

The Effects of an Additional Timed Reading on Reading Rate*

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The purpose of this research was to increase correct frequency and decrease error frequency of see/say words in context (oral reading) in *Corrective Reading*. The participants were three fourth grade students with mild disabilities enrolled in a special education resource room program in a small rural school district. The number of correct and error words from *Corrective Reading* were measured. These data were collected after each *Corrective Reading Lesson*. The intervention was to decrease the number of timed readings in the *Corrective Reading* lesson. The overall outcomes indicated a small decrease in errors and an increase in correct responses when additional timed readings were employed. The benefits of additional timings for teachers and students are discussed.

DESCRIPTORS: Corrective Reading, Timed Readings, Frequency

Reading is an essential skill, and teachers must regard the attainment of functional literacy as a right of all children (Gregori & McLaughlin, 1996; Guthrie & Cunningham, 1982; Sweeney, Omness, Janusz, & Cooper, 1990). There is agreement among teachers and researchers that children must have graphonic knowledge in order to read. That is, they must understand that written symbols make up written words. The debate lies in which method is most effective in imparting this knowledge to the student (Lieberman & Liberman, 1986; McIntyre, 1993; Stahl, 1990; Stahl & Miller, 1989).

The failure of students to acquire skills in reading has been linked to dropping out of school (Ekstrom, Goertz, Pollack, & Rock, 1986; Greenwood, 1996; Hart & Risley, 1995; Howard, McLaughlin, & Vacha, 1996; McLaughlin & Kellogg, 1995; McLaughlin & Vacha, 1991; Slavin, 1989; Steinberg, Blinde, & Chan, 1984). Being a school dropout has been linked to being a problem in the neighborhood or community, (Tremblay, Masse, Perron, & LaBlanc, 1992), producing increased family strife (Barkley, 1990), and in later life, acquiring low paying jobs (Barkley, 1990), experiencing frequent unemployment (Barkley, 1990; Darby, 1995), and living in poverty (Danziger & Gottschalk, 1995; Zigler, 1997).

Fortunately, skill-based reading instruction where skills are taught directly with data-based and effective teaching procedures have been shown to be an effective approach to improve the literacy of all children and adults (Adams & Engelmann, 1996; Carnine, Silbert, & Kameenui, 1997; Slavin, 1996). Direct Instruction emphasizes frequent teacher-student interaction guided by care-

fully sequenced lessons utilizing modern learning principles and advanced programming strategies (Englemann & 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 employs an increase in opportunity to respond. The pupil is active in the learning and evaluation process. Evaluations of Direct Instruction and skill based approaches with children at-risk for failure in reading, have been extremely positive (Becker, 1977; Gersten, 1985; Gersten, Carnine, & Woodward, 1987; Gersten & Dimino, 1991; Gersten & Keating, 1987; Gersten, Keating, & Becker, 1988; Lloyd, Cullinan, Heins, & Epstein, 1980).

The present study attempted to replicate and extend the findings of Drago and McLaughlin, (1996) Blackwell, Stookey, and McLaughlin (1996), Holz, Peck, and McLaughlin, (1996) in reading. In that series of research studies, the use of the Precision Teaching measurement system was combined with Direct Instruction. Also, in the present analysis, *Corrective Reading* (Engelmann, Meyer,

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Johnson, & Carnine, 1988) was used with elementary students with mild disabilities rather than high school students at-risk for school failure.

METHOD

Participants and Setting

The participants were three students enrolled in a resource room setting located in an elementary school in rural Eastern Washington. Two of the students (James and Garry) matched the State and Federal definition for learning disabilities while the third (Kyle) was labeled as behaviorally disordered. "Kyle" had difficulty with expressive and receptive language and exhibited autistic-like behaviors such as echolalic speech, rhythmic movements, flat affect, etc. This was done through psychometric testing and multi-disciplinary team (MDT) meetings. The two students with learning disabilities received 90 minutes of instruction while the last was enrolled in the resource room program for 150 minutes per day in reading, math, and social studies. The resource room was managed by a single teacher with four years of teaching experience and one para-educator. Prior to data collection, the tool rates (Kunzelmann, Cohen, Hutten, Martin, & Mingo, 1970; Lovitt, 1989; White & Haring, 1980) for each of the participants were gathered. The tool rate for see to say words for the participants was 117 corrects and 0 errors for Gary, 96 corrects and 3 errors for James, and 68 corrects and 0 errors for Kyle.

