A comparative study of reading methods and their effect on test scores of title one children

Michael Meadows

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A COMPARATIVE STUDY
OF
READING METHODS
AND THEIR EFFECT ON
TEST SCORES
OF
TITLE ONE CHILDREN

PROJECT

Presented in partial fulfillment of the requirements for
the Master's Degree in Education in the School of Education of California State College
San Bernardino

By
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E.S. Gal Poly SLO
1967

California State College
San Bernardino
Fall 1973

Approved by

Advisor

Committee Member

Committee Member
PREFACE

The late 1960's, with the largest federal expenditures in history set aside for educational research, has seen more researchers than any other era. Of all the fields in the educational arena the most researched has been the area of reading, and especially at the primary level. Studies have dealt with overachievers, underachievers, the rich child, the poor child, and cross sections of all these groups. What prompts research? In the research to follow the motive was simple. All advanced degrees require research, and thus the large numbers of educational papers on the market. The final selection of this research topic was based on the theory that if you must research, it might as well be in an area that will benefit the researcher in his day to day endeavors.

The teaching of reading to the economically deprived and culturally different child is a difficult and tedious matter. What is the best approach? Is there a best approach? Some previous research is available. In the study of all the first grades in Goldsboro City, North Carolina comparing Basal programs to Basal programs plus phonics, and Language Experience programs it was discovered that white students learned equally well under either of the first two approaches, while black children showed better growth with the phonics included.*1 The Language Experience approach showed favorably (at the .05 level) for both groups of children.

*1 Bordeaux, E. A. and Skope, N. H., "An Evaluation Of Three Approaches To Teaching Reading In The 1st Grade," from First Grade Reading Studies, Stauffer, R., Newark, Del: IRA, 1967.
Even within the varying approaches there are narrower delineations. Such is the case of Systematic and Intrinsic Phonics. While the differences will be discussed at much greater length within the project body, suffice it to say for now that the former is a separate concentrated program of phonics while the latter incorporates phonics as a part of the regular classroom reading program, and seeks mutual exchange between sight and phonetic methods. Jeanne Chall found that systematic phonics led to higher vocabulary scores in the first grade then did the Intrinsic approach, but then explained the differences as follows: "Theoretically, the advantage that an earlier and heavy emphasis on phonics gives a child taking a standardized silent test of vocabulary is probably limited. In the lower grades most of the words on these tests are no doubt well within the meaning vocabularies of most children; thus a child's performance depends mainly on his ability to recognize the word. In the latter grades this ability is still important, but the differences in comprehension of word meanings—i.e., the child's general knowledge and experience—become more crucial. So here again statistical results are available but much depends on interpretation.

Several other reading approaches are emerging to challenge the basal and the phonetic classroom programs. When deciding upon which of these newer approaches to include in this research much time was spent. Language Experience was considered as well as the "new" alphabet approaches (ITA and others), and finally one of the older newcomers the Linguistic Approach was selected for this

research. The basis of this selection was a previous study which compared Linguistic approach to Basal, and discovered conflicting significances at the .05 level.

"The Linguistic group obtained significantly higher adjusted mean scores for the writing sample (writing mechanics, spelling, and total words written). The Basal reader group obtained significantly higher adjusted mean scores for oral reading rate. Neither group obtained significantly higher adjusted mean scores on the other oral measures."

Practically all the research reviewed said something to the effect that the results were not conclusive or reported actual conflicts of factual discovery within their findings. For this reason it is suggested from the very beginning of this research that the reader must apply the findings to his own situation, and use the results not as concrete walls but rather as bridges to destinations of his own.

*3. Schneeyer, J. Wesley, "Reading Achievement Of First Grade Children Taught By A Linguistic Approach And A Basal Reader Approach," from First Grade Reading Studies, Stauffer, R., Newark, Del: IRA, 1967.
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HYPOTHESIS: There is no difference for Title One Primary students when comparing different reading approaches. Measuring device: Stanford Achievement Test.

Introduction: The past decade, with the advent of the Title programs, has heralded an awakening interest in the role of education in the lives of children rather broadly labeled "socio-economically deprived." The foremost areas of interest have been in reading and math, and when we stop long enough to evaluate the results it becomes apparent that money and the accompanying hardware have not been enough.

