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# *Effects of Intensive Remedial Reading Instruction*

John Slate, Bob Algozzine, and Joseph F. Lockavitch

**ABSTRACT:** *Reading problems are among teachers' most prevalent academic concerns. In this research, students at risk of serious reading failure were taught word recognition and comprehension skills using the failure free reading program. The intervention was designed to give nonreaders and lowest literacy students the opportunity to have an immediate and successful reading experience with age-appropriate materials. A key of the program is reliance on three elements crucial to reading success: adequate repetition, appropriate sentence structure, and meaningful story content. Directed instruction, talking software, and print materials are integral parts of the intervention. Improvements were evident in attitudes, curriculum-based performance measures, and standardized achievement tests. The failure free reading program appears to have promise for improving achievement of students at-risk of literacy failure.*

## *Effects of Intensive Remedial Reading Instruction*

A variety of special methods not typically used in general education classrooms have been developed and used with students at-risk of severe problems in reading. For example, multisensory stimulation approaches (VAKT, Fernald, and Orton-Gillingham methods), neurological impress methods (rapid-unison reading by student and teacher), intensive phonics instruction, and whole-language approaches have been popular over the years (Lerner, 1997). Reading Recovery (Clay, 1985) is among the most recent additions to this area of study.

Data on the effects of general approaches to improving reading skills are favorable (Lerner, 1997). For example, several studies have been completed on the effects of pre-viewing and various reading practice techniques. Generally, these studies show that listening to a story prior to reading it is very effective and more effective than silent reading alone (Rose, 1984; Rose & Beattie, 1986; Rose & Sherry, 1984). Additionally, other studies have focused on the effects of specific pre-viewing with peers (Salend & Nowak, 1988), using tapes and computers to facilitate basic reading skills and comprehension (Cobb, 1995; Freeman & McLaughlin, 1984), repeated readings (van Bon, Bokseveld, Font Freide, & van den Hurk, 1991; Weinstein & Cooke, 1992), and one-to-one tutoring (Wasik & Slavin, 1993). All these general techniques appear to be effective in improving students' oral reading fluency, a key to later literacy success (Lerner, 1997).

A few studies have also been completed that reveal significant effects in improving students' oral reading performance when using specific error correction and feedback strategies. For example, supplying correct words while students are reading them and providing extensive practice reading materials focused on sight word vocabulary have been studied by Rosenberg (1986) and Rose, McEntire, & Dowdy (1982), with results showing the need to include

correction procedures that complement simply supplying the word to students when they make errors. Similar effects are obtained when students simply receive feedback (Perkins, 1988; Thorpe, Chiang, & Darch, 1981).

For the most part, data on the effectiveness of more broadly described programs for teaching at-risk readers are equivocal or unconvincing. Consider the following: (a) the Slingerland approach (Lovitt & DeMeir, 1984), was not found to be any more effective than a traditional basal program, (b) studies of Direct Instruction curricula reveal contradictory outcomes, with some studies showing no significant effects (Kuder, 1990; O'Connor, Jenkins, Cole, & Mills, 1993) and others showing significant effects (Polloway, Epstein, Polloway, Patton & Ball, 1986), and, (c) despite implementation with 78,000 students from 1984-1993, data from Reading Recovery research sites produced an unconvincing scenario on its effectiveness with age cohorts (Hiebert, 1994; Viadero, 1994).

*A key of the program is reliance on three elements crucial to reading success: adequate repetition, appropriate sentence structure, and meaningful story content*

The *failure free* reading program is grounded in much of the research on effective reading instruction and tutorial programs (cf. Wasik & Slavin, 1993; Lerner, 1997; Lockavitch, 1998). Its primary goal is to provide a basic understanding of the reading process to students with pronounced reading difficulties by employing age appropriate

materials and promoting independence in reading using a consistent approach, repetition, and immediate performance feedback. A key of the program is reliance on three elements crucial to reading success: adequate repetition, appropriate sentence structure, and meaningful story content. Directed instruction, talking software, and print materials are integral parts of the intervention. The program is designed to function within the parameters found in typical classrooms with large numbers of at-risk students: Minimum requirements for staff training, noncertified teaching assistants, and a zero-reject policy in which no student is denied access to support because of a previous disability or level of reading performance. While the factors that differentiate this approach are sometimes evident in remedial classroom instruction, their packaging and the simultaneous nature of their presentation represent a unique intervention in this research.

