

The Research Base and Validation of SRA's Corrective



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The Research Base and Validation of SRA's Corrective Reading Program

Research has long documented the difficulty educators face when challenged to accelerate the development of reading skills in struggling readers in late elementary, middle school, and high school, such as:

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Introduction: Importance of Reading

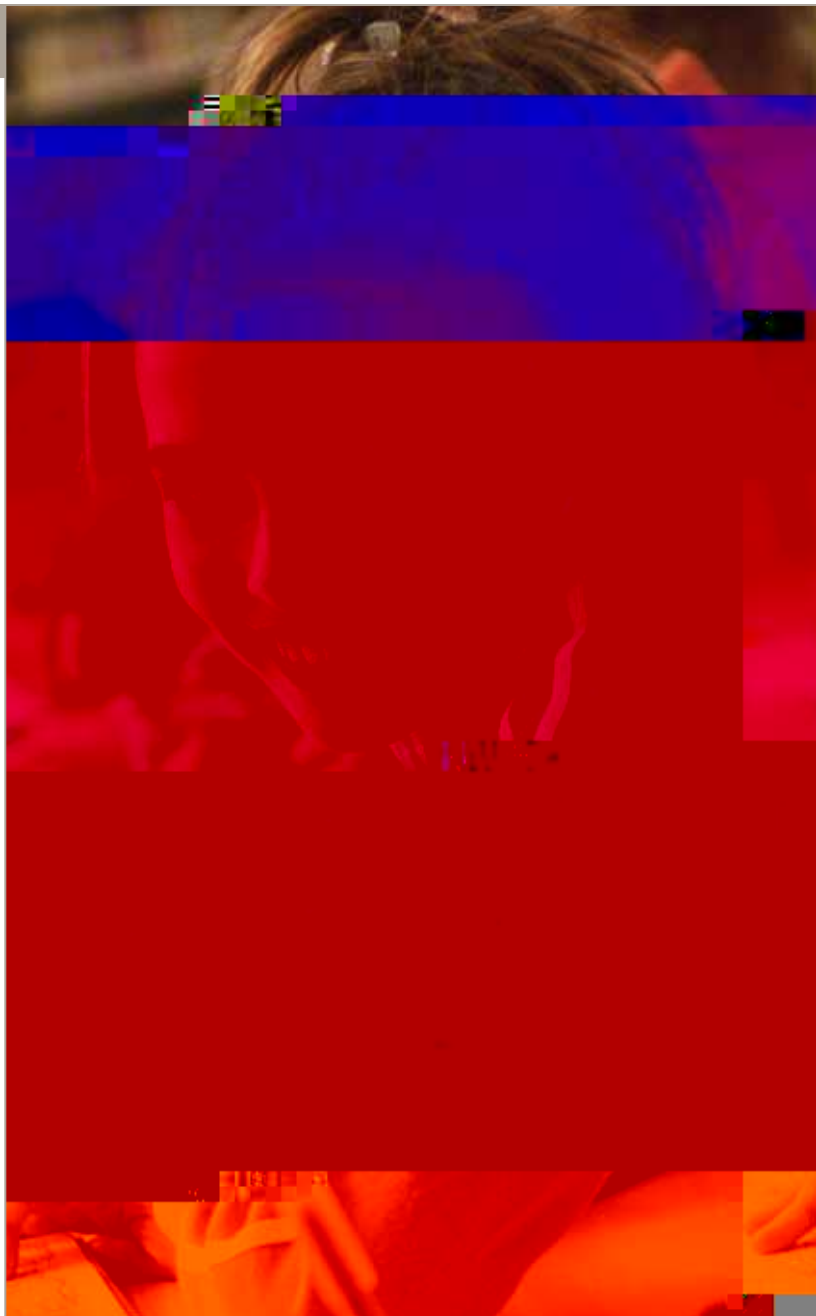
Section I

Reading is the cornerstone of an effective education. Without this skill we are limited in so many important life activities: we cannot understand a newspaper, read directions of a new recipe, enjoy a favorite novel, or read a prescription bottle of medication. Reading is also closely aligned with activities in Mathematics, Writing, Spelling, and the content areas (e.g., Science, Social Studies). For poor readers, college is out of the question and many jobs are simply out of reach because they require some basic level of reading or other skill that hinges on reading. Lack of reading places these individuals at a serious disadvantage in our society (Biancarosa & Snow, 2004).

Unfortunately, “approximately eight million young people between fourth and twelfth grade struggle to read at grade level. Some 70% of older readers require some form of remediation” (Biancarosa & Snow, 2004, pg. 3). Failure to learn to read is the major reason for retention, long-term remediation, and qualification for special education services (Meese, 2001). Further, 74 percent of children who were poor readers in Grade 3 were poor readers in Grade 9 (Francis, Shaywitz, Stuebing, Shaywitz, & Fletcher, 1996). Thus, a vast majority of children who do not learn to read early may never become skilled readers unless focused and intensive reading intervention is provided. Note the following statistics cited by the U.S. Department of Education (2002) in *No Child Left Behind: A Desktop Reference*:

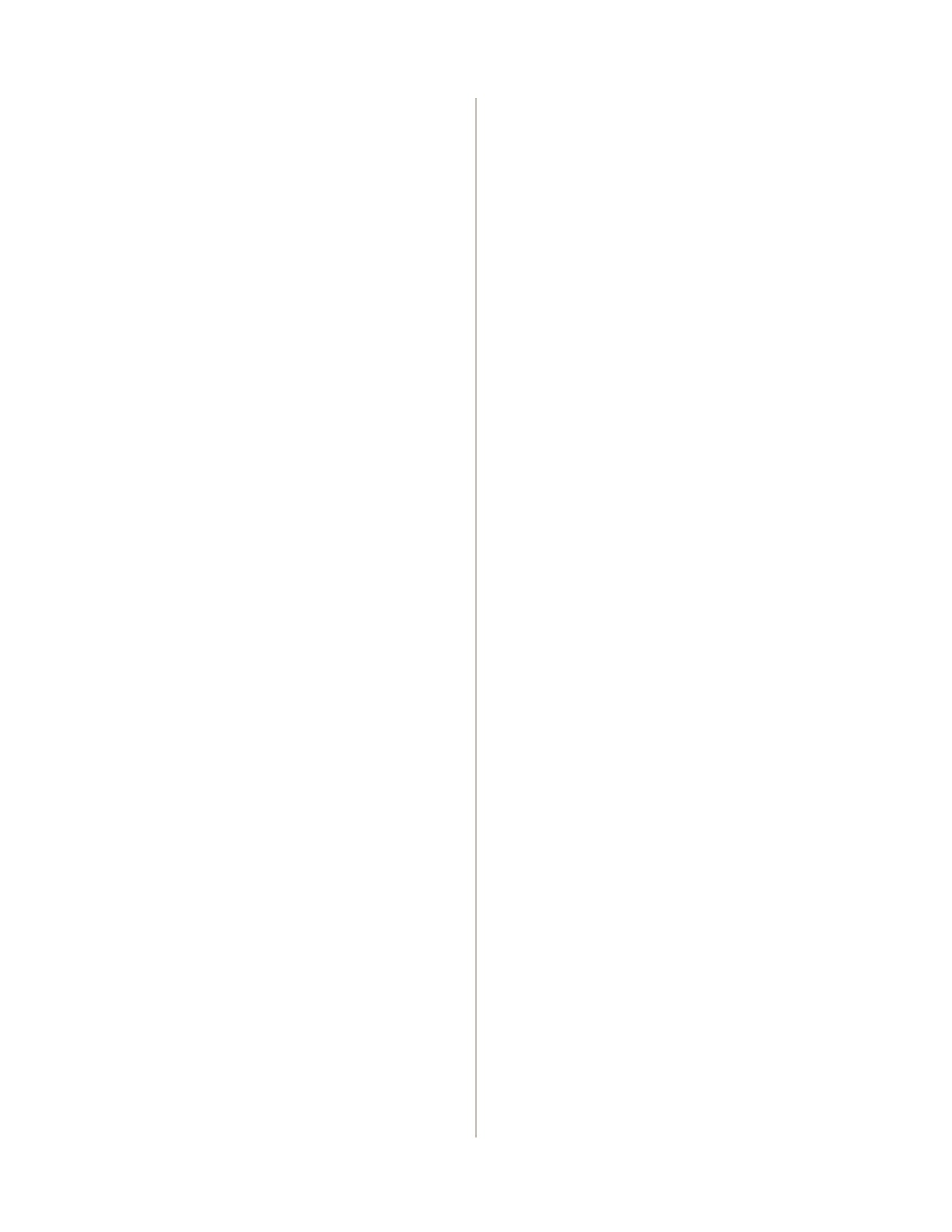
Reading has always been a key ingredient for students to be successful in school, yet the National Assessment of Educational Progress (NAEP) shows serious deficiencies in children’s ability to read, particularly in high-poverty schools. Even in wealthier schools, more than a fifth of fourth-graders were unable to reach NAEP’s basic level in 2000 and about two-thirds of fourth-graders in high-poverty schools were unable to reach the basic level in that year’s survey (pg. 11).