The purpose of this study was to compare instructional methods in reading and their relative effectiveness in increasing growth as measured by scores on the Stanford Achievement Test. Teaching currently at a fifth grade level the researcher decided to review the reading training of present students throughout their primary years. (This project was begun in June, 1973.) The school involved will be referred to as Gamma Elementary, and is located in a barrio area in Southern California. It has been a Title One school since the advent of Title One.
There were two limitations to this research. The first was that many of the teachers involved in that time period were difficult to locate, and in some cases impossible. This problem was overcome by contacting the aides of those teachers, all of whom were still available. These aides had all been integral parts of these reading programs. The second drawback was the validity of group test scores when comparing "individual" growth. Group tests are good indicators of the progress of a group, but less reliable for individuals by the very design of the test. This drawback was insurmountable as these were the only scores available, and it must be clear from the outset that this research deals with growth as measured by group test results.

Project Design: This study was begun by locating the reading test scores for Gamma students for the years 1969, 1970, and 1971. Only spring test scores were used thus comparing test scores for an entire year. The only scores examined were total reading scores and no attempt was made to further narrow the comparisons to vocabulary and comprehension.
Obviously the first grade scores from 1969 can only be considered from the standpoint of relative achievement as no earlier test data was available with which to measure growth. At the second and third grade levels however both comparisons were possible but the emphasis is on growth.

The next step was to design a questionnaire to determine the reading methods employed in the classrooms for these same three years. The questionnaire was limited to only four types of reading instruction defined as follows:

Systematic Phonics- The early and systematic teaching of phonics, usually before the introduction of sight (whole) words. Phonics usually taught separate from other reading instruction. Children are usually taught separate letter sound correspondences and given practice in blending these sounds.

Intrinsic Phonics- Program stressing sight or thought reading, introducing phonics later, and in a more moderate amount- all intrinsic to meaningful reading. Children usually learn sound values of letters by analyzing known sight words. Other means of word
identification such as context and picture clues receive greater stress than word analysis. Generally no separate period for phonics.

Look-Say Method—No teaching of phonics at all. Emphasis on visual recognition of the whole word. Children taught to "get the thought," and read in whole sentences.

Linguistic Approach—Emphasis on decoding and learning the alphabet by letter names. There is usually a systematic patterning of initial phonemes and selected word endings, but sounds are never isolated from words. Other clues of word recognition are ignored in most linguistic approaches.

The questionnaire itself consisted of twelve statements concerning the teaching of reading. Each statement has three possible responses, each response representative of one of the four methods of reading previously listed. The instructions ask the teacher to rate the possibilities 1, 2, or 3, with 1 being the highest priority in their own reading program.

In all, there were ten classes and twenty students involved in the study. These twenty students had all attended Gamma from the beginning of first grade until

the present. The ten classes were the four first grades, the three second grades, and the three third grades of the students involved. Student first names are used and the teachers are coded from 1 to 10.

Designing the questionnaire was by far the most difficult part of the project as there is much overlapping from system to system. Primary sources in the development of the twelve statements and subsequent responses were *Learning To Read*, by Jeanne Chall; *Reading And Young Children*, by V. Anderson; and *Approaches To Beginning Reading*, by Robert C. Aukerman.

Of the thirty-six possible answers on the questionnaire there were nine possible answers from each of the methods being considered. Responses rated 1 were worth five points. Those rated 2, worth 3 points. And those selected as 3 received one point. This type of rating made possible the avoidance of designating just one style for each teacher, and allowed observation in terms of relative approach rather than absolute. The abbreviations before the questions represent the method related to that question.
READING QUESTIONNAIRE

Abbreviations: SP- Systematic Phonics
       IP- Intrinsic Phonics
       Lin- Linguistics
       LS- Look-Say

Directions: Under each of the following twelve comments about reading are listed three possible answers. In the space beside each of the letters please rank the responses 1, 2, or 3, with the number 1 the highest priority within your reading program or philosophy. Please answer all the questions as they pertained to your teaching while at Gamma School. Please rank every letter under each question even if none of the answers fit your program exactly.

1. When teaching children to read I would be more likely to:
   (SP)_ A. Introduce individual sounds first.
   (LS)_ B. Deal with whole words and whole sounds only.
   (Lin)_ C. Relate early word recognition with regular spelling patterns.

