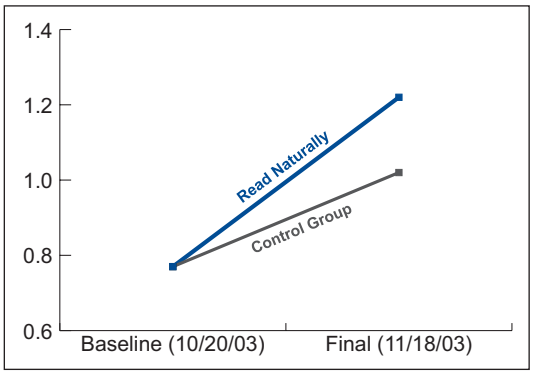
Mesa first established a baseline for the students by using their STAR, Comprehension Reading Test (CRT), and Oral Reading Fluency (ORF) test scores. After three weeks in their respective reading programs, the students were then re-tested using the same tests.

The results indicated that the Read Naturally group increased their fluency and comprehension scores considerably more than the control group.

Average Scores on Three Reading Tests

		Control Group	Read Naturally
STAR Test	Baseline (10/20/03)	.77	.77
	Final (11/18/03)	1.02	1.22
	Increase	.25	.45
Comprehension Reading Test	Baseline (10/20/03)	3.67	4.33
	Final (11/18/03)	4.33	6.00
	Increase	.67	1.67
Oral Reading Fluency Test	Baseline (10/20/03)	52.2	55.2
	Final (11/18/03)	74.3	83.0
	Increase	22.2	27.8

Average Scores on the STAR Test



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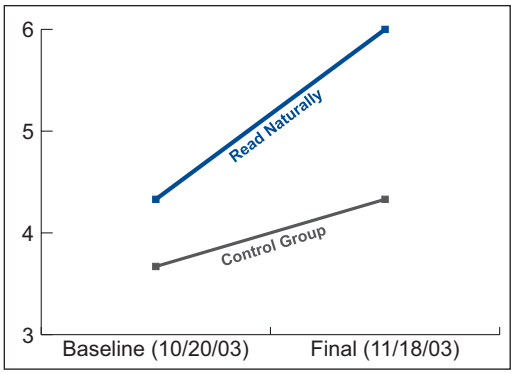
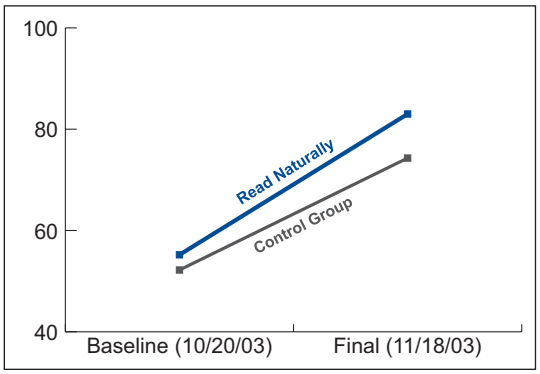
Average Scores on the Comprehension Reading Test



Average Scores on the Oral Reading Fluency Test



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Wright, S. (2006).

The effects of Read Naturally on students' oral reading fluency and reading comprehension.

California State University, San Marcos

Third Graders, Southern California

The complete study is available at:
csusm-dspace.calstate.edu/handle/10211.3/140775

A study by Stacy Wright, a Masters in Education student at California State University San Marcos, found that students using Read Naturally SE had greater gains in fluency and comprehension than students who did not receive intervention instruction.

The study involved 12 third-grade students in southern California who were identified by their teachers as "at risk." The students were paired up based on similarities in their learning and academic profiles. One student from each pair was randomly assigned to an experimental group, and the other student was assigned to a control group.

All students were given a pretest to determine their baseline reading fluency and comprehension levels.

The students in the experimental group used Read Naturally SE for 30 minutes a day, three times a week, for 10 weeks. The students in the control group remained in the general education classroom and did not receive any reading intervention instruction.

After 10 weeks, all of the students were given a posttest to determine their growth in reading fluency and comprehension. The results are summarized below.