More than 75 percent of students who drop out of school (approximately 10–15% of the total school population) ascribe major significance to the difficulties experienced in learning to read (Lyon, 2001). A high school junior remarked in one investigation on reading, “I would rather have a root canal than read” (Lyon). The dropout statistics translate to more than three thousand students every school day (Alliance for Excellent Education, 2003, as cited by Biancarosa & Snow, 2004). Statistics and statements like these show that reading affects the futures of all individuals, both young and old.



Given the importance of reading and the overwhelming number of students who struggle with reading beyond Grade 3, we are left with the conclusion that with strong literacy skills, doors open for individuals; with poor literacy skills, doors close for them. Focused and intensive reading intervention is the key to unlock these doors and allow individuals to access the working world more successfully.

Corrective Reading is a reading intervention program designed to help struggling readers unlock the door to success!



The National Reading Panel (NICHD, 2000) recommends effective instruction in *phonemic awareness*, *phonics*, *fluency building*, *vocabulary*, and *text comprehension* for beginning readers and intervention programs for struggling readers.

Decoding: Learning to Read: Phonemic Awareness, Phonics, and Fluency Building

Phonemic awareness, phonics, and fluency building are often called *learning to read* or *decoding* skills. These skills are emphasized in *Corrective Reading's* Decoding programs.

Phonemic awareness. Phonemic awareness is defined as “the ability to notice, think about, and work with the individual sounds in spoken words” (Armbruster et al., 2003, pg. 2). Before children learn to read printed words, they need a working knowledge of speech sounds (called phonemes). Phonemic awareness can be taught and learned; it helps students learn to read and to spell at higher levels compared to students who have few or none of these skills (Armbruster et al., 2003; NICHD, 2000).

Corrective Reading includes phonemic awareness activities in the early levels of the program (*Decoding, Levels A and B1*). It incorporates two primary types of phonemic awareness activities: blending and segmenting words. These two types of phoneme manipulation activities are “likely to produce greater benefits to your students’ reading than teaching several types of manipulations” (Armbruster et al., 2003, pg. 8).

Phonemic blending has students listen to a sequence of phonemes and then combine the phonemes to form a word. Figure 1 illustrates an example of phonemic blending in Lesson 1 of *Decoding A*.

Figure 1: Example of phonemic blending in *Corrective Reading*

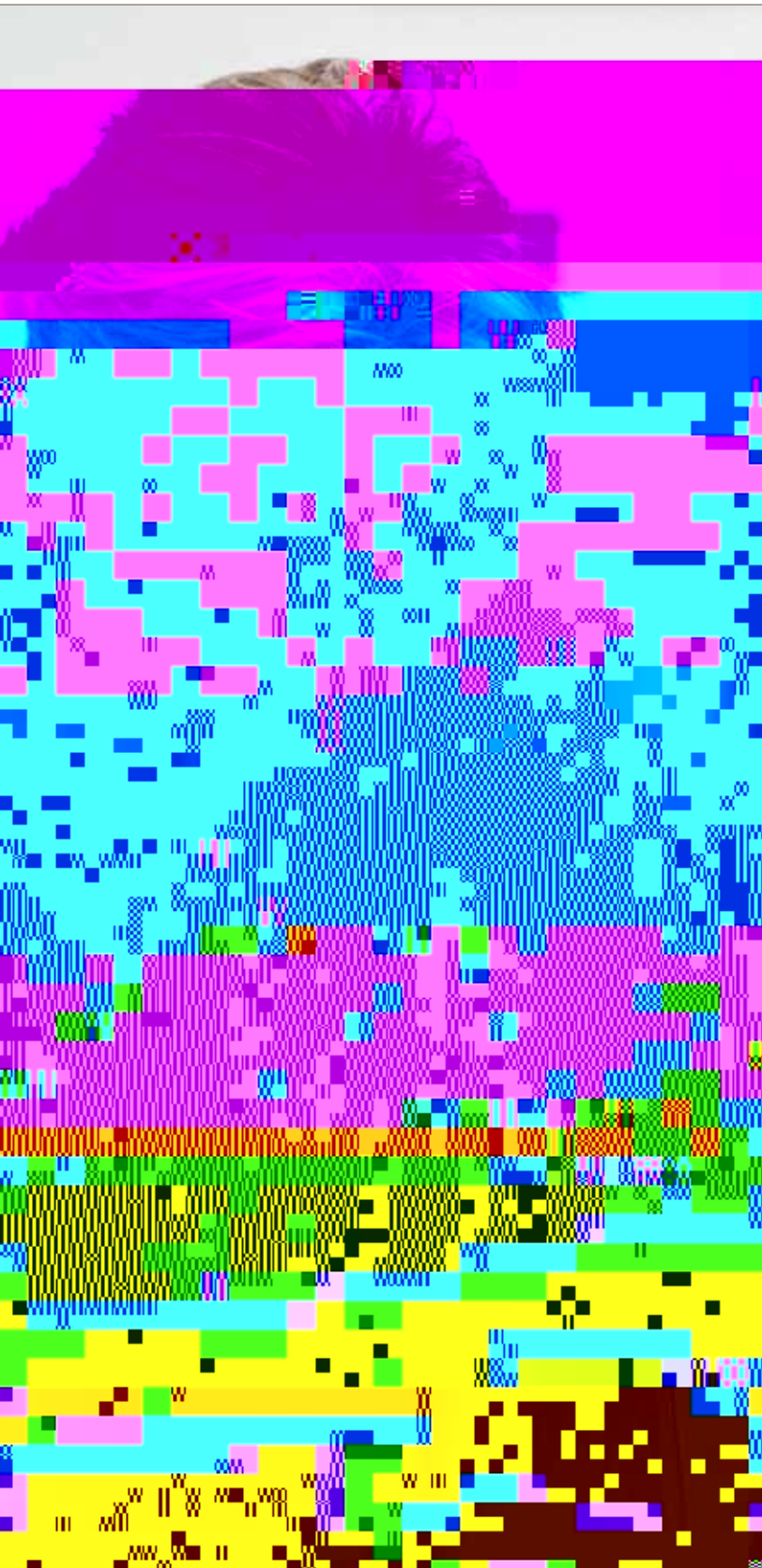
Phonemic segmentation involves having students break a word into its separate sounds. Figure 2 illustrates an example of phonemic segmentation in Lesson 1 of *Decoding B1*.