2. Most of my teacher directed lessons introduced:
   (LS)_ A. Words in context of a sentence.
   (IP)_ B. Whole words followed by phonetic breakdown.
   (Lin)_ C. Words most frequently already mastered by the child in his own auditory environment.

3. When attacking new words I would generally:
   (LS)_ A. Relate the word to others already mastered.
   (SP)_ B. Break the word into phonemes even before meaning was understood believing understanding would follow recognition.
   (IP)_ C. Stress understanding first; phonetic pronunciation secondly.

*6. Abbreviations not included on teacher questionnaire.
4. The first task of a beginning reader is:
   (LIN) A. To learn the alphabet introducing only one letter for one sound.
   (SP)  B. To learn the alphabet and the multi-letter/sound combinations.
   (IP)  C. Learn some basic words first, then break the code using these basic words for keys.

5. When organizing your reading program did you:
   (SP) A. Teach phonics, pre-ordered and separately.
   (IP) B. Teach phonics as an integral part of your regular reading program and based on individual needs.
   (LS) C. Use no phonics as such.

6. As far as reading textbooks are concerned, beginning readers are:
   (SP) A. Too much oriented towards whole words.
   (LS) B. Too little oriented towards whole words.
   (LIN) C. Useful insofar as they contain the child's own auditory language.

7. Classroom organization:
   (IP) A. Students should be grouped by sophistication of sight vocabulary and phonics taught within these groups as a part of the regular reading program.
   (SP) B. Students should be grouped by phonetic needs and these needs should be a prime consideration with a sequential but separate reading program.
   (LS) C. Students should be grouped only by the sophistication of sight vocabulary, and the development of this vocabulary should be the prime consideration.

8. When considering vocabulary control in reading:
   (LIN) A. It should be based on spelling regularity.
   (IP) B. Words should be introduced at a faster rate than they are.
   (LS) C. It should be based on frequency of word usage.

9. When considering the alphabet as a part of the reading program:
   (Lin) A. Letters should be learned by letter names.
   (SP) B. Letters should be learned as sounds or blends before actual reading takes place.
   (LS) C. The alphabet is secondary to some basic sight words.
10. The most serious problem of students with reading difficulties is when they:
(IP)   A. Have difficulty recognizing meaningful words
and from this a lack of correct phonetic discrimination.
(SP)   B. Lack the basic phonetic skills for meaningful
reading.
(Lin)  C. Have problems in decoding.

11. Rate the following as to importance in a
reading program:
(Lin)  A. A systemized pattern of initial phonemes and
selected word endings.
(IP)   B. A meaningful sight vocabulary and a con-
current program of phonics.
(LS)   C. The ability to recognize whole words at sight.

12. Reading is:
(Lin)  A. The skill of decoding printed symbols.
(SP)   B. The command of letter sounds and blends
for the verbal pronunciation of printed symbols.
(IP)   C. A growing recognition of whole words and
the sounds which make them up.

With the 5, 3, 1 scoring system there were 45
possible points for each approach. Here is the pro-
file for the ten teachers:

<table>
<thead>
<tr>
<th>Teacher</th>
<th>SP</th>
<th>IP</th>
<th>Lin</th>
<th>LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st grade</td>
<td>32</td>
<td>33</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>2nd grade</td>
<td>37</td>
<td>29</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>3rd grade</td>
<td>24</td>
<td>27</td>
<td>34</td>
<td>23</td>
</tr>
<tr>
<td>4th grade</td>
<td>35</td>
<td>29</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>5th grade</td>
<td>25</td>
<td>31</td>
<td>27</td>
<td>25</td>
</tr>
<tr>
<td>6th grade</td>
<td>35</td>
<td>31</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>7th grade</td>
<td>41</td>
<td>28</td>
<td>23</td>
<td>16</td>
</tr>
<tr>
<td>8th grade</td>
<td>23</td>
<td>27</td>
<td>37</td>
<td>21</td>
</tr>
<tr>
<td>9th grade</td>
<td>23</td>
<td>31</td>
<td>29</td>
<td>25</td>
</tr>
<tr>
<td>10th grade</td>
<td>32</td>
<td>33</td>
<td>21</td>
<td>22</td>
</tr>
</tbody>
</table>

A mean score for any method would be 27. Dev-
iation would indicate relative strength of approach.
The next phase of the investigation led to the Educational Service Center for the school district. Test records were located for the years under study and then by arranging the data, first for the entire twenty student population each year, and then by the individual classrooms it was possible to test for significant results. The following are the statistics and interpretations for the first grade (1969).