### Method

The purpose of this research was to evaluate the effects of implementing the *failure free* reading program with a group of at-risk students. Attitude and curriculum-based reading performance scores were compared for children participating in the intensive remedial reading program.

### Participants

The research took place in a K-3 elementary school of approximately 600 students located in a Southern metropolitan area with a population of approximately 80,000. Pretest data were collected from 91 elementary school students (56 boys and 35 girls) enrolled in grades 1 (35), 2 (31), and 3 (25). Eight students were Caucasian, 81 were African-American, and two were of other groups. Of these 91 children, 70 (39 boys and 31 girls) were still present at the school and available for the posttest data collection. Of the 70 children on whom posttest data were collected, 26 were enrolled in first grade, 26 in the second grade, and 18 in the third grade, five students were Caucasian, 64 were African-American, and one was of another group. To participate in the *failure free* reading program, all students were identified as being at-risk for reading difficulties (i.e., teachers nominated them based on reading achievement below the tenth percentile). Pretest Normal Curve Equivalents (NCEs) on the Iowa Test of Basic Skills reading measure were approximately one standard deviation below the mean ( $M=29.92$ ,  $SD = 13.78$ ), reflecting significantly below average reading performance expected for students at-risk of failure. Mean pretest scores on the students' attitudes and teachers' perceptions of attitudes were 53.1 and 34.6 respectively. With a possible range of 15 (most negative) to 75 (most positive), students' attitudes were somewhat higher (i.e., more positive) whereas teachers' perceptions of students' attitudes were somewhat lower (i.e., slightly more negative).

### Procedure

Students participated in intensive remedial reading exercises designed to provide opportunities for immediate success in appropriate age- and grade-level materials (Lockavitch, 1995). The *failure free* materials are specifically designed to allow teachers to place nonreading students in reading passages regardless of current levels of reading performance. Scripted lessons with instructional readers and independent reading booklets at varying levels of difficulty as well as flashcards and independent reading activities for additional practice are key components of the program; talking software is also available. Repetition, sentence structure, and story content are controlled for each lesson. The scripted reading activities provide high rates of vocabulary repetition in sentences that are not complicated with inverted phrases, dependent clauses, or incomplete thoughts that confuse and frustrate emergent readers. The program content also controls the use of multiple meaning words, figurative speech, and complex language in the content of each reading passage.

The students participated in a maximum instructional period of 30 minutes daily with a trained teacher. The approach reduces reading to its simplest form by controlling for context of the material, sentence structure, and story content. The primary instructional procedure involved previewing material to be read; listening to the teacher read; answering factual, inferential, and leading questions; reading the material; and reviewing the material successfully. While these activities are often included in classroom reading instruction, their simultaneous application within a structured remedial program was a unique intervention for this group of students. The approach was designed to improve word recognition and comprehension performance by having students read controlled passages from carefully scripted lessons.

### Instrumentation

For both the preprogram and postprogram data collection periods, students were administered a 10-item, silent reading screening test in which reading comprehension was assessed. The number of items students answered correctly comprised their preprogram and postprogram comprehension scores. Next, students were administered a 30-item word recognition measure. The number of words students correctly identified became their preprogram and postprogram word recognition scores. Following these two reading measures, students and teachers completed a 15-item reading attitude questionnaire in which they were asked to respond using a five-point Likert scale (5=Always, 1=Never). Children responded to 10 items about reading and to 5 items in which they compared their reading performances to other students in their classroom (see Table 1). Teachers responded to 10 items regarding their perceptions of each

**Table 1: Students' Preprogram Attitudes Toward Reading**

Survey Item	% Disagreement	% Agreement
1. I really enjoy reading.	16.7	82.3
2. I really like to work at my desk doing my written reading assignments.	27.8	72.2
3. I think I am a good reader.	26.7	73.3
4. I think I can become a very good reader.	14.4	85.6
5. I really enjoy coming to school.	12.2	87.8
6. I really enjoy being in my classroom.	16.7	83.3
7. I think I can read as well as most of the kids in my classroom.	33.3	66.7
8. I can see my reading getting better and better every day.	20.0	80.0
9. I think my classmates think I am a good reader.	33.3	66.7
10. I really enjoy reading aloud to my classmates.	30.0	70.0
Compared to my classmates, my _____ is better than my classmates.		
11. Silent Reading.	23.5	76.5
12. Reading aloud.	21.1	78.9
13. Working on my written reading assignments.	28.9	71.1
14. Writing sentences and stories by myself.	27.8	72.2
15. Spelling.	26.7	73.3

child's attitude toward reading and to 5 items in which they compared each child's reading performance to other children in the classroom (see Table 2).

