

A COMPARATIVE EVALUATION OF THE
PINELLAS COUNTY READING SYSTEM

Jane K. Elligett
Thomas S. Tocco
Pinellas County Schools

Introduction

The purpose of this study was to compare reading achievement gains of pupils in the Pinellas County Reading System (PCRS) with gains of pupils in other, more traditional reading programs. The Pinellas County Reading System is a program of educational management designed to individualize reading instruction in grades 1 - 6. It was developed during the 1971-72 school year by Pinellas County teachers and reading supervisors in response to pupil needs and the community's interest in an alternative reading program. The basic principles of this system are (1) the precise definition of instructional aims in five broad areas -- readiness, word perception, comprehension, study skills, and ongoing skills; (2) the specification of procedures for achieving those aims, involving diversified learning resources; and (3) continuous monitoring of each pupil's status and progress. The major objective of the reading system is the individualization of reading instruction, so that each pupil receives individual diagnosis, treatment, and evaluation of progress.

The hypothesis of this study was that there is no difference in reading achievement between pupils in the PCRS and pupils in other, more traditional programs.

Sample

The experimental group consisted of all children in grades 2 - 6 in six schools which had used the PCRS for over one year. The comparison group consisted of all children in grades 2 - 6 in six schools matched to the experimental schools for similarity of size and pupil characteristics. The data obtained from both groups was screened to eliminate pupils who transferred in or out of a school during the period from January 1, 1973, to June, 1974. Thus, all pupils whose scores are summarized in this study were in attendance in the same schools for at least one and one-half years. Data for 757 pupils in the target schools and 768 in the comparison schools were analyzed.

Data Collection and Analysis

Scores from the reading subtests of the Metropolitan Achievement Test (1970) were subjected to analysis of covariance, with posttest scores as the dependent variable and pretest scores as the covariate. Thus, the posttest scores were adjusted for differences in achievement prior to the experiment. Also, "expected" reading gains were compared to actual gains in both the PCRS and comparison schools.

Results

As shown in Table 1, the analysis of covariance failed to reveal significant differences in overall reading performance between the PCRS and comparison schools.

Table 1

PCRS Schools and Comparison Schools
Statistically Adjusted Mean Post-Test
Grade Equivalents (Based on Metro-Stanford Equivalency Norms)*

	<u>6 PCRS Schools</u>	<u>n</u>	<u>6 Comparison Schools</u>	<u>n</u>
Grade 2	2.8	(201)	2.8	(169)
	F (1,367) = 2.26			
Grade 3	3.8	(158)	3.8	(196)
	F (1,351) = .01			
Grade 4	4.3	(213)	4.5	(219)
	F (1,429) = 3.35			
Grade 5	5.6	(185)	5.6	(184)
	F (1,366) = .24			

An analysis was conducted on the reading growth of boys and girls separately, shown in Table 2. No significant difference was found for either boys or girls which could be attributed to PCRS.

*Stanford Research Report No. 6. New York: Harcourt Brace Jovanovich, 1973.

Table 2
 PCRS Schools and Comparison Schools
 Boys and Girls
 Statistically Adjusted Mean Post-Test
 Grade Equivalents (Based on Metro-Stanford Equivalency Norms)

	<u>6 PCRS Schools</u>		<u>6 Comparison Schools</u>	
	<u>Boys</u>	<u>Girls</u>	<u>Boys</u>	<u>Girls</u>
Grade 2	2.7	2.8	2.7	2.8
Grade 3	3.7	4.0	3.7	4.0
Grade 4	4.2	4.5	4.3	4.5
Grade 5	5.4	5.8	5.6	5.8

Finally, an analysis was conducted comparing the PCRS and comparison schools in terms of low, average, and high reading achievers (based on pre-test performance of pupils). As shown in Table 3, no significant differences were found between the PCRS and comparison schools for any of the ability groups.