**ABBREVIATIONS:**
- $x =$ individual score
- $u =$ population mean
- $G =$ population standard deviation
- $\bar{X} =$ sample mean
- $S =$ sample standard deviation
- $P =$ number in entire population
- $N =$ number in sample
- $E =$ cumulative sum
- $f =$ frequency
- $\sqrt{S} =$ square root
- $\frac{U}{X} =$ mean of all possible samples
- $G =$ standard deviation all possible samples.
- $G =$ (est) = estimate of previous symbol derived as follows:
  - $S/\sqrt{S}$ of $N$ or $G/\sqrt{N}$
- $t =$ t score (units of std. dev.)
- $sig.$ = level of significance

---

<table>
<thead>
<tr>
<th>NAME</th>
<th>READING SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robin</td>
<td>1.4</td>
</tr>
<tr>
<td>Donna</td>
<td>1.5</td>
</tr>
<tr>
<td>Arthur</td>
<td>1.4</td>
</tr>
<tr>
<td>Paula</td>
<td>1.3</td>
</tr>
<tr>
<td>Danny A.</td>
<td>1.9</td>
</tr>
<tr>
<td>Raymond C.</td>
<td>1.4</td>
</tr>
<tr>
<td>Joe</td>
<td>1.3</td>
</tr>
<tr>
<td>Evelyn</td>
<td>1.6</td>
</tr>
<tr>
<td>Raymond M.</td>
<td>1.6</td>
</tr>
<tr>
<td>Larry</td>
<td>1.6</td>
</tr>
<tr>
<td>Becky</td>
<td>1.5</td>
</tr>
<tr>
<td>Danny M.</td>
<td>1.2</td>
</tr>
<tr>
<td>Raymond S.</td>
<td>1.2</td>
</tr>
<tr>
<td>Rudy R.</td>
<td>1.2</td>
</tr>
<tr>
<td>Benny</td>
<td>1.1</td>
</tr>
<tr>
<td>Martha</td>
<td>1.4</td>
</tr>
<tr>
<td>Anna</td>
<td>1.5</td>
</tr>
<tr>
<td>Sylvia</td>
<td>1.5</td>
</tr>
<tr>
<td>Alfonso</td>
<td>1.4</td>
</tr>
<tr>
<td>Rudy A.</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**TOTAL** 27.7

\[
P = 20
\]

\[
u = \frac{27.7}{20} = 1.398
\]

\[
g = \frac{E(f x^2)}{N-u^2} = .24
\]

After totals were completed for the entire 1st grade it was next necessary to examine results class by class to discover if any one method resulted in significantly different results, when compared to the total population of 20 students. These comparisons are made class by class, listed under the number of their teacher, and the teachers profile as determined by the questionnaire.

*8. All project results were rounded to the nearest hundredth.
Teacher # 1- Profile:  SP-32  IP-33  Lin.-21  LS-22

<table>
<thead>
<tr>
<th>Student Name</th>
<th>SAT5/20/69</th>
<th>Previous Years</th>
<th>Test Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robin</td>
<td>1.4</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Donna</td>
<td>1.3</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Arthur</td>
<td>1.4</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Paula</td>
<td>1.3</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Danny A.</td>
<td>1.3</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Raymond C.</td>
<td>1.4</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Joe</td>
<td>1.3</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>TOTALS</td>
<td>9.4</td>
<td>none</td>
<td></td>
</tr>
</tbody>
</table>

$\bar{x}=1.34$  
$s=\text{sr of } E(x-\bar{x})^2/N-1$  
Critical $t=\pm 3.71$  
$S=.05$  
$u=1.39$  
$G=.24$  
sig.=.01  
These results were not significantly different.

