

AN INTERIM EVALUATION  
OF THE  
PINELLAS COUNTY READING SYSTEM

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SUMMARY

A brief report of the results of evaluating reading achievement in a county school system is given. Gains by ability and grades on both vocabulary and comprehension are designated as significantly higher, as expected or significantly lower. The Gates-MacGinitie test and statistical procedures were employed on these 1552 students.

INTRODUCTION

The Pinellas County Reading System is an educational management technique developed to further implement the individualization of reading instruction. The system is an elementary (grades 1-6) reading skills program in which instructional aims, the procedures for achieving those aims, and the means of assessment are all precisely defined.

During the 1971-72 school year the Pinellas County Reading System was developed by teachers and reading supervisors as a response to student needs and community urging for an improved reading program. During that year, instructional outcome goals were defined in five broad areas: (1) Readiness, (2) Work Perception; (3) Comprehension; (4) Study Skills; and (5) On-Going Skills. Objectives were stated in behavioral terms to define the skills necessary to achieve the goals of each area. Instruments were developed to assess student reading skills achievement, and a record-keeping system was designed to manage and control the learning process.

A system for prescribing multiple activities and methodologies was also developed to provide the student and teacher with numerous options for learning reading skills. Files of diversified learning resources were constructed and used throughout the development and implementation of the system.

The following report documents the results of the Pinellas County Reading System to date.

## PROBLEM

The evaluation of the Pinellas County Reading System attempted to determine the degree of reading achievement of students in the program. A brief description of how the students were grouped is given below, followed by a general form of the research question.

Six elementary schools were involved in the evaluation. For purposes of data analysis the student data across all six elementary schools were grouped according to grade level and I. Q. Since this was not a comparative study of the six schools, the data across all schools were combined for each grade level. Within each grade level the students were grouped into one of three I. Q. levels. The first level was composed of those students whose I. Q. 's were 89 or lower, which is roughly equivalent to the lower three stanines (1, 2, 3). The second level was composed of those students whose I. Q. 's were between 90 and 110 (inclusive), which is roughly equivalent to the middle three stanines (4, 5, 6). The third level was composed of those students whose I. Q. 's were 111 or above, which is roughly equivalent to the upper three stanines (7, 8, 9).

The grouping procedure generated 15 groups consisting of three I. Q. levels within each of five grades (2nd, 3rd, 4th, 5th, and 6th grades). The number of students was 1552.

The question that the evaluation attempted to answer for each of the 15 groups was:

At the end of the school year are children who were exposed to the Pinellas County Reading System significantly below, at, or above their beginning-of-the-school-year standing with respect to national reading norms in the areas of vocabulary and comprehension?

## PROCEDURE

The Gates-MacGinitie Reading Test was the instrument used to assess the pre-post reading achievement of children participating in the Pinellas County Reading System target schools. The Gates-MacGinitie Reading Test attempts to measure "the child's ability to recognize or analyze isolated words" as well as the "child's ability to read and understand whole sentences and paragraphs." This latter ability includes "many skills not involved in the mere ability to recognize words." The child must grasp the total thought clearly if he is to answer correctly. The students used to norm the test are described in the manual as "carefully selected on the basis of geographic location, size, and socioeconomic level to assure a representative sample of pupils at all grade levels" (Gates and MacGinitie, 1965, p. 1).

The procedures utilized in this interim evaluation included the following: 1) acquisition of last year's pre and post standard score data; 2) editing the data to remove student scores from the data set in those instances where missing data were detected; 3) calculation of the mean standard score for each of the 15 groups for both vocabulary and comprehension; and 4) the calculation of statistical indices suggested in the standard testing manual (p. 11) for the pre and post standard score means on each of the 15 groups for both the vocabulary and comprehension variables.

The exact statistical procedure employed to answer the question posed above in the Statement of Problem section of this report can be found in the Gates-MacGinitie Reading Test Manual. The procedure suggested in the test manual is basically a  $t$ -ratio which examines the difference between two means with a preset significance level of .15. Simply stated, the procedure compared the gain made in each group of target children with the gain made by the group used to norm the instrument.

## RESULTS

The results of the analyses of last year's Pinellas County Reading System data can be found in Table 1. Sixteen of the 30 possible combinations of groups (low ability, average ability, and high ability), grades (2, 3, 4, 5, and 6), and skill areas (vocabulary and comprehension) were found to have achievement gains in excess of statistical expectation. In other words, each of those showed greater gain in achievement than one would expect as a result of the normative information given in the test manual. For example, the low ability, second graders gained more than expected on the vocabulary section of the Gates-MacGinitie from the beginning of the school year to the end of the school year as indicated by an "M" (More) in Table 1.

Thirteen of the 30 combinations of group, grade, and skill areas were found to have achievement gains consistent with expectation. In other words, each of these showed achievement gains in accord with the results of the normative information given in the test manual. For example, the average ability fourth graders showed gains in accord with Gates-MacGinitie normative expectations on both the vocabulary and comprehension sections. Both of these results are indicated by an "E" (Expected) in Table 1. One combination of grade, group, and skill area was found to have an achievement gain significantly less than expected as a result of comparison to Gates-MacGinitie norms. This result emerged for low ability second graders in the area of comprehension and is indicated by an "L" (Less) in Table 1.

TABLE 1

Expected vs. Actual Achievement Gain in Vocabulary and Comprehension  
in Pinellas County Reading System Target School Children

Ability	Grade Level									
	2nd		3rd		4th		5th		6th	
	VOCAB	COMPR	VOCAB	COMPR	VOCAB	COMPR	VOCAB	COMPR	VOCAB	COMPR
Low	M	L	E	M	E	E	M	E	E	E
Average	M	M	E	M	E	E	M	M	M	M
High	M	M	E	M	M	E	E	E	M	M

M - significantly more gain than expected (improved upon previous standing)

E - no significant difference from expected gain (maintained previous standing)

L - significantly less gain than expected (failed to maintain previous standing)

### SUMMARY AND CONCLUSIONS

This interim evaluation of the Pinellas County Reading System attempted to answer the following question for 15 groups of children participating in the program: at the end of the school year, are children who were exposed to the Pinellas County Reading System significantly below, at, or above their beginning-of-the-school-year standing with respect to national reading norms in the areas of vocabulary and comprehension? The 15 groups of students included low, average and high ability groups at each grade (2 through 6) enrolled in the six Pinellas County Reading System target schools.

The results indicated that in 16 of the 30 (53.3%) separate gains significantly greater than gains made by the national norm group were achieved. In 13 of the 30 statistical analyses (43.3%) gains similar to gains made by the national norm group were achieved. In only one of the 30 statistical analyses, (3.3%) gains significantly less than gains made by the national norm group were achieved.

Even a cursory examination of these interim outcomes suggests that results of last year's pilot reading system project were highly favorable.

### REFERENCES

Gates, A. I., and MacGinitie, W. H. Teachers manual, Gates-MacGinitie Reading Tests. New York: Teachers College Press, Columbia University, 1965.