Average Scores on Three Reading Assessments

		Control Group	Read Naturally
Oral Reading Fluency *Words Read Per Minute*	Pretest	117	106
	Posttest	118	128
	Increase	1	22
Comprehension *Percentage of Comprehension Questions Answered Correctly*	Pretest	62%	63%
	Posttest	62%	68%
	Increase	0%	5%

A comparison of the students' pretest and posttest scores for oral reading fluency showed that, on average, the Read Naturally students had gains of 22 words per minute compared to average gains of only one word per minute by students in the control group.

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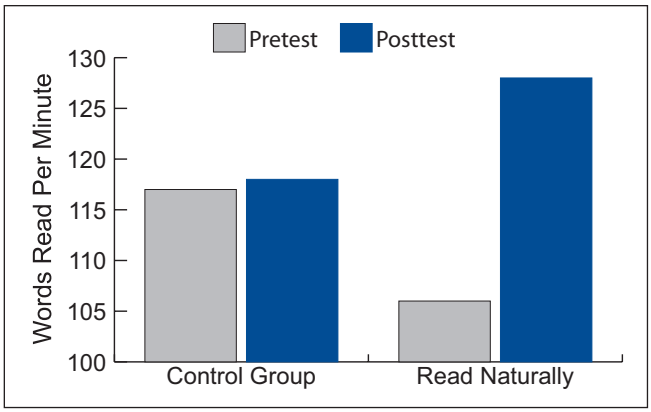
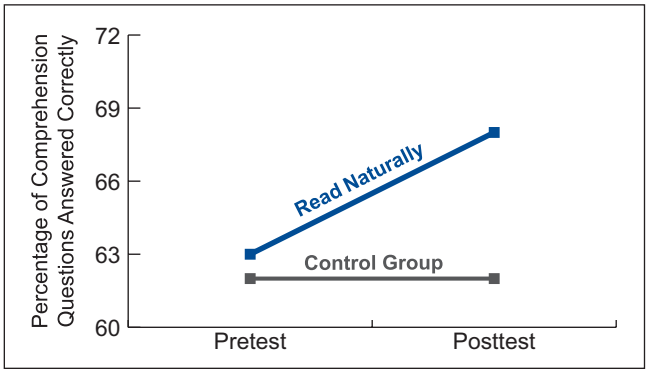
Average Oral Reading Fluency Scores



A comparison of the students' pretest and posttest scores for comprehension showed that, on average, the Read Naturally students had gains of five percent in the number of comprehension questions answered correctly compared to no gain by students in the control group.

Average Comprehension Scores



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Read Naturally, Inc. (1997).

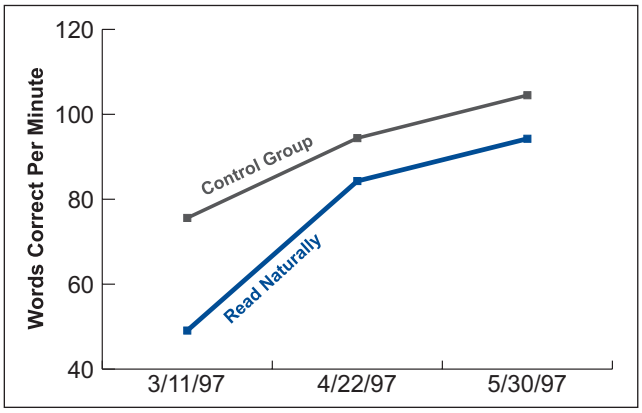
Second-Grade Students, Elk River, MN

For 12 weeks in 1997, 24 second-grade students at Lincoln Elementary School in Elk River, Minnesota, spent 30 minutes a day using Read Naturally. One or two adults worked with these students in groups of six. At the end of the 12 weeks, these students increased their reading fluency by an average of 92 percent. A control group of 10 students (who did not use Read Naturally) made an average gain of 38 percent in reading fluency over the same 12 weeks.

