

The Effects of Using Direct Instruction and a Re-Reading Contingency with Precision Teaching

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The purpose of this study was to determine the effectiveness of using re-reading as a consequence for failing to read passages quickly with 3 or fewer errors using the Direct Instruction approach in *Corrective Reading, Skill Applications: Decoding C* (Engelmann, Meyer, Johnson, & Carnine, 1988). The participant was a senior high school student who read at the 2.0 grade level at the beginning of the study. For reading, his correct rate was low, error rate high, but he read with perfect comprehension. Corrects and errors during oral reading and the number of times the student had to re-read the material to read in 1-minute and 20 seconds were measured. An AB single case design was implemented to examine effectiveness of Direct Instruction and the re-reading contingency. The use of Direct Instruction included a timing for 2-minutes, while the student read his lessons in the *Skill Applications Decoding C* text. After the first 2-minute timing, the student re-read the passage until he was able to read the same passages at or below 1 minute 20 seconds with three or fewer errors or repeats. The outcomes indicated that Direct Instruction and re-reading were effective in improving correct frequency. The use of re-reading, as a consequence, coupled with Direct Instruction is discussed.

Literacy is a major goal for being successful in school and later in the world or work (Danziger & Gottschalk, 1995; Darby, 1996; Gersten, Keating, & Becker, 1988; Howard, McLaughlin, & Vacha, in press; Sweeney, Omness, Janusz, & Cooper, 1992). It has been suggested that failing to acquire reading skills will adversely affect one's everyday life and may make it highly unlikely that one will enjoy an economically and socially successful adult life (Danziger & Gottschalk, 1995; Darby, 1996; Gersten et al., 1988; Hart & Risley, 1995; Sadovnik, 1991).

Direct Instruction and its skill applications series, *Corrective Reading*, is a skill-based reading instruction program for older children. Direct Instruction emphasizes frequent teacher-student interaction, guided by carefully sequenced lessons utilizing modern learning principles and advanced programming strategies (Engelmann & Carnine, 1982). The two major rules of Direct Instruction are to "teach more in less time", and to "control the details of what happens" (Engelmann, Becker, Carnine, & Gersten, 1988). Direct Instruction has been suggested as a way to improve the literacy of all children and adults (Carnine, Silbert, & Kameenui, 1990). *Corrective reading materials* employs a high rate of student responding while the student is active

in the learning and evaluation process. The materials or sequences are scripted; this allows the teacher to know exactly what and how to teach the material (Engelmann et al., 1988). Evaluations of Direct Instruction approaches with young children at-risk for failure in reading have been extremely positive (Becker, 1977; Gersten, 1985, Gersten, Carnine, & Woodward, 1987; Gersten & Keating, 1987; Gersten, Keating, & Becker, 1988; Lloyd, Cullinan, Heins, & Epstein, 1980). However, such evaluations with older children have not been as common.

The purpose of this study was to evaluate the effectiveness of the Direct Instruction Reading, *Corrective Reading Skill Applications: Decoding C* (Engelmann, Meyer, Johnson, & Carnine, 1988), on acquisition of reading skills, see-say words in context, the frequency of re-reads required to reach criteria of reading the passage in 1 minute and 20 seconds, with 3 or fewer errors, using Precision Teaching with a senior high school student. This case study also attempted to extend the use of Direct Instruction with older students.

Method

Participant and Setting

The participant of this study was an 18-year-old high school senior. Data from the *Woodcock-Johnson Psycho-Educational Battery* (Woodcock & Johnson, 1977) revealed a grade equivalent of 2.0. He was enrolled in general education classes and attended a special basic skills class. The classroom was located in an adjacent building from the main high school and was staffed by a certified special education teacher and a part-time instructional assistant. The special education teacher volunteered her free period to assist and teach high school students who were judged to be at-risk for dropping out of school because of their below grade level performance in the basic skills.

Dependent Variables and Measurement Procedures

The first dependent variable was the number of words read correctly. Data as to the number of re-readings required to reach the criteria of reading the entire passage with three or fewer errors in 1 minute and 20 seconds were also taken.