Dependent Variables and Measurement

The behaviors measured were the number of correct and error words read aloud by each student. After the reading lesson was completed each participant read from their *Corrective Reading, B2* (Engelmann et al., 1988). Data were gathered from Lessons 10 through 27. A word was scored as read correctly if it was pronounced exactly as it was written in the text. An error was defined if the word was mispronounced, omitted, inserted, or was not read within 5 seconds.

Experimental Design and Conditions

An AB single case design (Kazdin, 1982) was used to evaluate the rate of see-to-say words with and without an additional 1-minute timing in context from *Corrective Reading* (Engelmann et al., 1988).

Baseline. During baseline, the students read for 1-minute timed sample after they completed their respective lesson in *Corrective Reading*. This phase lasted for 7 data days and just over three calendar weeks.

Additional 1-minute timings. During this

phase, everything in baseline remained the same. The only changes, were of additional 1-minute timing on data days as well as having data days take place more frequently. This phase lasted for 20 data days and just over eight weeks.

RESULTS AND DISCUSSION

The number of corrects and errors during each 1-minute timed reading during baseline and with an additional 1-minute timings can be seen in Figures 1 through 3. As the data indicate, there was a small increase in corrects and a slight decrease of errors.

For "Kyle" (See Chart 1), the number of corrects for baseline ranged from 80 to 100 with an overall mean of 87.9 words. Kyle's error frequencies ranged from 0 to 1 with an overall mean of .429. When the additional 1-minute timed reading was added, Kyle's performance increased ($M = 104$; range 86-120), while his error rate increased slightly ($M = .632$; range 0 to 3).

For "Garry" in Chart 2, the number of corrects for baseline ranged from 96 to 114 with an overall mean of 103.86. His performance for errors averaged 1.0, range 0 to 2. When the additional 1-minute timing was employed, his performance improved for corrects ($M = 112.05$, range 97 to 132) and errors ($M = .80$; range 0 to 2).

As can be seen in Chart 3, correct rate for James was stable ($M = 98.0$; range of 94-104) while his errors ranged from 1 to 3 with an overall mean of 1.6 during baseline. Then timings were increased from one to two per session, his performance improved ($M = 102.18$; range 80 to 130) for corrects and errors showed a slight increase ($M = 2.0$; range 0 to 5).

As the present outcomes indicate, the use of repeated timings (Sweeney et al., 1990) along with Direct Instruction materials could increase correct rate for each participant. For errors, only two of the students decreased their errors. However, for the third child, James, his errors were higher after absences than when he attended school daily.

Due to the small changes in performance a Friedman Analysis of Variance (Siegel, 1956) was carried out for both corrects and errors across participants. Significant differences were found for errors for each participant ($r^2 = 9.292$; $p = .009$) Follow up tests Wilcoxon Matched Pairs were significant for Kyle and Jerry.

The present set of findings also replicate and extend the combining of Precision Teaching procedures and Direct Instruction (Blackwell et al., 1996; Drago & McLaughlin, 1996; Stenseth & McLaughlin, 1996). However, in the present analy-

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Sulgrove

Kyle

See to Say Words

Mary Walker

Sp. Ed.