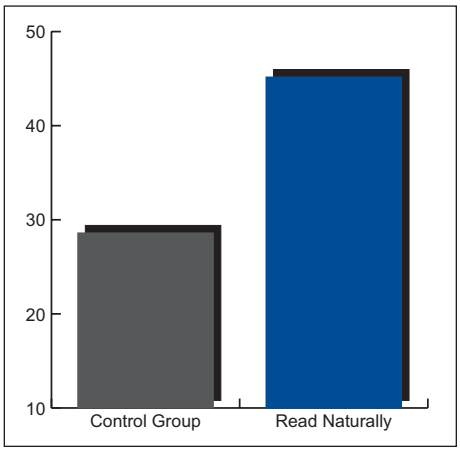
Average Fluency Scores in Words Correct Per Minute

	Control Group	Read Naturally
3/11/97	75.60	49.08
4/22/97	94.40	85.29
5/30/97	104.50	94.25
Average Point Gain	28.60	45.17

Growth in Fluency Over a 12-Week Period



Comparison of Average Point Gains



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Additional Studies

Students from diverse backgrounds and from many different geographic areas have made significant improvements in reading fluency and in comprehension scores. This section describes some additional studies that provide evidence of Read Naturally's effectiveness.

The following studies are included in this section:

- **Nickodem, B. A. and Dupuis, D. (2017). New findings on Read Naturally Live.**
  Data from the 2015–2016 school year showed second-grade students in Read Live made statistically significant gains compared to national norms. *(See page 29.)*

- **Heistad, D. (2004). The effects of Read Naturally on fluency and reading comprehension.**
  A year-long study comparing demographically matched students in two schools, where one group received Read Naturally instruction and one group did not. *(See page 30.)*

- **Johnson, B. and Weaver, J. Special education students, grades 3 through 8, Huron County, Mich.**
  A study comparing special education students receiving Read Naturally instruction with other special education students and with general education students. *(See page 32.)*

- **Ihnot, C. and Marston, D. (1990). Using teacher modeling and repeated reading to improve the reading performance of mildly handicapped students.**
  The original study that launched the Read Naturally strategy. *(See page 34.)*

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Nickodem, K. and Dupuis, D. (2017).

New findings on Read Naturally Live.

Second-Grade Students, Extant Data From Read Live

The complete study is available on the Read Naturally website:
readnaturally.com/nick-dupuis

Dr. Danielle Dupuis of the University of Minnesota's Center for Applied Research and Educational Improvement conducted a study on extant data from Read Naturally Live. The focus of the study was Grade 2. The data showed the Grade 2 students who completed more than 24 stories gained 1.57 Average Weekly Improvement (AWI) Fall to Winter and 1.40 AWI from Fall to Spring. These gains are significant when compared to the typical Grade 2 student's 1.15 AWI.

Average Weekly Improvement (AWI) for Grade 2 Students Who Completed More Than 24 Stories

Grade	Total Number of Students	Averge AWI* (Fall-Winter)	Average AWI* (Fall-Spring)
2	281	1.57	1.40

*Typical AWI for Grade 2 is 1.15

The results of the Grade 2 study provide evidence for the effectiveness of Read Naturally Live. Students who read 24 or more stories from Fall to Spring had statistically significant growth, gaining an average of 1.4 to 1.6 words per week compared to the 0.6 to 1.2 average words gained per week that is expected for Grade 2 students.

Descriptive Statistics for AWI by Group and Results of One-Sample T-Tests (Grade 2 Only)

Number of Stories Read	Mean	Standard Deviation	Mini-mum	Maxi-mum	Number of Students	t-value	p-value
24–35	1.43	0.45	0.30	2.70	52	4.40	0.00*
36 or more	1.64	0.50	0.50	2.60	64	7.57	0.00*

*Results are statistically significant

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Heistad, D. (2004).

The effects of Read Naturally on fluency and reading comprehension: A supplemental service intervention.

Two-School Study, Minneapolis, MN

The complete study is available on the Read Naturally website:
readnaturally.com/2schools

A study of students in two Minneapolis schools showed that students using Read Naturally had greater reading gains than comparable students who did not use Read Naturally. The study was based on data collected in Spring 2003 through Spring 2004. Throughout the 2003–2004 school year, one group of students used Read Naturally ME and SE, while one group did not.