Figure 2: Example of phonemic segmentation in *Corrective Reading*

Corrective Reading also includes phoneme isolation activities. Phonemic isolation involves having students recognize individual sounds in words. Figure 3 shows an example of how phonemic isolation is used in Lesson 15 of *Decoding A*.

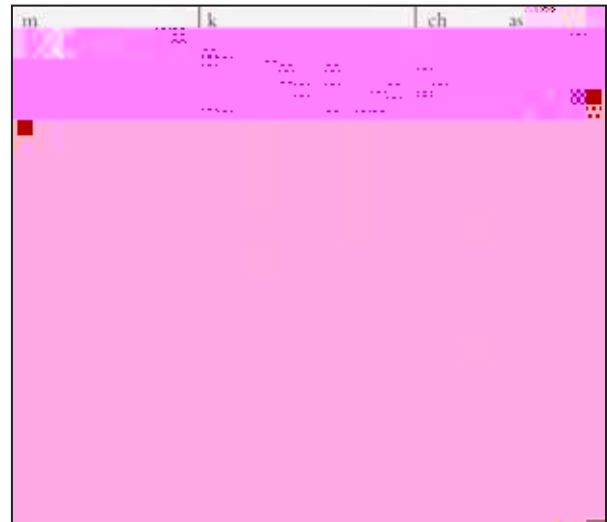
Figure 3: Example of phonemic isolation in *Corrective Reading*





Systematic, Explicit Phonics. "Phonics instruction teaches children the relationship between the letters (graphemes) of written language and individual sounds (phonemes) of spoken

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s taught in *Corrective*

prescribed sequences of words that are similar to words that are found in other highly similar words. Words that are not included in words are derived from *Corrective Reading* are first time rather than



In fact, the text used in this program is 95 percent decodable or higher, which means that at least 95 words out of 100 are composed of letter-sound relationships the students are learning (or have learned). When the decodable text level is high, students experience success rather than failure. They practice reading materials in which they have *already* received instruction. Sentences that appear early in the program are relatively easy to read. For example, the first sentence read by students appearing in Lesson 18 of *Decoding A* is:

“She had rats and cats.”

As students progress through the program, they encounter more complex text such as that shown in the last lesson (Lesson 65) of *Decoding A*:

*A green frog was in a bathtub. A red bug said,
 “Can I get in the tub with you?” “No,” the frog said.
 “This tub is for me.” The bug said, “But I need a bath.”
 The frog said, “Go hop in the sink.” That is what the
 bug did. It went for a swim in the sink.*

Decodable text is based on the instruction students have received up to that point. Only when students have mastered the prerequisite skills of accurate decoding do stories become more like the text students will encounter in everyday reading (e.g., newspapers, textbooks, novels). For example, the last lesson (Lesson 125) of *Decoding C* includes the informational passage appearing in Figure 6B.

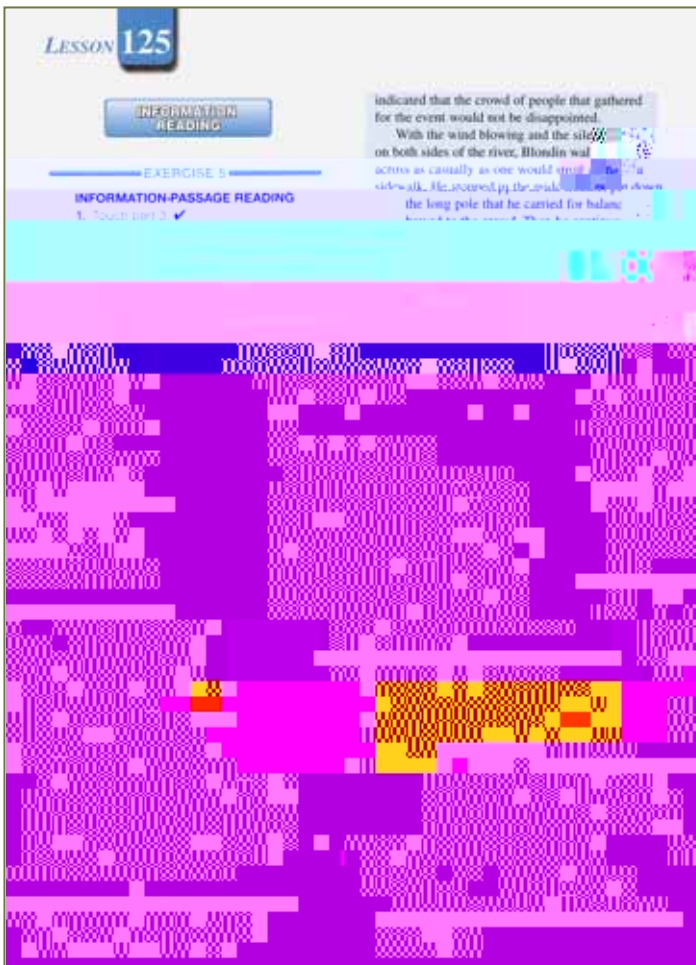


Figure 6B: *Corrective Reading Decoding C*, Teacher Presentation Book

Fluency building. Fluency involves reading text accurately, quickly, and with proper expression (NICHD, 2000). “Fluency is important because it provides a bridge between word recognition and comprehension. Because fluent readers do not have to concentrate on decoding the words, they can focus their attention on what the text means ... less fluent readers, however, must focus their attention on figuring out the words, leaving them little attention for understanding the text” (Armbruster et al., 2003, pg. 22).

Repeated and monitored oral reading has been found to improve reading fluency and overall reading achievement (Armbruster et al., 2003; NICHD, 2000). The **Corrective Reading Decoding** program includes repeated and monitored oral reading. In particular, partner reading (where paired students take turns reading aloud to each other) is utilized. Words read correctly per minute increase gradually but steadily across levels of the *Decoding* program:

- *Decoding A* = 60 wpm with 98% accuracy
- *Decoding B1* = 90 wpm with 98% accuracy
- *Decoding B2* = 120 wpm with 98% accuracy
- *Decoding C* = 130 wpm with 98% accuracy

Figure 7 illustrates the use of fluency-building activities (called *Individual Reading Checkouts*) found in Lesson 43 of *Decoding B1*. These checkouts occur on a daily basis to reinforce the importance of reading quickly, accurately, and with proper expression.

Comprehension: Reading to Learn: Vocabulary and Text Comprehension

Corrective Reading includes direct (explicit) instruction in vocabulary development. Figure 8 shows an example of how vocabulary words are explicitly taught and practiced in Lesson 67 of *Decoding C*.



Figure 8: Direct vocabulary instruction in *Corrective Reading*

Focused vocabulary instruction also occurs in *Corrective Reading's Comprehension* program. Figure 9 highlights an example of how explicit vocabulary instruction is provided in Lesson 1 of *Comprehension B1*.