Table 3

PCRS Schools and Comparison Schools

Low, Average and High Reading Achievers

Statistically Adjusted Mean Post-Test
Grade Equivalents (Based on Metro 70 Norms)

	6 PCRS Schools			6 Comparison Schools		
	Low Reading Achievers (1,2,3)	Average Reading Achievers (4,5,6)	High Reading Achievers (7,8,9)	Low Reading Achievers (1,2,3)	Average Reading Achievers (4,5,6)	High Reading Achievers (7,8,9)
(Stanines)*	(1,2,3)	(4,5,6)	(7,8,9)	(1,2,3)	(4,5,6)	(7,8,9)
Grade 2	2.2	2.6	4+ **	2.1	2.6	4
Grade 3	2.4	3.6	5+	2.4	3.6	5+
Grade 4	2.9	4.5	7+	3.0	4.7	7+
Grade 5	3.9	5.7	7+	4.0	5.7	7+

*Low, average and high classification by Stanines was based on entry achievement; i.e., pre-test performance.

**The number of pupils in the high Stanines ranged from only 18 to 38 in individual grades. These small samples, combined with the variability of the norm tables at the upper extremes, make more precise conversion unjustifiable. Thus, "+" should be read as "higher than the beginning of the grade equivalent shown."

However, as shown in Table 4, both the PCRS and the comparison schools showed achievement gains in reading, which were significant as well as in excess of expectation.

Table 4
PCRS Schools and Comparison Schools
Gains vs. Expectations

Unadjusted Mean
Grade Equivalents (Based on Metro 70 Norms)

	6 PCRS Schools		6 Comparison Schools	
	Observed Gain	Expectation Index	Observed Gain	Expectation Index
Grade 2	.8 *	.5	.8 *	.5
Grade 3	.7 *	.5	.8 *	.5
Grade 4	.5 *	.5	.7 *	.5
Grade 5	.8 *	.6	.7 *	.6

* Significant at $\alpha = .05$

The above finding corroborates the finding of an earlier study (Tocco et al, 1974). Expectation indexes are based on the pupils' average yearly growth rate up to the time of pretesting.

Limitation

A trend toward individualization in all instructional programs and strategies delimits this study. The PCRS gives first priority to individualization, and develops the program from this premise. The more traditional programs, however, are also moving toward individualization through the adaptation of standard materials, the use of supplementary materials, and the increased commitment and ability of teachers to meet individual needs. Hence, it can be stated that to a greater or lesser degree the individualized approach has been injected into the "traditional" approaches. Thus, this evaluation cannot be viewed as a comparison of the PCRS with a strictly non-systems, non-individualized reading approach.

CONCLUSIONS AND A WORD ABOUT COSTS

This evaluation corroborates the findings of the earlier, interim, evaluation of PCRS. Reading gains made by pupils in the PCRS were greater than gains expected on the basis of past reading growth. The PCRS posttest scores, however, were not statistically greater than were the posttest scores in the comparison schools.

The Elementary Education Department of the Division of Curriculum and Instruction has estimated the costs for the PCRS and the reading programs in the comparison schools used in this study. The results indicate that the yearly PCRS cost, when amortized over four years, was less than the cost of the tri-basal approach used in the comparison schools. Thus, the results of this study, when combined with these cost estimates, suggest that the PCRS was higher in cost efficiency than the more traditional tri-basal approach. Specifically, similar cognitive results were achieved in the PCRS for approximately 15% less yearly materials and maintenance cost. In addition, start-up and maintenance costs for implementing both the system and the tri-basal approach in new 24-teacher schools were estimated. Again, the yearly difference when all costs were amortized over a four-year period favored the PCRS by approximately 15%; i.e., the PCRS projected yearly costs for materials and maintenance were approximately 15% less than were similar projected costs for the tri-basal approach.

References

- Metropolitan Achievement Tests. New York: Harcourt Brace Jovanovich, 1970.
- Tocco, T. S. et al. An interim evaluation of the Pinellas County Reading System. Florida Journal of Educational Research, 1974, 16, 35-38.