A total of 102 students from two Minneapolis schools were included in the study. Each Read Naturally student was matched with a student who was not in a Read Naturally program but had comparable baseline test scores and demographics. The demographic criteria were grade, English language learner status, special education status, free or reduced price lunch status, racial/ethnic category, home language, and gender.

The students were evaluated using three assessments—the Northwest Achievement Levels Test (NALT), the Minnesota Comprehensive Assessments (MCA), and Read Naturally's *Reading Fluency Monitor.** The test results are shown below.

Average Scores on Three Reading Assessments

		Control Group	Read Naturally
Northwest Achievement Levels Test	Baseline (Spring 2003)	187.2	187.3
	Final (Spring 2004)	193.4	195.8
	Increase	6.2	8.5
Minnesota Comprehensive Assessments		1327.6	1380.9
Reading Fluency Monitor Assessments	Fall 2003	68.1	67.7
	Winter 2004	76.4	89.2
	Spring 2004	87.8	100.0
	Increase	19.7	32.3

A comparison of the students' NALT pre-test scores in Spring 2003 with their test scores in Spring 2004 showed that, on average, the Read Naturally students had gains of 8.5 points compared to gains of only 6.2 by students not in a Read Naturally program (see below). This represents approximately one-third of a year of additional reading growth for the Read Naturally students.

**Reading Fluency Monitor* has been replaced by Benchmark Assessor Live.

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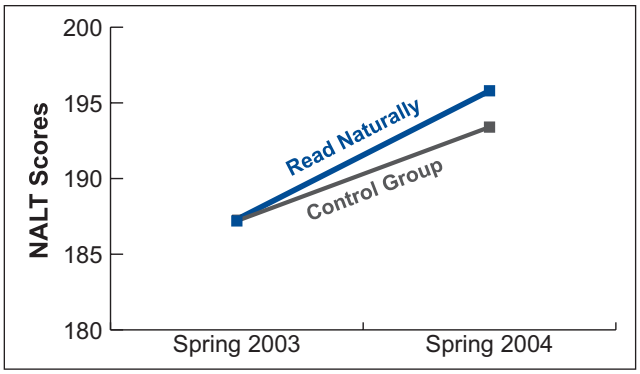
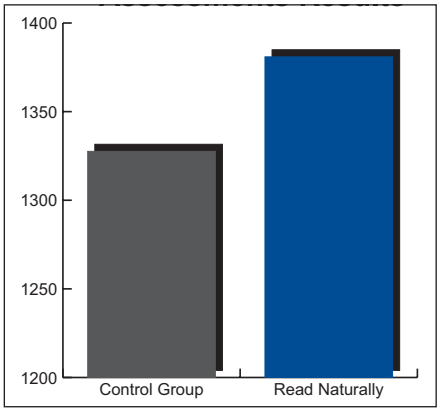
Average Scores on the Northwest Achievement Levels Test



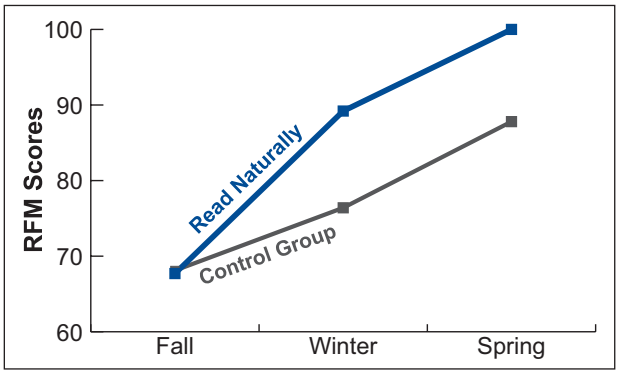
A comparison of 44 matched pairs of students with MCA scores in grades 3 and 5 showed that students in the Read Naturally program scored significantly higher than the control group. Specifically, the average score for the Read Naturally students was 1380.9 compared to an average score of 1327.6 for the control group (see below).

Average Scores on the Minnesota Comprehensive Assessments



A comparison of the *Reading Fluency Monitor** scores for 48 matched pairs of students from both schools (grades 3, 4, and 5) showed that the Read Naturally students increased their scores on benchmark passages by an average of 32.3 points compared to an average increase of 19.7 points for the control group (see below).