Teacher # 2- Profile:  SP-37  IP-29  Lin.-17  LS-25

<table>
<thead>
<tr>
<th>Student Name</th>
<th>SAT5/20/69</th>
<th>Previous Years</th>
<th>Test Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evelyn</td>
<td>1.6</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Raymond M.</td>
<td>1.6</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Larry</td>
<td>1.6</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>TOTALS</td>
<td>4.8</td>
<td>none</td>
<td></td>
</tr>
</tbody>
</table>

$\bar{x}=1.60$  
$S=0$  
Critical $t=\pm 9.93$  
$u=1.39$  
$G=.24$  
sig.=.01  
These results were not significantly different.

*9. SAT used throughout project as an abbreviation for Stanford Achievement Test.*
Teacher # 3- Profile:  SP-24  IP-27  Lin.-34  LS-23

<table>
<thead>
<tr>
<th>Student Name</th>
<th>SAT5/20/69 Total Reading</th>
<th>Previous Years Test Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becky</td>
<td>1.5</td>
<td>none</td>
</tr>
<tr>
<td>Danny M.</td>
<td>1.2</td>
<td>none</td>
</tr>
<tr>
<td>Raymond S.</td>
<td>1.2</td>
<td>none</td>
</tr>
<tr>
<td>TOTALS</td>
<td>3.9</td>
<td>none</td>
</tr>
</tbody>
</table>

\[ \bar{x} = 1.30 \]
\[ s = 0.14 \]
\[ u = 1.39 \]
\[ G = 0.24 \]
\[ sig. = .01 \]

These results were not significantly different.

Teacher # 4- Profile:  SP-35  IP-29  Lin.-19  LS-25

<table>
<thead>
<tr>
<th>Student Name</th>
<th>SAT5/20/69 Total Reading</th>
<th>Previous Years Test Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rudy R.</td>
<td>1.2</td>
<td>none</td>
</tr>
<tr>
<td>Benny</td>
<td>1.1</td>
<td>none</td>
</tr>
<tr>
<td>Martha</td>
<td>1.4</td>
<td>none</td>
</tr>
<tr>
<td>Anna</td>
<td>1.5</td>
<td>none</td>
</tr>
<tr>
<td>Sylvia</td>
<td>1.5</td>
<td>none</td>
</tr>
<tr>
<td>Alfonso</td>
<td>1.4</td>
<td>none</td>
</tr>
<tr>
<td>Rudy A.</td>
<td>1.5</td>
<td>none</td>
</tr>
<tr>
<td>TOTALS</td>
<td>9.6</td>
<td>none</td>
</tr>
</tbody>
</table>

\[ \bar{x} = 1.37 \]
\[ s = 0.16 \]
\[ u = 1.39 \]
\[ G = 0.24 \]
\[ sig. = .01 \]

These results were not significantly different.

Comparing reading systems at this particular first grade level seemed to be very difficult due to the narrow range of the test scores. Teacher # 2 with a heavier emphasis on phonics, seemed at first glance to
have generated better test results from the students. Upon further examination however, and the test for statistical significance, one discovers that there is no real significance to the seemingly higher scores. All the other teachers total scores and their students test scores fell well within the area of statistical non-significance.

There did seem to be a side indication provided by these first grade scores that concerns itself with the validity of the test administered. The range of scores only spanned from 1.1 to 1.6 throughout the entire first grade. This narrow range of test scores might be an indication that a ceiling was placed on the more able students either by test item selection or the instruction practices within the grade level. Although test scores are traditionally tighter in the lower grades this span could be considered unusually narrow.

When reviewing the test scores it may be concluded that insofar as the first grade is concerned no one reading procedure produced significantly higher or lower results.
The following are the results class by class for the 2nd grade and their comparisons with the entire test group results for that grade level.

**Teacher # 5- Profile:** SP-25 IP-31 Lin.-27 LS-25

**Student Name** | SAT-6/12/70 Total Reading | Previous Year Test Score | Growth
--- | --- | --- | ---
Raymond C. | 2.0 | 1.4 | .6
Rudy R. | 1.5 | 1.2 | .3
Benny A. | 1.7 | 1.1 | .6
Rudy A. | 2.1 | 1.5 | .6
Larry | 1.9 | 1.6 | .3
Danny M. | 1.8 | 1.2 | .6
Arthur | 1.9 | 1.3 | .5
Paula | 1.7 | 1.4 | .6
Danny A. | 1.8 | 1.3 | .5
Sylvia | 1.8 | 1.2 | .3
Alfonso | 1.6 | 1.2 | .2
Evelyn | 1.8 | 1.2 | .2
Raymond S. | 1.7 | 1.2 | .5
Becky | 1.5 | 1.2 | .0
Robin | 1.9 | 1.2 | .5
Joe | 1.9 | 1.2 | .6
Martha | 1.6 | 1.2 | .2
Anna | 1.8 | 1.2 | .3
Donna | 1.9 | 1.2 | .6
Raymond M. | 2.0 | 1.4 | .4

