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ABSTRACT

A study investigated the relationship between the amount students read and reading achievement. Subjects, 2,185 first- through eighth-grade students enrolled in a Chapter 1 program during the 1990-91 school year in a large southeastern school district, kept reading logs. Teachers informally assessed comprehension of each text read, and they recorded on the log whether or not the child demonstrated comprehension. Scores on a norm-referenced, standardized achievement test were compared with the end-of-year totals for number of texts read, number of pages read, and number of texts comprehended, while controlling for previous test performance. Results indicated that there was no meaningful relationship between the amount read and reading achievement when previous reading achievement was controlled, with the exception of grade 2 and pages read for grades 4 and 8. (Three tables of data are included. Contains 16 references.) (RS)

The Relationship Between the Amount Read and Reading Achievement

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The Relationship Between the Amount Read and Reading Achievement

Over the past twenty years the emphasis in reading instruction has shifted from a focus on discrete skills to an integrated approach (Dole, Duffy, Roehler, & Pearson, 1991; Farr, 1986; Harste, 1989; Pearson, 1984; Robinson, Faraone, Hittleman, & Unruh, 1990; Weintraub, 1990; Weintraub, 1991.) Recent years have seen a surge in "language experience" curricula and "free reading" periods (see, for example, Speigel, 1981; Stahl, 1990). Parenting manuals and government reports alike tout recreational reading as an important determinant of reading achievement (Anderson, Hieber, Scott, & Wilkinson, 1985, p.119).

Although these beliefs have a sound theoretical foundation, empirical evidence is limited. A few studies lend credence to the belief that the practice of reading improves reading ability (Anderson, Wilson, & Fielding, 1988; Bureau of School Programs Evaluation, 1976 cited in Taylor, Frye, & Maruyama, 1990; Greaney, 1980; Heyns, 1978 cited in Taylor, Frye, & Maruyama, 1990; Leinhardt, Zigmond, & Cooley, 1981). However, these studies are not without their detractors (Taylor, Frye, & Maruyama, 1990; Wilkinson, Wardrop, & Anderson, 1988). For example, in a recent (1988) reanalysis of the Leinhardt et al. data (1981), Wilkinson et al. found that silent reading at school was not related to gains in student achievement in reading. And even more recently (1991), Taylor et al. found that reading in school was related to reading achievement gains while reading at home was not.

It is obvious from the foregoing discussion that no conclusive answer has been found for the question, "How does the amount read relate to reading achievement?" The purpose of the current study was to further investigate this relationship. "Amount read" was operationally defined as the number of texts read, number of texts comprehended, and number of pages read, as recorded on reading logs during the 1990-91 school year. Reading achievement was measured through test scores derived from end-of-year standardized tests.

Methods

Procedures

During the past several school years, a large southeastern school district has shifted its instructional philosophy for reading from a fragmented approach to a more "whole language" approach. This restructuring culminated in the setting of specific reading goals for children served by the Chapter 1 (remedial) programs during the 1990-91 school year. To assess whether or not these goals were being met, reading logs (Figure 1) were kept for each of the approximately 4000 children (Grades K-8) enrolled in the program.

The title, author, number of pages, and type of text (using library classifications) was recorded on the log for each piece (book, short story, poem, etc.) read by a child (or to a child). In addition, teachers informally assessed comprehension of each text read, and they recorded on the log whether or not the child

demonstrated comprehension. Logs were monitored by district staff three times during the school year.

Insert Figure 1 about here

At the end of the school year, children were tested with a norm-referenced, standardized achievement test (Stanford Achievement Test - 8). The SAT-8 Total Reading and Reading Comprehension scores were compared with the end-of-year totals for number of texts read, number of pages read, and number of texts comprehended, while controlling for previous test performance.

Subjects

The sample used for the data analysis included 2185 students enrolled in the Chapter 1 (remedial) programs during the 1990-91 school year. The sample spanned grades 1-8 and included repeaters as well as non-repeating students. Table 1 gives the number of repeating and non-repeating students in each grade level.

Insert Table 1 about here

The sample is substantially smaller than the Chapter 1 population which was targeted for the reading program. Loss of subjects was due to the following factors. First, students were eliminated if they did not have 1990 and 1991 test scores.

Second, students were deleted if there was no variation in the number of texts read among the students instructed by their teacher. A lack of variation would automatically restrict the relationships tested in this study. Third, due to the nature of the Chapter 1 programs, students could be enrolled in more than one program. Duplicate students were deleted.

Data Analysis

Data were analyzed in several ways. Correlations between the reading achievement scores and the "amount read" variables (number pages/texts read, etc.) were calculated while partialling out previous reading achievement test scores. It was initially believed that the number of pages and texts read would impact the Total Reading test score, while the number of texts comprehended would relate to the Reading Comprehension subtest score. Thus, the correlations were figured in this way for the subtests. Table 2 reports these findings by grade level. Analyses were not performed for repeater/non-repeater categories due to the small number of repeaters at some grade levels.