Writing activities are a key part of vocabulary instruction. These activities extend learning to reinforce what is taught during the lesson, solidifying knowledge to promote retention and generalization. Figure 10 shows an example of how writing activities are integrated into vocabulary development exercises in Lesson 19 of *Comprehension C*.

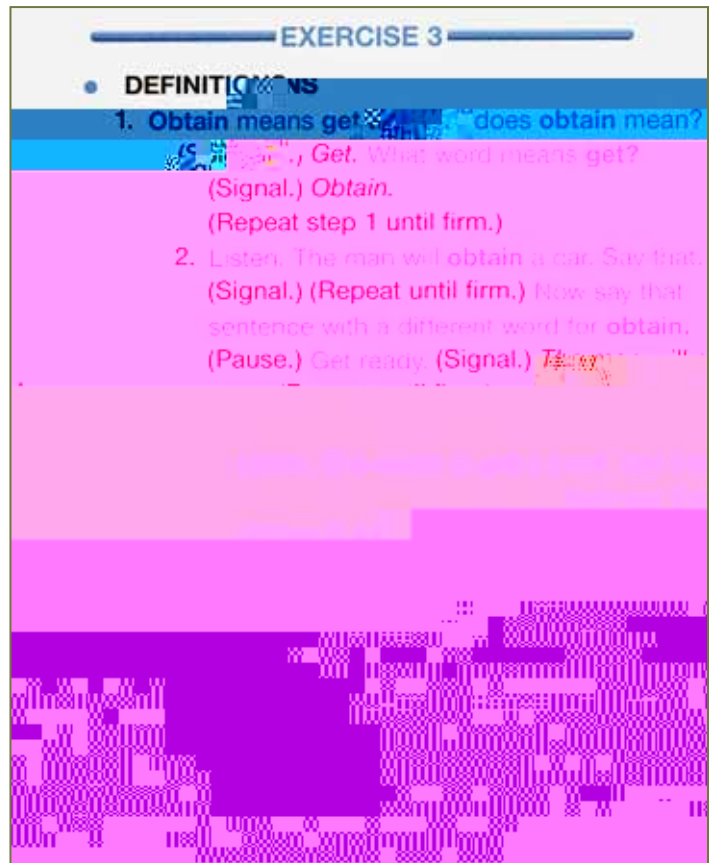


Figure 9: Direct vocabulary instruction in *Corrective Reading*

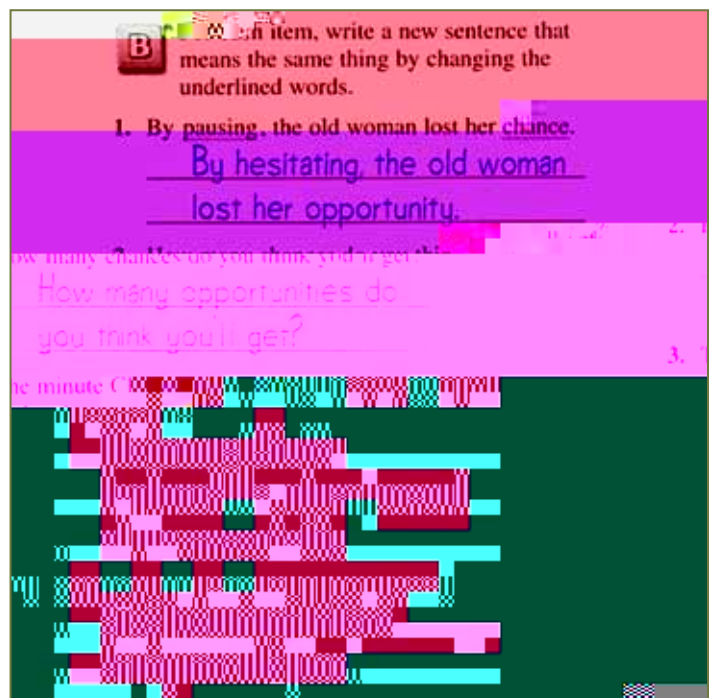


Figure 10: Writing activities in vocabulary instruction in *Corrective Reading*

Text comprehension. “Comprehension is the reason for reading. If readers can read the words but do not understand what they are reading, they are not really reading” (Armbruster et al., 2003, pg. 48). Understanding what is read can be improved when readers use specific comprehension strategies.

One comprehension strategy requires students to synthesize important ideas in a text (e.g., main ideas, conclusions). Figure 11 provides an example of how main idea is taught and practiced in Lesson 73 of *Comprehension C*.

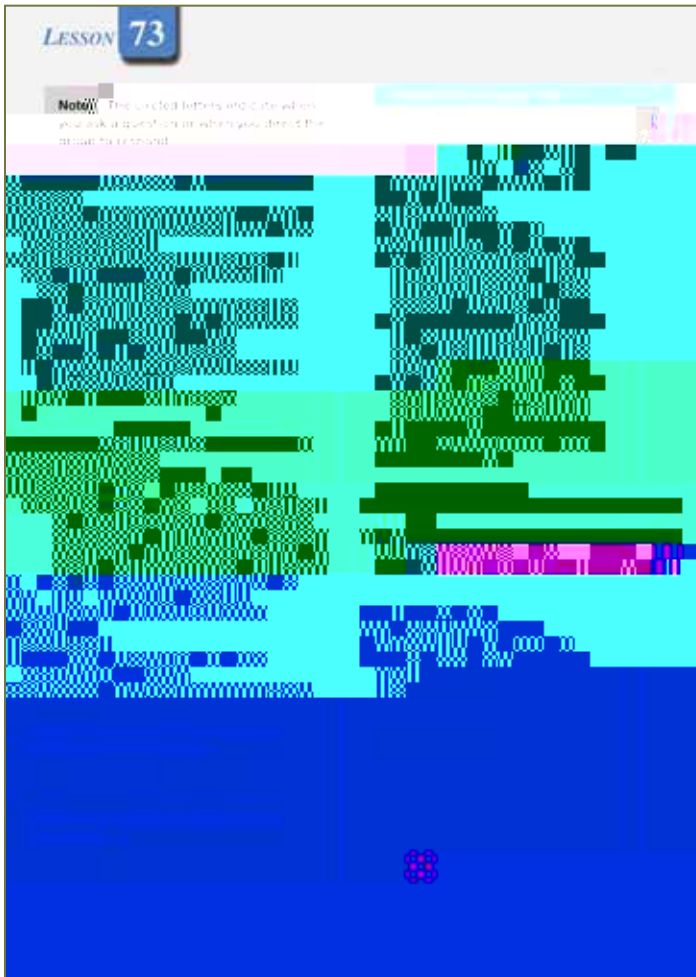


Figure 11: Main idea instruction in *Corrective Reading*

Synthesizing important ideas from text and drawing logical conclusions is a mainstay of *Comprehension C*. Figure 12 illustrates an example from Lesson 122 where students practice analyzing arguments in text and determine if these arguments are faulty based on stated rules.