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>35.9</td>
<td>8.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P=.20</td>
<td>P=.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>u=1.80</td>
<td>u=.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G=.10</td>
<td>G=.17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**These results were not significantly different.**
### Teacher # 6- Profile: SP-35 IP-31 Lin.-25 LS-17

<table>
<thead>
<tr>
<th>Student Name</th>
<th>SAT6/12/70 Total Reading</th>
<th>Previous Years Test Scores</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthur</td>
<td>1.9</td>
<td>1.4</td>
<td>.5</td>
</tr>
<tr>
<td>Paula</td>
<td>1.7</td>
<td>1.3</td>
<td>.4</td>
</tr>
<tr>
<td>Danny A.</td>
<td>1.8</td>
<td>1.3</td>
<td>.5</td>
</tr>
<tr>
<td>Sylvia</td>
<td>1.3</td>
<td>1.5</td>
<td>.3</td>
</tr>
<tr>
<td>Alfonso</td>
<td>1.6</td>
<td>1.4</td>
<td>.2</td>
</tr>
<tr>
<td>Evelyn</td>
<td>1.8</td>
<td>1.6</td>
<td>.2</td>
</tr>
<tr>
<td>Raymond S.</td>
<td>1.7</td>
<td>1.2</td>
<td>.5</td>
</tr>
<tr>
<td>Becky</td>
<td>1.5</td>
<td>1.5</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>13.8</strong></td>
<td><strong>11.2</strong></td>
<td><strong>2.6</strong></td>
</tr>
</tbody>
</table>

\[ \bar{x} = 1.72 \quad \text{sig.} = .01 \]
\[ s = .13 \quad \text{Crit t} = 23.50 \]
\[ t = 1.80 \quad \text{Cal t} = -2.00 \]
\[ G = .10 \]

These results were not significantly different.

### Teacher # 7- Profile: SP-41 IP-28 Lin.-23 LS-16

<table>
<thead>
<tr>
<th>Student Name</th>
<th>SAT6/12/70 Total Reading</th>
<th>Previous Years Test Scores</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robin</td>
<td>1.9</td>
<td>1.4</td>
<td>.3</td>
</tr>
<tr>
<td>Joe</td>
<td>1.2</td>
<td>1.3</td>
<td>.6</td>
</tr>
<tr>
<td>Martha</td>
<td>1.6</td>
<td>1.4</td>
<td>.2</td>
</tr>
<tr>
<td>Anna</td>
<td>1.8</td>
<td>1.5</td>
<td>.3</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>7.2</strong></td>
<td><strong>5.5</strong></td>
<td><strong>1.7</strong></td>
</tr>
</tbody>
</table>

\[ \bar{x} = 1.80 \quad \text{sig.} = .01 \]
\[ s = .14 \quad \text{Crit t} = -5.84 \]
\[ t = 1.80 \quad \text{Cal t} = 0 \]
\[ G = .10 \]

These results were not significantly different.

### Teacher # 1-(Taught 1st grade 68-69, 2nd grade 69-70.)

Profile: SP-32 IP-33 Lin.-21 LS-22

<table>
<thead>
<tr>
<th>Student Name</th>
<th>SAT6/12/70 Total Reading</th>
<th>Previous Years Test Scores</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donna</td>
<td>1.9</td>
<td>1.3</td>
<td>.6</td>
</tr>
<tr>
<td>Raymond M.</td>
<td>2.0</td>
<td>1.6</td>
<td>.4</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>3.9</strong></td>
<td><strong>2.9</strong></td>
<td><strong>1.0</strong></td>
</tr>
</tbody>
</table>

\[ \bar{x} = 1.95 \quad \text{sig.} = .01 \]
\[ s = .07 \quad \text{Crit t} = 63.68 \]
\[ t = 1.80 \quad \text{Cal t} = 2.14 \]
\[ G = .10 \]