Sulgrove

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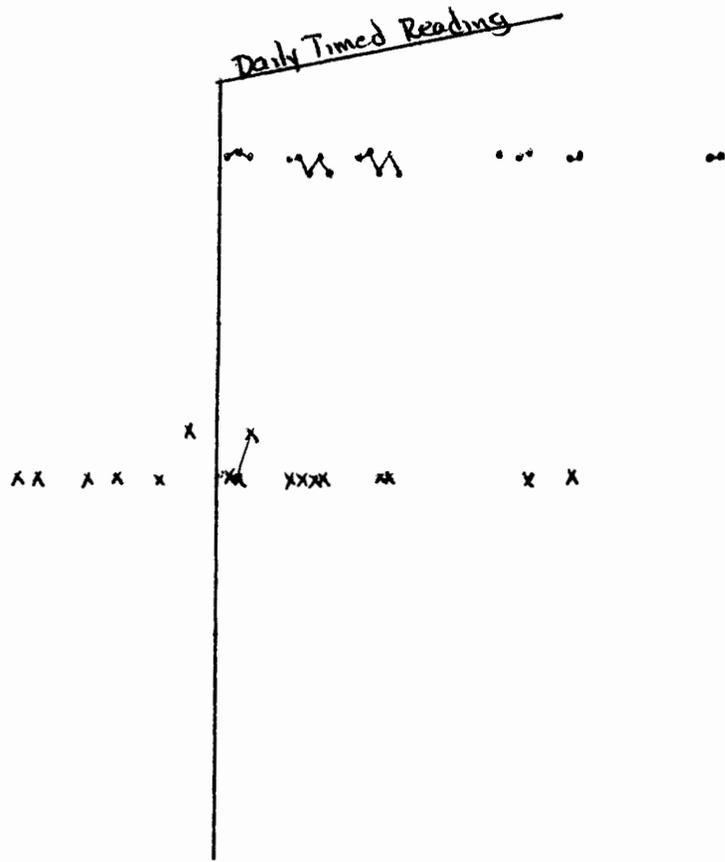
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Garry

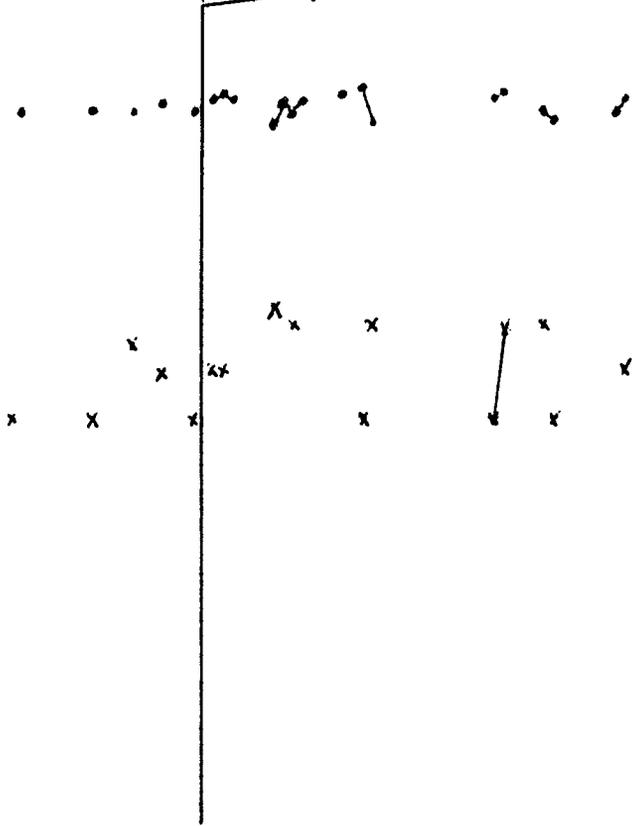
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Daily Timed Reading



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James
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See to Say Words

sis, elementary students rather than preschool or high school students participated.

The procedures were very easy to carry out. The Direct Instruction materials are scripted and very easy to implement. The use of an additional 1-minute timing required little additional preparation or data analysis.

Additional research may wish to examine the use of additional 1-minute timings. Timings could be longer, so that instead of using two 1-minute timings, one could employ one 2-minute timing. The children enjoyed the program and the teacher as well as their parents were happy with their progress in reading.

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