Insert Table 2 about here

A general linear models procedure was also utilized. The 1991 test score was the dependent variable and the "amount read" variables were the independent variables. Only the findings for pages read and texts read are given. Similar results were found for texts comprehended. Previous test scores (1990) were treated

as covariates. The results of this analysis are given in Table 3 for each grade and subtest. Similar findings were derived from analyses controlling for repeater status.

Insert Table 3 about here

Findings and Discussion

With the exception of grade 2 and pages read for grades 4 and 8, there was no meaningful relationship between the amount read and reading achievement when previous reading achievement was controlled. The following speculations may help explain the outcome of this study.

The reading logs may have been inaccurate. Accuracy was dependent upon student reporting and teacher tabulation. In addition to memory and calculation errors, some errors might be due to discontinuation of the logs. Teachers were given a goal to reach and may have discontinued the logs once the goal was met. A suggestion for future research would incorporate a simpler form with daily recording.

Similarly, the operational definition of "amount read" may not have been adequately sensitive. Perhaps it is not the number of books or pages read, but the amount of time spent reading.

The effects of the regular instructional program were not taken into account in this study. While the practice of reading can be encouraged, it does not supplant reading instruction.

This consideration might be compounded by the remedial nature of the readers in the sample.

Although this study could be classified as descriptive, certain aspects of the reading program alter that conception. Reading was encouraged. The Central Office emphasized the practice of reading to the teachers and the teachers encouraged the children to read at least insofar as the completion of the logs. Data were collected during the first year of the study when this "new" philosophy was permeating the reading program. Perhaps there will be cumulative or latent effects that were not recognized in this initial year or in this study. As a matter of fact, reading test scores did increase among Chapter 1 children.

Another possible explanation is that the data are accurate and there is no relationship between the amount read and reading achievement. This hypothesis can be tested (again) and more accurately in programs where there is not undue encouragement of reading which may be unevenly applied or in later years of the current program when emphases are more standardized and when measurement issues are stabilized.

Educators are constantly struggling toward a goal of universal literacy. The method of accomplishing this goal has evolved into the present belief that reading achievement is positively influenced by the practice of reading. Empirical evidence supporting or refuting the efficacy of this assertion is needed. The present study sought to provide such evidence and found no relationship between reading achievement and the

practice of reading. However, the findings must be interpreted in conjunction with possible measurement and design shortcomings.

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Table 1

Breakdown of Sample by Grade and Repeater Status

Grade	Number Repeaters	Number Non-Repeaters	Total
1	138	328	466
2	52	278	330
3	48	262	310
4	45	288	333
5	19	248	267
6	49	166	215
7	16	119	135
8	4	125	129

Table 2

Partial Correlation Coefficients for Reading Achievement Subtests and Texts Read (T-Read), Pages Read (P-Read), Texts Comprehended Controlling for Previous Reading Achievement

	Total Reading		Reading Comprehension
Grade	T-Read	P-Read	Texts Comprehended
1	-0.0482	-0.0043	-0.0292
2	0.0989	0.0979	0.1065
3	0.0013	0.0103	0.1170
4	0.0565	0.1082	0.0315
5	0.1169	0.0374	0.0295
6	0.0702	0.0423	0.1035
7	-0.1489	0.1336	-0.1207
8	0.0252	0.2231	0.0754

Table 3

F-Value (Probability) Predicting Reading Achievement from Texts Read (T-Read) and Pages Read (P-Read) when Controlling for Previous Reading Achievement

	Total Reading		Reading Comprehension	
Grade	T-Read	P-Read	T-Read	P-Read
1	1.62	0.44	0.01	0.38
	(0.20)	(0.51)	(0.92)	(0.54)
2	6.83	5.38	6.82	7.04
	(0.01)	(0.02)	(0.01)	(0.01)
3	0.01	0.00	0.59	2.71
	(0.91)	(0.97)	(0.44)	(0.10)
4	0.97	4.11	0.94	1.30
	(0.33)	(0.04)	(0.33)	(0.26)
5	3.51	0.22	2.15	0.00
	(0.06)	(0.63)	(0.14)	(0.95)
6	0.81	0.05	0.25	1.77
	(0.37)	(0.83)	(0.62)	(0.19)
7	2.88	2.66	1.37	3.84
	(0.09)	(0.11)	(0.24)	(0.52)
8	0.08	6.60	0.12	1.53
	(0.78)	(0.01)	(0.72)	(0.22)

gure 1. Reading log.

INSTRUMENT FOR DESIRED OUTCOMES

STUDENT NAME _____ CHAPTER I TEACHER _____ SCHOOL _____ GRADE _____

ID # _____ SOCIAL SECURITY _____ SCHOOL CODE _____

	NAME OF TEXT	AUTHOR	DATE COMPLETED (Teacher Initials)	TYPE OF TEXT See back for codes	# PAGES READ IN TEXT	DATE COMPREHENSION DEMONSTRATED (Teacher Initials) O = Orally W = Written P = Performance
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
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