These results were not significantly different.
Once again, it appears that no one particular reading method proved to bring about significantly different results than any other of the reading approaches involved. From the figures available it not only appears that no one system was superior in improving test results, but also that none of the samples involved resulted in even month for month growth as measured by the Stanford Achievement Test. The entire population of 20 at the 2nd grade level had a mean test score of only 1.80 as compared to an ending 1st grade average of 1.39 for the same students. If this is a truly valid measure of student growth in reading, then the annual growth was only .41, a definite indicator that something is not quite right. And although intergrade comparisons are outside this projects delineation these second grade results would certainly open future areas of research. Either the test is invalid, the children unready to advance, or the teachers involved were less capable than those on a national norm.

Returning again to the original research hypothesis all data for the 2nd grade supports the original claim that no one method, or variations of method led to meaningfully higher test results. There is one other thought that comes to mind while viewing these results. It centers around an old joke about "starting behind and losing ground ever since. The 3rd grade results quickly dispelled this fear.
<table>
<thead>
<tr>
<th>Name</th>
<th>Test Score</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donna</td>
<td>3.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Danny A.</td>
<td>2.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Joe</td>
<td>3.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Rudy R.</td>
<td>2.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Sylvia</td>
<td>2.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Raymond M.</td>
<td>4.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Evelyn</td>
<td>2.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Danny M.</td>
<td>2.3</td>
<td>1.7</td>
</tr>
<tr>
<td>Raymond S.</td>
<td>2.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Robin</td>
<td>2.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Arthur</td>
<td>2.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Paula</td>
<td>2.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Martha</td>
<td>2.5</td>
<td>1.9</td>
</tr>
<tr>
<td>Anna</td>
<td>2.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Alfonso</td>
<td>2.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Rudy A.</td>
<td>2.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Raymond C.</td>
<td>3.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Benny</td>
<td>2.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Larry</td>
<td>2.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Becky</td>
<td>2.8</td>
<td>1.3</td>
</tr>
</tbody>
</table>

| Sum          | 53.9       |

The following are the 3rd grade results by class:

**Teacher # 8- Profile:** SP-23 IP-27 Lin.-37 LS-21

<table>
<thead>
<tr>
<th>Student Name</th>
<th>SAT 6/16/71 Total Reading</th>
<th>Previous Years</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donna</td>
<td>3.4</td>
<td>1.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Danny A.</td>
<td>2.0</td>
<td>1.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Joe</td>
<td>3.7</td>
<td>1.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Rudy R.</td>
<td>2.3</td>
<td>1.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Sylvia</td>
<td>2.5</td>
<td>1.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Raymond M.</td>
<td>4.1</td>
<td>2.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Evelyn</td>
<td>2.5</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Danny M.</td>
<td>2.2</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Raymond S.</td>
<td>2.5</td>
<td>1.7</td>
<td>1.8</td>
</tr>
<tr>
<td>TOTALS</td>
<td>25.5</td>
<td>16.1</td>
<td>9.4</td>
</tr>
</tbody>
</table>

\[ x=2.83 \quad \text{sig.}=0.01 \quad \bar{x}=1.04 \quad \text{sig.}=0.01 \]

\[ s=3.7 \quad \text{Crit t}=3.36 \quad s=6.1 \quad \text{Crit t}=3.36 \]

\[ u=2.70 \quad \text{Cal t}=0.87 \quad u=0.91 \quad \text{Cal t}=0.87 \]

\[ G=0.49 \quad G=0.46 \]

These results were not significantly different.

**Note:** This test was administered on the last day of school because earlier test results seemed suspiciously high to district personnel.
Teacher # 9- Profile: SP-23 IF-31 Lin.-29 LS-25