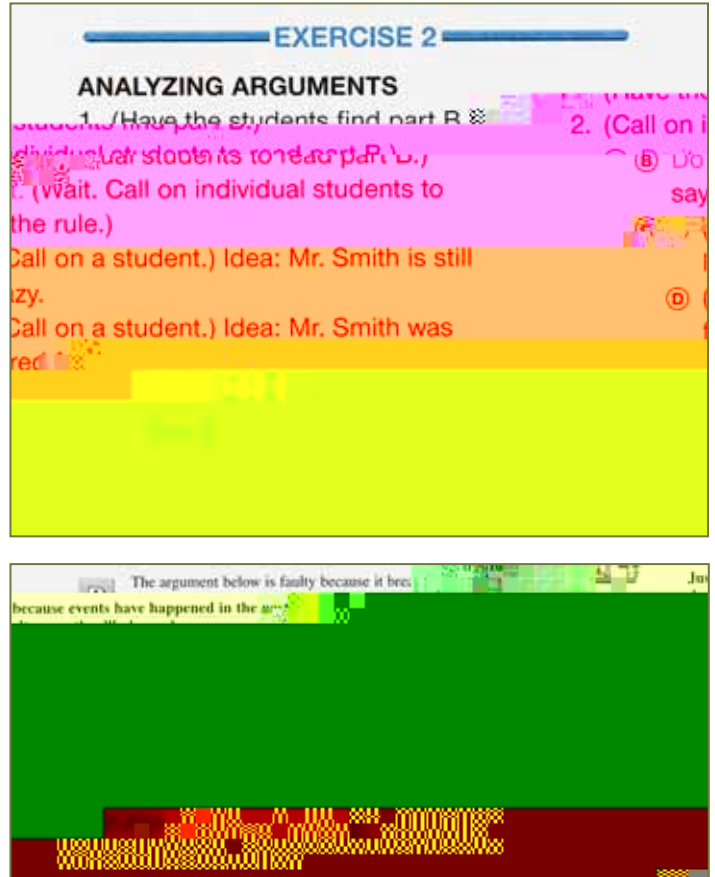


Figure 12: Synthesizing information and drawing logical conclusions in *Corrective Reading*

Answering questions is another important part of comprehension instruction. “Teachers have long used questions to guide and monitor students’ learning. Research shows that teacher questioning strongly supports and advances students’ learning from reading” (Armbruster et al., 2003, pg. 51). **Corrective Reading** includes interspersed questions designed to check students’ understanding of what is read. Figure 13 shows an example of how interspersed questions are used in Lesson 97 of *Decoding C*.

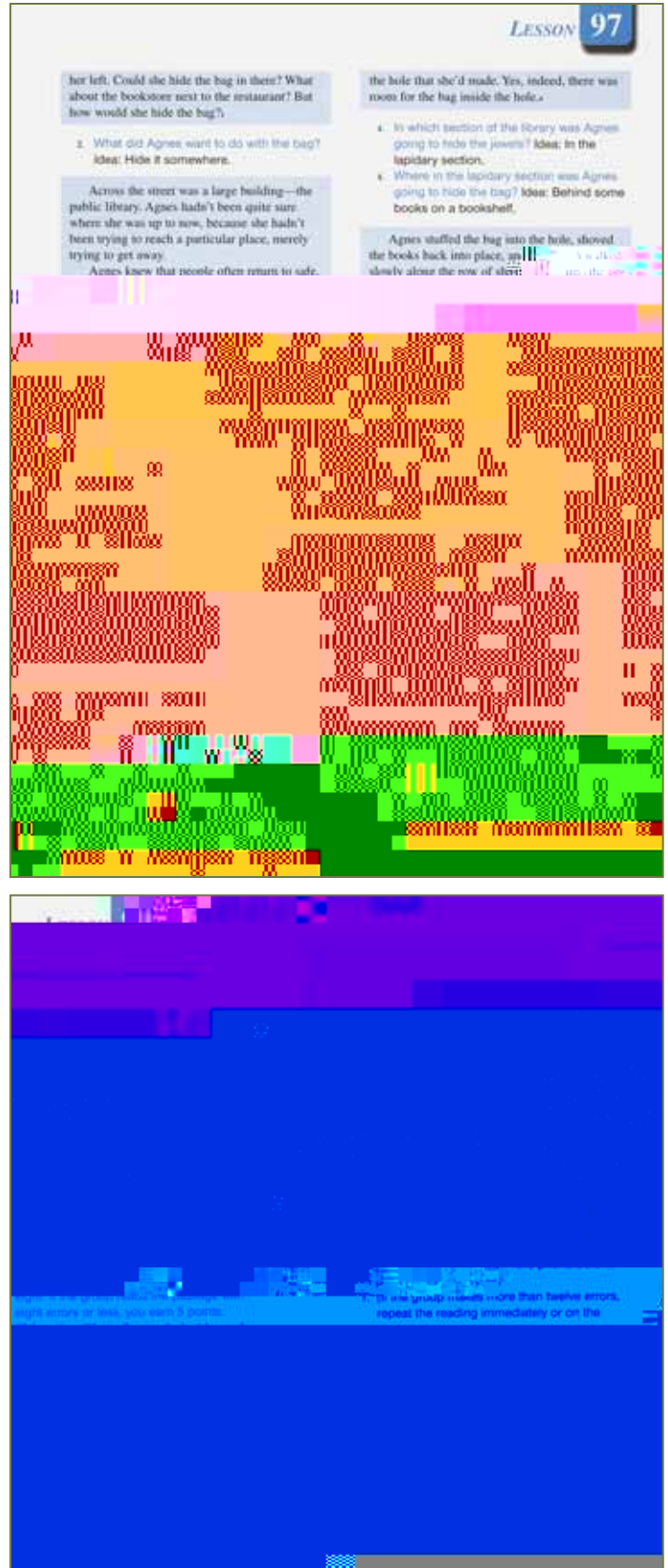


Figure 13: Answering questions in *Corrective Reading*

Figure 14 provides an example of answering questions using text-explicit information (words found in the text) or deductions (words not found in the text) in Lesson 64 of *Comprehension C*.

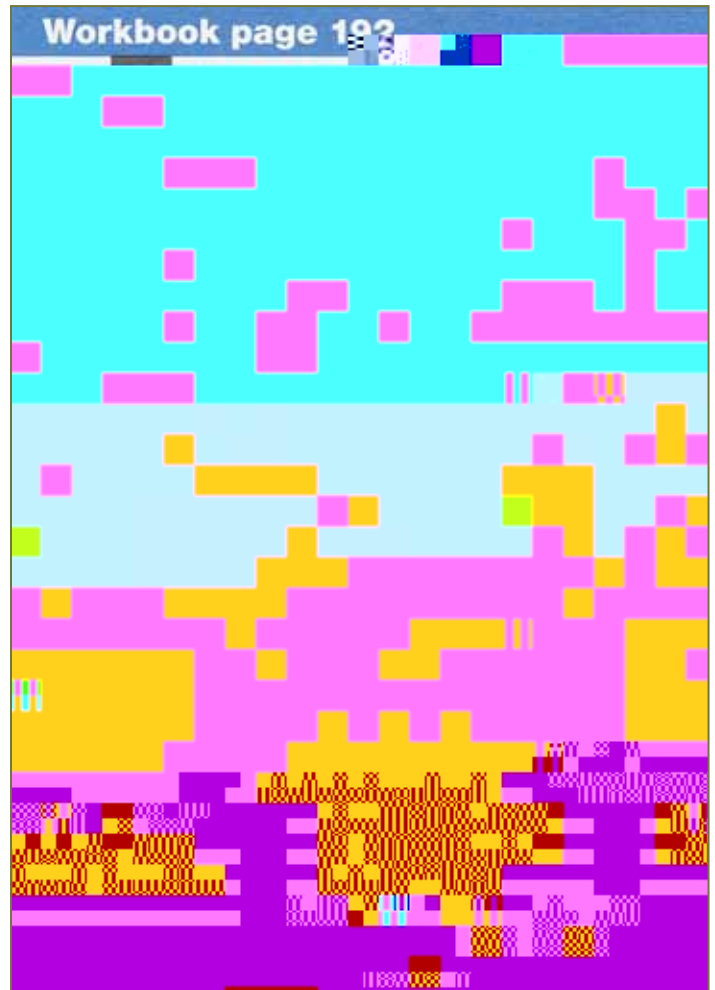


Figure 14: Answering questions in *Corrective Reading*, pages 191 and 192

Alignment of Corrective Reading with Reading Remediation Guidelines

SECTION IV

Carnine, Silbert, Kame'enui, and Tarver (2004) provide guidelines for establishing a comprehensive program for children who are behind in reading. *Corrective Reading* is designed with these guidelines in mind:

- **Intervene early.**
Students may be placed in *Corrective Reading* starting in Grade 3.
- **Provide extra instructional time.**
Lessons for each of the *Corrective Reading* programs (*Decoding* and *Comprehension*) can be completed comfortably in a 45 to 50 minute block of time. Carnine et al. (2004) recommend up to 150 minutes of language arts instruction for "corrective readers." This recommendation could be met by completing one lesson of decoding and one lesson of comprehension (called a double strand sequence) plus a writing program such as *Expressive Writing*.
- **Utilize small-group instruction.**
Flexible skill grouping is recommended in the *Corrective Reading* program. The rule of thumb in direct instruction is "the lower the reading level, the smaller the group." Thus, small group instruction is advocated.
- **Use effective instructional materials.**
Corrective Reading meets the definition of an effective instructional program. It is research-validated, incorporating best practices in reading remediation by including explicit instruction in phonemic awareness, phonics, fluency, vocabulary, and comprehension.
- **Create a comprehensive aligned program.**
Corrective Reading is comprehensive in that it includes all elements of effective reading instruction, offering a seamless approach to reading remediation (one level leads to the next with carefully designed cumulative skill development).



“Research evidence is essential for identifying effective educational practice. Research — when it is based on sound scientific observations and analyses — provides reliable information about what works and why and how it works.

This information is essential to designing effective instruction and to demonstrating that it is, in fact, effective. Responsible decisions about what is good for students, therefore, require scientific evidence” (Reyna, 2004, pg. 47).

In a climate where accountability has never counted more, *Corrective Reading* is carefully structured to ensure success. In fact, 28 studies have been published in peer-reviewed journals using the *Corrective Reading* program. Of these 28 studies, 24 group design studies (pre-experimental, quasi-experimental,

Clunies-Ross (1990) compared the effects of the *Corrective*

Kasendorf and McQuaid (1987) analyzed the effects of the *Corrective Reading Decoding*

Study								
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Arthur (1988)

Benner, Kinder,
Beaudoin, Stein, &
Hirschmann (in
press)

Campbell (1984)

Edlund & Ogle
(1988)

Arthur (1988) implemented the *Corrective Reading Decoding*
and

Figure 18: Benner et al. (in press) study showing change in scores on *Woodcock Johnson III (WJ-III)* and *DIBELS*

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Flores et al. (2004) examined the efficacy of the *Corrective Reading Decoding A* program with six students (ages seven to 13 years, IQ range 38 to 52) who were served in a self-contained setting for students with moderate intellectual disabilities from a large Southeastern city. A multiple baseline across behaviors design with embedded conditions was used to assess the effects of the program in teaching the following isolated sounds: *m*, *a*, *s*, and *t*; the following sound discriminations and blends: *a/m*, *s/t*, and *m/a/s/t*; and the following word decoding tasks: *mat* and *sam*. The number of training sessions ranged from 11 to 27 sessions. The results of the study indicated that five of the six students mastered all of the instructed items in letter-sound identification, continuous sound blending, sounding out, and the decoding of CVC words. Also, these five students demonstrated generalized performance on sounding out untaught words, although only two students *fully* decoded untaught words.

Glang, Singer, Cooley, and Tish (1991) used a multiple baseline across behaviors design to determine the effects of *Corrective Mathematics* and the "Deductions" strand of *Corrective Reading Comprehension A*

Lloyd, Cullinan, Heins, and Epstein (1980) randomly assigned 23 elementary-aged Rockford, Illinois students with learning disabilities to three different classrooms — two experimental classrooms (N=15, mean age for experimental groups 1 and 2 = 9 years, 9 months and 9 years, 11 months, respectively) received the **Corrective Reading** program and Arithmetic training.

A control classroom (N=8, mean age 10 years, 4 months) received individual and small group instruction in Language Arts and Arithmetic as well as some training in perceptual, perceptual-motor, and other psychological processes. After eight months, the results showed that both experimental groups had a statistically significant improvement of .75 of a standard deviation over the control group as measured by the *Slosson Intelligence Test* and *Gilmore Oral Reading Test* (see Figure 23).



Figure 23: Lloyd et al. (1980) study illustrating posttest oral language comprehension scores on the *Slosson Intelligence Test* and posttest reading comprehension scores on the *Gilmore Oral Reading Test*

Polloway, Epstein, Polloway, Patton, and Ball (1986) assessed the effects of the **Corrective Reading Decoding A or B** program on rural and suburban central Virginia middle and high school students with learning disabilities or mental retardation. Seventy-eight students with learning disabilities (mean age 15.7 years, Grades 6–12, mean IQ 87) and 41 students with mental retardation (mean age 16.0 years, Grades 6–12, mean IQ 62.5) received the program for one academic year.

Results showed that both groups exhibited statistically significant improvements for reading recognition on the *Peabody Individual Achievement Test* of .570 of a year during the **Corrective Reading** program compared to .109 of a year before **Corrective Reading** was implemented. Additionally, there were statistically significant gains for reading comprehension from .128 before **Corrective Reading** to .500 during **Corrective Reading**. Finally, students with learning disabilities showed greater gains than students with mental retardation in reading recognition and comprehension.

Somerville and Leach (1988) randomly assigned 40 Australian students (mean age 10 years 11 months) who had reading difficulties to one of four groups — psycho-motor, self-esteem, **Corrective Reading**, and a waiting-list control. After a period of 12 weeks, the **Corrective Reading** program resulted in statistically significant gains in reading performance as measured by tests of reading (see Figure 24). Statistically significant differences were not found among the groups on measures of psycho-motor performance or self-esteem.

Figure 24: Somerville and Leach (1988) study showing mean gains in months in reading scores over a 3-month period

Thomson (1992) compared 144 students with specific learning disabilities who were taught by teachers using the **Corrective Reading** program to students (N=61) who received a traditional/basal approach and those (N=50) instructed using a whole language approach over the 1989–90 school year. Thus, 255 total students participated in the study. Instruction took place in resource rooms and general elementary and middle school classrooms in the Manatee County School District in Florida.

Overall, a larger number of the **Corrective Reading** students were lower in intelligence and socio-economic status and were older than the students in the comparison groups. Results indicated that the **Corrective Reading** group had larger standard score gains on the *Woodcock-Johnson Individual Achievement Test* (six standard score points or 0.33 standard deviation) and had larger increases in words read per minute (as measured by the timed *Dolch Story Reading Test*) than the other two groups (see Figure 25).