Average Reading Fluency Monitor *Scores*



**Reading Fluency Monitor* has been replaced by Benchmark Assessor Live.

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Johnson, G. and Weaver, J.

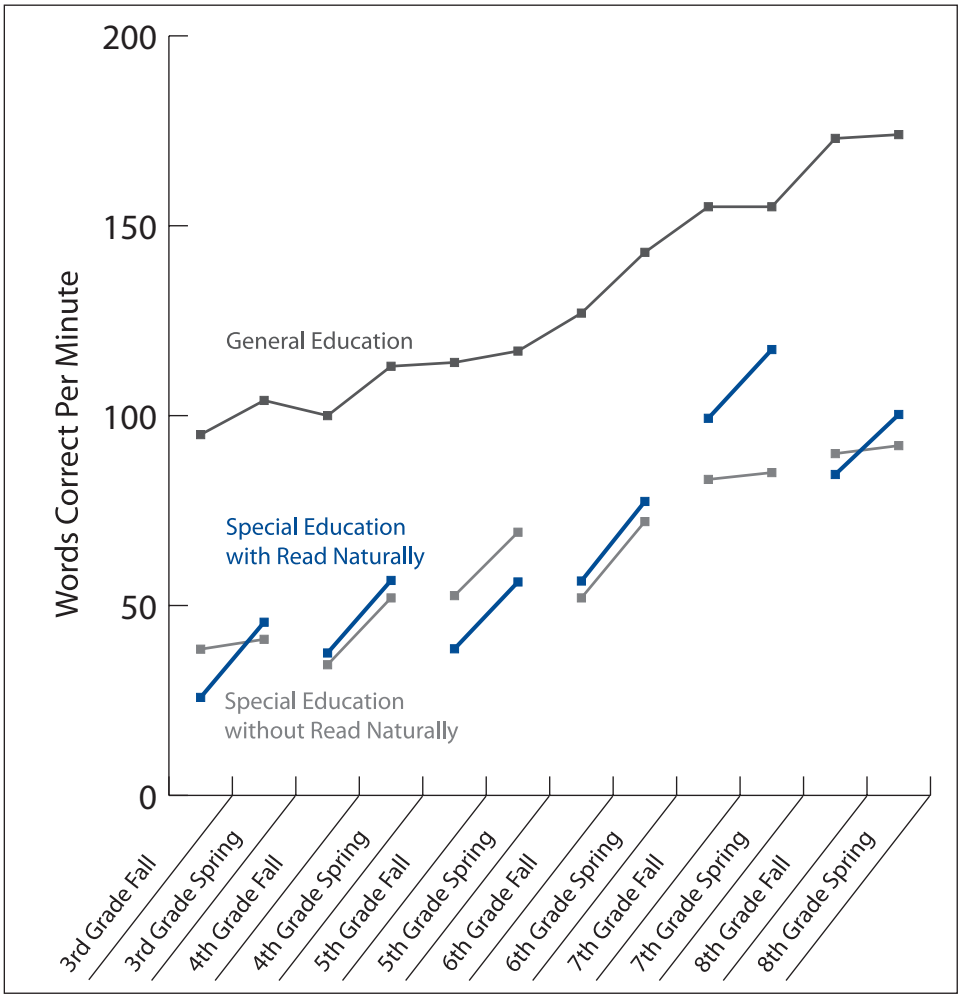
Special Education Students, Grades 3 through 8, Huron County, MI

Students' assessments in Huron County, Michigan, showed a substantial discrepancy in oral reading fluency between general education students and special education students (see below). To try to narrow this gap, the Huron Intermediate School District implemented the Read Naturally program targeted at special education students.

School psychologists Gloria Johnson and Jim Weaver collected and analyzed data to compare the test results of special education students who received Read Naturally instruction with the test results of special education students without Read Naturally instruction and with general education students.

As indicated by the slope of the Read Naturally graph lines (in blue) in the following graph and the data in the table on the next page, the special education students who received Read Naturally instruction had greater gains in fluency than the special education students without Read Naturally instruction.