Internal consistency estimates (Cronbach's alpha) were calculated to evaluate the reliability of the attitude scores. For the total score on the student form, the reliability estimate was 0.87 on the preprogram assessment and 0.81 on the postprogram measure. For the total score on the teacher form, the reliability estimate was 0.90 on the preprogram form and 0.92 on the postprogram administration. Separate estimates were calculated prior to the determination of attitudinal summary scores for each area of the scales. The reliability for items 1 through 10 was 0.91 for the preprogram measure and 0.90 for the postprogram on the teacher form and for items 11 through 15, the preprogram reliability was 0.88 and the postprogram reliability was 0.87. For students, internal consistency estimates of 0.77 and 0.76 were obtained on the preprogram and postprogram measures respectively for items 1 through 10. On items 11 through 15, internal consistencies of 0.77 and 0.66 were obtained on the preprogram and postprogram measures respectively. For purposes of subsequent analyses, summary scores were calculated for each scale by adding together the responses for items 1 through 10 and items 11 through 15, with higher scores reflecting more positive attitudes than lower scores.

## Results

Means and standard deviations of all the scores and subscores are presented in Table 3. Significant improvements were evident in word recognition and silent reading. The average number of words read on the posttest ( $M=24.66$ ,  $SD=6.99$ ) was more than twice that read on the pretest ( $M=10.40$ ,  $SD=10.01$ ). Similarly, comprehension scores were almost doubled from pretest ( $M=4.57$ ,  $SD=2.09$ ) to posttest ( $M=9.30$ ,  $SD=1.52$ ). The practical significance of these outcomes is further illustrated when compared to those obtained in similar research. For example, no differences were indicated in pretest ( $M=11.04$ ,  $SD=6.47$ ) and posttest ( $M=15.24$ ,  $SD=5.87$ ) word recognition performance of control group students in a study by Lockavitch and Algozzine (1998), while treatment group scores more than doubled. Similarly, significant improvements in reading comprehension scores were evident for students participating in a *failure free* remedial program with no corresponding changes in pretest and posttest scores for control group students ( $M=4.64$ ;  $SD=1.71$ ,  $M=5.71$ ;  $SD=2.09$ , respectively).

Analyses were also conducted to determine whether teachers' and students' perceptions of students' attitudes toward reading had changed during the course of the program. No statistical differences were evident in students'

**Table 2: Teachers' Perceptions of Students' Attitudes Toward Reading Survey**

Survey Item	% Disagreement	% Agreement
1. The student appears to really enjoy reading.	62.9	37.1
2. The student appears to like to work at his/her desk during written reading assignments.	73.0	27.0
3. The student appears to think s/he is a good reader.	67.4	32.6
4. The student demonstrates that s/he believes s/he can become a very good reader.	55.1	44.9
5. The student appears to really enjoy coming to school.	24.7	75.3
6. The student regularly completes independent reading assignments.	51.7	48.3
7. The student is a behavior problem during reading.	88.8	11.6
8. The student demonstrates a good attention span during reading time.	76.4	23.6
9. The student demonstrates confidence in his/her reading ability.	82.0	18.0
10. The student volunteers to read aloud to his/her classmates.	66.3	33.7
This student's performance in _____ is better than his/her classmates.		
11. silent reading	96.4	3.6
12. oral reading	94.4	5.6
13. working on written reading assignments	92.1	7.9
14. writing sentences and stories to his/her classmates	95.5	4.5
15. spelling	68.5	31.5