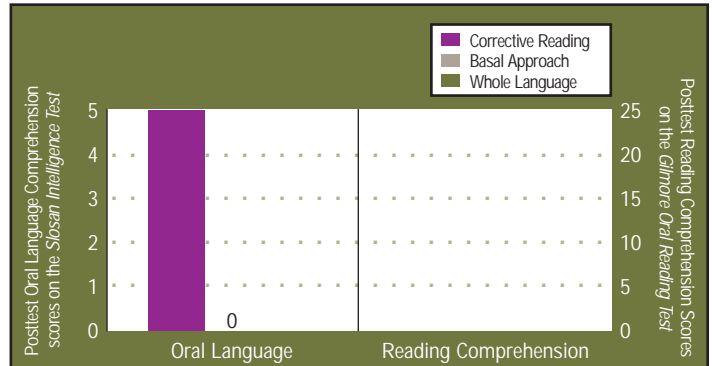


Figure 25: Thomson (1992) study showing mean standard score gains on the *Woodcock-Johnson Individual Achievement Test* and mean increases in words read per minute on the *Dolch Story Reading Test*

Overall, results were positive for students using **Corrective Reading**. In comparison studies, **Corrective Reading** groups often significantly outperformed control groups on a variety of measures including standardized assessments, program-based criterion-referenced tests, and oral reading fluency probes. Results also indicated that many students experienced positive changes in behavior and increased school attendance.

Alternative settings. Table 3 shows seven studies examining the use of *Corrective Reading* with students in alternative settings as delivered by teachers.

Table 3: *Corrective Reading* as delivered by K–12 teachers in alternative settings

Study	DI Program	n	Participants	Research Design	Research Purpose	Intervention Details	Outcome Measures	Findings
Drakeford (2002)	<i>Corrective Reading</i>	6	Incarcerated males Average age = 17 years All participants had a history of educational disabilities and/or had received special education services	Single-case — Multiple baseline across participants	Investigate the effects of <i>Corrective Reading</i> with incarcerated males.	8 weeks, 1 hour per day, 3 days per week. Teachers delivered the <i>Corrective Reading</i> program to incarcerated youth. Fidelity checks were conducted. Participant 1 completed 24 lessons, Participant 2 completed 19 lessons, Participant 3 completed 18 lessons, Participant 4 completed 22 lessons, Participant 5 completed 19 lessons, and Participant 6 completed 17 lessons.	<i>Measures of oral reading fluency; Rhody-Secondary Reading Attitude Assessment (RSRA)</i>	All participants demonstrated positive gains on oral reading fluency measures; positive trends were noted in attitudes toward reading instruction.
Herr (1989)	<i>Corrective Reading Decoding</i>	3	College students with poor reading skills	Pre-experimental — One group pretest-posttest	Determine the effects of <i>Corrective Reading Decoding</i> with college students with poor reading skills.	Provided reading instruction with <i>Corrective Reading Decoding</i> over a multi-year period.	<i>Wide Range Achievement Test, Nelson Reading Test</i>	Participants demonstrated improved grade-level reading.
Holdsworth (1984–85)	<i>Corrective Reading Decoding B and C</i>	15	Students placed in a school for students with special needs in the United Kingdom	Pre-experimental — One group pretest-posttest	Determine the effects of <i>Corrective Reading</i> with students with special needs in the United Kingdom	Provided <i>Corrective Reading, Decoding B</i> to 9 students over a period of 4 months and <i>Decoding C</i> to 6 students over 2.5 months.	<i>Neale Analysis of Reading Ability</i>	Large improvements in reading accuracy and reading comprehension grade equivalent scores.
Malmgren, & Leone (2000)	<i>Corrective Reading</i>	45	Incarcerated males, 20 receiving special education services Average age = 17.07 years (Range = 13.92 – 18.75) EBD (N=10); LD (N=7); & MR (N=3)	Pre-experimental — One group pretest-posttest	Determine the effects of <i>Corrective Reading</i> with incarcerated youth.	6 weeks, 45 min. per day, 5 days per week. Teachers delivered an intensive <i>Corrective Reading</i> program to incarcerated youth. Fidelity checks were conducted.	<i>Gray Oral Reading Test (GORT-3)</i> subtests (i.e., Rate, Accuracy, Passage, and Comprehension)	Overall, positive results. Statistically significant gains on Rate, Accuracy, and Passage subtests. Gains made on Comprehension subtest did not reach statistical significance.
Scarlato & Asahara (2004)	<i>Corrective Reading: Decoding B2</i>	9 (5 in <i>Corrective Reading</i> , 4 in comparison)	Adjudicated youth EBD/LD 16 to 17 years	Quasi-experimental — Nonequivalent control group, 2 groups (<i>CR</i> , reading specialist group)	Compare the effects of <i>Corrective Reading</i> and another intervention.	Nineteen weeks of instruction. 5 students received instruction using <i>Corrective Reading Decoding Level B2</i> ; the other group received instruction developed by a reading specialist (RS).	<i>Woodcock Reading Mastery Test – Revised</i>	Majority of students in the <i>Corrective Reading</i> group had large to moderate gains on standardized measures. Majority of students in the comparison group demonstrated moderate to large losses on standardized measures.
Steventon, & Fredrick (2003)	<i>Corrective Reading: Decoding Level B2</i> (Lessons 33–52)	3	Alternative middle school Participant 1 was 15 years old; participants 2 and 3 were 13 years old	Single-case — Multiple baseline across participants	Investigate the effects of <i>Corrective Reading</i> with repeated readings.	3 students received up to 13 lessons of <i>Corrective Reading</i> with repeated readings (RR). Students orally read passages 3 times prior to timed checkout on the 4th reading. Students then read a novel part of the passage that was timed to assess generalization. Fidelity checks & social validity measures were done.	Correct words per minute (CWPM) and errors per minute (EPM) on repeated and novel passages from intervention materials; & program-specific oral reading checkout rates. Additional criterion: 20% rate of improvement across 2 consecutive intervention days	All students showed gains in average CWPM on RR passages. No clear evidence of fluency gains on novel passages. There were increases in the number of sessions meeting program-specific reading checkout rates for all students. Participants 1 and 3 had mean error rate decreases during RR condition. Participant 2 had mean error rate increases during RR condition.
Thorne (1978)	<i>Corrective Reading</i>	13	Junior maladjusted boys in England Age range = 8 to 12 years	Pre-experimental — Pretest-posttest, no comparison group	Investigate the effects of <i>Corrective Reading</i> with maladjusted boys in England.	35 lessons of the <i>Corrective Reading</i> program were taught to two groups of boys by the same teacher. A contract-based system was used.	<i>Neale Analysis of Reading</i>	After 35 lessons, Group A made gains in reading accuracy. Group 2 made gains in reading accuracy and reading comprehension.