Experimental Design and Conditions

An AB single case replication design (Kazdin, 1982) was used to assess the effectiveness of the Direct Instruction-Corrective Reading text, *Skill Application: Decoding C* (Engelmann et al., 1988).

Before Direct Instruction. The Before Phase consisted of presenting the student with nine sounds that would be introduced in the first 16 lessons and the selected words that accompanied these lessons. The student read each story, and the first author timed him for two minutes for two sessions.

During direct instruction. The first author taught from the Direct Instruction text, *Skill Applications: Decoding C* (Engelmann et al., 1988). This program is a carefully planned and presented method for teaching reading skills. Each session is approximately 30 to 45 minutes of fast-paced instruction. Review is an important aspect of this series. A detailed description of the

procedures can be found in the workbook, *Skill Applications: Decoding C* (Engelmann et al., 1988). The lessons in the text are scripted for the teacher. Data were collected 2 to 3 times per week for a total of six weeks (13 sessions).

Results

During the Before Phase (Chart 1), the number of correct words read during the timed readings was 216.5 (range 215 to 228). With the implementation of Direct Instruction, there was an increase in the number of words read correctly (Median = 251; range 204 to 293).

The number of re-readings can also be seen on Chart 1. The average number of re-readings per lesson until the student could read the material with three or fewer errors in 1 minute and 20 seconds for before phase was 6.5 (range 5 to 8). For the During Phase, the number re-readings increased for the student to reach the goal of 1 minute and 20 seconds, averaged 8.51 and ranged from 2 to 11.

Discussion

The data showed that Direct Instruction using the corrective reading materials was an effective method for improving the participant's reading skills. The student did require additional re-reading to reach his goal, but felt this extra work was well worth the effort. The reading coordinator in the school district suggested the use of a reduced time of 1 minute and 20 seconds. The classroom teacher has found this standard to be appropriate for her at risk high school students.

The student stated he enjoyed working with the Direct Instruction materials. He looked forward to using the materials each day and has continued to progress in reading. This spring he is preparing to graduate and plans to attend a local community college.

This case study indicated that Direct Instruction, using *Skill Applications, Corrective Reading Decoding C* (Engelmann et al., 1988) was

CALENDAR WEEKS

29/9/95
DAY MO YR

26/10/95
DAY MO YR

1000
500
100
50
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0

Baseline (Before)

Direct Instruction (During)

COUNT PER MINUTE

COUNTING PERIOD FLOORS
MIN
HRS

1
2
5
10
20
50
100
200
500
1000
-16
-24

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

SUCCESSIVE CALENDAR DAYS

McLaughlin	McLaughlin	Stokey	High School Student	18	At-Risk	See/Say & Re-Reads
SUPERVISOR	ADVISER	MANAGER	BEHAVER	AGE	LABEL	COUNTED
Stokey	Gonzaga University		Blackwell	Blackwell	Blackwell	
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER	

effective in acquisition of reading skills. The classroom teacher and first author also observed an improvement in the student's attitude towards school, as well as in attending the special class. The student enjoyed the procedure and liked being timed.

The use of frequent measurement and the Standard Celeration Chart allowed for the easy monitoring of student progress. The benefit of using Precision Teaching procedures has been noted elsewhere (Lindsley, 1991; Sweeney et al., 1992). Another positive benefit of employing the Direct Instruction materials with Precision Teaching, is that the teaching procedures are very clear, scripted, and the text is widely available. The measures employed in Direct Instruction are easy to measure and plot.

Providing students with the necessary reading and comprehension skills has been suggested as a way to reduce school failure for many students (Gersten et al., 1987, Gersten et al., 1988; Howard et al, in press; Lloyd et al., 1988; Sadovnik, 1991). Rather than jumping on another unproven bandwagon, such as whole language reading, as we have done so much in the past and continue to do today (Lieberman & Lieberman, 1990; Slavin, 1989), the use of data-based and empirically verifiable procedures such as corrective reading is recommended. Direct Instruction procedures appear not only to improve the performance of children at risk for school failure, but in the participant's case, permit a student to graduate from high school.

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