Comparison of Grade-Level Reading Performance (in Words Correct Per Minute)



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Gains in Fluency (in Words Correct Per Minute)

	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Special Ed. Without Read Naturally	2.61	17.62	16.69	20.12	1.79	2.11
Special Ed. With Read Naturally	19.83	19.1	17.63	20.95	18.13	15.8

The school district used reading mazes to evaluate comprehension. In the timed reading maze task, the student is given a grade-level paragraph in which every seventh word is deleted. The student is presented with three choices and is asked to select the best word to fill in the blank, based on the context of the story. The results from the reading mazes indicated that special education students receiving Read Naturally instruction had greater gains in comprehension than the general education students (see below).

Gains in Comprehension Based on Reading Maze Results

	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
General Education	6	4	4	4	0	2
Special Ed. With Read Naturally	7.2	5.7	6.2	3.5	3.4	3.0

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Ihnot, C. and Marston, D. (1990).

Using teacher modeling and repeated reading to improve the reading performance of mildly handicapped students.

Original Study, Minneapolis, MN

The complete study is available on the Read Naturally website:
readnaturally.com/original

During the 1989–1990 school year, Candyce Ihnot combined teacher modeling, repeated reading, and progress monitoring into the Read Naturally strategy in a third-grade classroom at a large Minneapolis public school. The classroom consisted of seven third-grade special education students and 18 Title I students. Because the school used a collaborative model for delivering instruction to students with special needs, a classroom teacher, a special education teacher, and a Title I teacher (Candyce Ihnot) worked together to provide instruction to the students.

During her time with the seven special education students, Candyce used the Read Naturally strategy to supplement instruction in the basal. During her time with the Title I students, Candyce provided instruction in phonics to supplement instruction in the basal. At the end of seven weeks (Phase 1), the special education students (using the Read Naturally strategy) improved their reading fluency by an average of 2.35 words per week. The Title I students made an average gain of 1.23 words per week.

After seeing the results from the previous seven weeks, Candyce then used the Read Naturally strategy with the Title I students over 13 weeks (Phase 2). During the 13 weeks, these students gained an average of 2.15 words per week. The instruction they received from the classroom teacher and the special education teacher remained constant between the two periods.

Average Gains in Fluency for Special Education and Title I Students

		Special Education with Read Naturally	Title I
October	Mean	34.0	50.2
	Standard Deviation	8.7	11.9
November	Mean	50.7	58.7
	Standard Deviation	9.0	13.2
March	Mean	—	86.7
	Standard Deviation	—	16.2
Average Weekly Gain	Without Read Naturally	—	1.23
	With Read Naturally	2.35	2.15

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Other Benefits of the Read Naturally Strategy

As demonstrated in these case studies, the Read Naturally® strategy results in significant improvement in the reading fluency of students. But teachers have also noted other benefits of the strategy.

Students work independently. The structure of the Read Naturally strategy allows students to work independently most of the time. Students' time on task is very high, and they spend most of the instructional time engaged in the act of reading. As a result, teachers can give their time to more students, students of different levels can participate in the program at the same time, and, perhaps most importantly, students feel responsible for their own success.

Students take charge of their own reading growth. Many students enjoy the opportunity to select their own reading material. They enjoy reading the interesting stories, learning to read them with ease, and watching their progress on the graphs.

Getting feedback motivates students. The students often tell teachers directly that the immediate and frequent feedback the strategy provides is very valuable. This immediate feedback encourages students to beat their previous scores, and, as a result, many students get hooked on the strategy much like they get hooked on a game. This motivates them to continue to improve.

Students develop greater confidence. Students often demonstrate increased confidence in their academic abilities, higher self-esteem, and hope for their academic future.

Students exhibit fewer behavior problems. The greatest behavior management problem for the teacher is finding time to listen to the oral reading of all the students eagerly waiting to demonstrate their improved reading rates.

Students get excited about reading. Students show an increased interest in coming to reading class. Many students report reading books at home, and parents comment on the reading and attitude improvements of their children. Improving fluency makes reading easy enough for many students that they choose to read for pleasure, which after all, is a goal of most reading teachers.

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