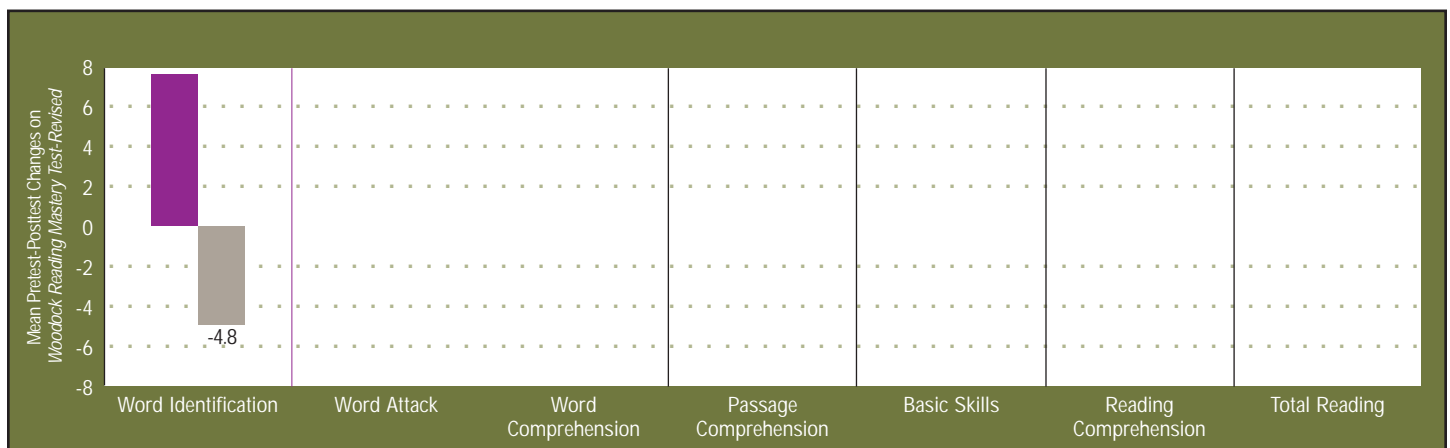
Scarlato and Asahara (2004) studied the effects of a 19-week *Corrective Reading Decoding B2* program with five 16- to 17-year-old adjudicated male students who were below grade-level readers. Four other students served as a comparison group. Students in this investigation had either emotional disturbances and/or learning disabilities. The comparison group received the reading program offered in their English class as well as services from the reading specialist. Results revealed that the *Corrective Reading* group showed improved performance on the *Woodcock Reading Mastery-Revised* subtests — Word Identification, Word Attack, Word Comprehension, and Passage Comprehension — and clusters — Basic Skills, Reading Comprehension, and Total Reading (see Figure 26). The comparison group had decreased performance on all subtests and clusters.

Steventon and Fredrick (2003) used a multiple baseline across participants design to assess the effects of adding repeated readings to the *Corrective Reading Decoding B2* program. Three African American middle school male students, who had been placed in an alternative school due to disciplinary infractions, participated. All students made gains in their mean correct words per minute (CWPM) on practiced passages with the repeated reading intervention — the number of words read correctly on practiced passages increased 21.8, 37.3, and 37.4 words. All students showed increases in the percentage of sessions in which they achieved program-specified criteria for CWMP. Two of the three students showed a reduction of mean errors per minute from baseline to the repeated reading phase,

thereby maintaining high levels of accuracy as their reading rates increased. However, two of three students showed losses in the number of words read correctly on the unpracticed passage time readings and none of the students showed distinct evidence of transfer of fluency gains to the unpracticed passages. As the students experienced only 3 to 13 days of intervention in the study, more extensive intervention may be necessary to produce generalizable gains.

Thorne (1978) provided the *Corrective Reading Decoding* program to two groups of maladjusted males ranging in age from 8 to 12 years. Group A included five boys and Group B included eight boys. The author reported that over 35 lessons, Group A exhibited a mean gain of 6.6 months for reading accuracy. Group B made an average gain of 6.8 months for accuracy and 6.2 months for comprehension on the *Neale Analysis of Reading*.

Overall, results were positive for students using *Corrective Reading* on standardized measures and oral reading fluency probes. These results should be of particular significance to correctional educators who often have a limited amount of time to teach students basic reading skills.



Corrective Reading as Delivered by Paraprofessionals and Peer Instructors

Five studies were found examining the effects of *Corrective Reading* as implemented by paraprofessionals or peer instructors in general and special education settings. In addition to these studies, Marchand-Martella and Martella (2002) highlighted the use of peer-delivered *Corrective Reading* in a research summary of four of the studies described below. Further, Marchand-Martella, Martella, Bettis, and Riley-Blakely (2004) described aspects of a high school-based tutorial program using *Corrective Reading* and peer-delivered instruction.

General education settings. Table 4 shows four studies examining the effects of *Corrective Reading* implementations by paraprofessionals or peer instructors in general education high school settings.

Study	n	Participants	Research Design	Research Purpose	Intervention Details	Outcome Measures	Findings
Gersten, Brockway, & Henares (1983)	35 (15 in 1980–81 school year, 20 in 1981–82 school year)	Limited and non-English speaking students, including students from Korea, Vietnam, Japan, the Philippines, and Samoa	Pre-experimental — One group pretest-posttest (for Grades 3 to 6 only)	Determine the effects of <i>DILE</i> program (which included <i>Corrective Reading</i>) on students with limited English proficiency.	<i>DILE</i> program implemented by bilingual instructional aides. Program components include: (a) the Direct Instruction Model of classroom organization and teaching strategies; (b) use of developmental and remedial Direct Instruction programs for ESL students; (c) structured English immersion, (d) non-graded approach; (e) use of bilingual aides as instructors, and (f) cultural activities.	<i>Comprehensive Test of Basic Skills</i>	Improvement in reading performance was shown for reading and language.
Harris, Marchand-Martella, & Martella (2000)	88	High school students at-risk for failure (N=88) 11th and 12th grade peer instructors (N=77)	Pre-experimental — One group pretest-posttest	Investigate the effects of peer-delivered instruction using <i>Corrective Reading</i> .	Average of 33 lessons taught across an average of 66 instructional days, 50 min. per day, 5 days per week over an average period of 6 school days. Peer-instructors delivered instruction to at-risk high school students using the <i>Corrective Reading</i> program. Fidelity checks were conducted.	<i>Gates-MacGinitie Reading Tests</i> ; measures of oral reading fluency	Learners demonstrated median grade level gains on standardized measures. Oral reading fluency rates increased greatly while the number of repeated readings to reach criterion decreased.
Keel, Fredrick, Hughes, & Owens (1999)	75	Elementary students at risk for failure	Pre-experimental — Pretest-posttest with no comparison group; 2 groups	Investigate the effectiveness of using para-professionals to deliver <i>Corrective Reading</i> .		<i>Woodcock Reading Mastery Test-Revised</i>	4th and 5th graders made statistically significant academic rate gains.
Short, Marchand-Martella, Martella, & Ebey (1999)	11	11th and 12th grade peer-instructors (N=11)	Pre-experimental — One group pretest-posttest	Determine the advantages of serving as peer-instructors using the <i>Corrective Reading</i> program.		<i>Gates-MacGinitie Reading Tests</i> ; direct observations; satisfaction surveys; and journal entries	Peer-instructors demonstrated stable performance from pre- to posttest on vocabulary and comprehension measures. Peer-instructors scoring below grade level on the vocabulary pretest performed at or above grade level on the posttest. Daily journal entries showed overall positive comments about their partners.



Special education settings. Table 5 shows one study examining the effects of **Corrective Reading** as delivered by peer instructors in special education settings.

Marchand-Martella, Martella, Orlob, and Ebey (2000) analyzed the effects of a peer-delivered **Corrective Reading** program with repeated readings to 22 rural high school students in the Pacific Northwest. These Grade 9 students were at least two years below grade level. The *Gates-MacGinitie Reading Tests* (vocabulary and comprehension subtests) served as the assessment. For the students in *Level B1*, grade-level performance increased from 2.6 (pretest) to 4.2 (posttest) for vocabulary and decreased from 2.6 (pretest) to 2.4 (posttest) for comprehension. For students in *Level B2*, there were increases for both vocabulary and comprehen

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