**Table 3: Achievement and Attitude Scores**

Measure		Pretest	Posttest	Obtained <i>t</i> statistic
Word Recognition	Mean	10.40	24.66	14.35*
	SD	10.01	6.99	
Silent Reading (comprehension)	Mean	4.57	9.30	15.21*
	SD	2.09	1.52	
Student Attitudes Items 1-10	Mean	36.77	34.13	-2.37
	SD	7.21	7.00	
Items 15-20	Mean	17.79	18.12	0.55
	SD	4.63	3.90	
Teacher Attitudes Items 1-10	Mean	25.59	30.78	5.23*
	SD	7.19	7.09	
Items 15-20	Mean	8.49	10.19	4.23*
	SD	2.71	3.00	

\* indicates a significant difference between pretest and posttest means

attitudes toward reading ( $t=-2.37, df=59$ ) or their comparison of their reading to the reading behaviors of other students ( $t=0.55, df=55$ ). Their generally high attitudes were maintained throughout the program; however, significant improvements were evident in teachers' attitudes. Again, comparable outcomes were obtained in similar research in which students participated in treatment and control groups (Lockavitch & Algozzine, 1998).

### Discussion

Most students with learning disabilities have difficulties in reading (Kirk & Elkins, 1975; Lyon, 1985; Lerner, 1997), and very poor reading skills have been blamed for many social problems (e.g., chronic unemployment, dropping out of school, and juvenile delinquency). Improving reading performance has received continuing interest in efforts to meet the needs of students at-risk of school failure as well as in the school's continuing commitment to see that all students learn basic skills (Lerner, 1997; Marr & Allington, 1994; Wasik & Slavin, 1993; Wood & Algozzine, 1995). The purpose of this research was to evaluate the effects of a structured program designed to improve the reading achievement of students with learning disabilities. Significant improvements in reading were evident as a result of this intervention.

In a review of five tutoring programs, Wasik and Slavin (1994) identified eight components of the reading process that were emphasized in successful approaches: perceptual analysis of print, knowledge of print conventions, decoding, oral language proficiency, prior knowledge, lexical access, syntactic analysis of sentences, and prose comprehension. The *failure free* reading program is grounded in these factors and the belief that "reading is relating" (Lockavitch, 1998, p. 78):

Students must be able to relate to what they read. They must be able to relate to the text, the sentence structure, and the story's content. When they can relate, successful reading will take place. When they can't relate, reading failure will occur.

The *failure free* instructional approach follows a simple, direct method using carefully constructed passages of connected text and addresses the disadvantages of many other remedial tutoring programs (e.g., one-to-one instruction, extensive training needs, cost) by emphasizing the following: (a) group administration, (b) ease of use, and (c) cost-effectiveness. The practical effects of implementing this program are similar to those associated with broader, more expensive, more labor-intensive programs.

For example, in "An Evaluation of Reading Recovery," Center, Wheldall, Freeman, Outhred, and McNaught (1995) reported posttest effect sizes ranging from 0.42 on the Syntactic Awareness Cloze Test to 3.05 on Clay's book level test. Effect sizes on comparable measures of reading recognition

and silent reading ranged from 1.14 to 2.85 when students participating in the *failure free* reading program were compared to control groups of their peers (Lockavitch & Algozzine, 1998). These large effect sizes favor the *failure free* students on all outcome measures. In another study, England, Rankhorn, Collins, Lockavitch, & Algozzine (in press) reported improved reading performance and decreased discrepancies between ability and achievement after using the *failure free* program to supplement the reading instruction of a group of students with reading disabilities.

The results of this study add to the growing body of literature supporting *failure free* reading. While additional effectiveness research is needed, it appears that this innovative program can be successful with students who fail to profit in traditional reading programs. The benefits of this approach include the following: (1) an organized intervention grounded in components of effective reading instruction (e.g., repeated reading within a meaningful context, easy and predictable sentence structures, and meaningful story content); (2) carefully sequenced activities building on key components of successful reading lessons (e.g., previewing, listening, answering comprehension questions, independent reading, and structured review); and (3) practical use with scripted materials that minimize the need for extensive teacher preparation and training.

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**John R. Slate** is a Professor in the Department of Educational Leadership at Valdosta State University, **Bob Algozzine** is a Professor in the Department of Educational Administration, Research, and Technology at the University of North Carolina at Charlotte, and **Joseph F. Lockavitch** is President of JFL Enterprises in Concord, NC.