<table>
<thead>
<tr>
<th>Student Name</th>
<th>SAT6/16/71 Total Reading</th>
<th>Previous Year Test Score</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robin</td>
<td>2.9</td>
<td>1.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Arthur</td>
<td>2.4</td>
<td>1.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Paula</td>
<td>2.0</td>
<td>1.7</td>
<td>0.3</td>
</tr>
<tr>
<td>Martha</td>
<td>2.5</td>
<td>1.6</td>
<td>0.9</td>
</tr>
<tr>
<td>Anna</td>
<td>2.6</td>
<td>1.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Alfonso</td>
<td>2.6</td>
<td>1.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Rudy A.</td>
<td>2.6</td>
<td>2.1</td>
<td>0.5</td>
</tr>
<tr>
<td>TOTALS</td>
<td>10.8</td>
<td>12.6</td>
<td>5.0</td>
</tr>
</tbody>
</table>

\[ x=2.51 \quad \text{sig.}=.01 \quad \bar{x}=7.1 \quad \text{sig.}=.01 \]
\[ S=.27 \quad \text{Crit} \ t=+-3.71 \quad S=.29 \quad \text{Crit} \ t=+-3.71 \]
\[ u=2.70 \quad \text{Cal} \ t=-1.06 \quad u=.91 \quad \text{Cal} \ t=-1.18 \]
\[ G=.49 \quad G=.46 \]

These results were not significantly different.

Teacher # 10- Profile: SP-32 IF-33 Lin.-21 LS-22

<table>
<thead>
<tr>
<th>Student Name</th>
<th>SAT6/16/71 Total Reading</th>
<th>Previous Year Test Score</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raymond C.</td>
<td>2.1</td>
<td>2.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Benny</td>
<td>2.7</td>
<td>1.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Larry</td>
<td>2.2</td>
<td>1.9</td>
<td>0.3</td>
</tr>
<tr>
<td>Becky</td>
<td>2.8</td>
<td>1.5</td>
<td>1.3</td>
</tr>
<tr>
<td>TOTALS</td>
<td>10.8</td>
<td>7.1</td>
<td>3.7</td>
</tr>
</tbody>
</table>

\[ x=2.70 \quad \text{sig.}=.01 \quad \bar{x}=9.2 \quad \text{sig.}=.01 \]
\[ S=.37 \quad \text{Crit} \ t=+-5.84 \quad S=.44 \quad \text{Crit} \ t=+-5.84 \]
\[ u=2.70 \quad \text{Cal} \ t=0 \quad u=.91 \quad \text{Cal} \ t=+.04 \]
\[ G=.49 \quad G=.46 \]

These results were not significantly different.

The third grade was by far the most spread out in terms of test results. The third grade as a whole averaged .91 months growth which was a tremendous improvement over the second grade scores. Although none of the third grade reading programs tested higher than the population as a whole, it seemed reasonable to test these higher scores against the combined total growth scores of the second and third grade.
Using teacher #8 as the sample, since those scores reflected the greatest growth, and then comparing this growth against the entire second and third grade growth scores there was still no statistical significance at the .01 level. Likewise the lowest second grade score did not test significantly lower.

Teacher #8 had a profile extremely high in the Linguistic approach, and what at first glance seemed to be an endorsement for this approach was quickly tempered by Teacher #10 whose heavier phonetic approach nearly matched the former’s results with a .92 growth rate.

The generally higher test results in the third grade could open two new areas for future study. Great pressure was exerted in the Gamma School District in 1971 to show test results. This concern was very evident when the district retested the Gamma Elementary School students on the last day of school because earlier test results seemed too high. This could certainly be an item for future research especially if compared to subsequent years. A second possibility is that many children may not be ready to read before the third grade and only at that stage finally had a chance. As for this project however it can only be stated that no teaching method in the third grade demonstrated any significantly superior test results in reading.
Summary of Results: The original purpose of this project was to investigate varying reading methods and their effect on state mandated test scores. We began with the hypothesis that none of the approaches would significantly affect test scores and this research has borne out that assumption. In testing the eleven sample classrooms taught by ten different teachers, each with her own variety of approaches, not one of the eleven samples proved to be significantly different from the others, when compared to the overall sample population for that grade level.

This project makes no claim to be purely experimental by nature. Conditions were not controlled by the researcher, and randomization of subjects was not tight. With this in mind the results can be analyzed in terms of tendencies rather than experimental facts. The following tendencies seemed apparent within this project, and could be considered for future investigation.

The reading method did not significantly affect test scores, and if method does not raise test scores then, what will? Perhaps the answer is that nothing will. Title One has poured countless dollars into "lower income schools" and if results are to be measured by standardized tests the money isn't raising the test scores either. Realizing how threatening this may sound to those advocates
it is just possible that test scores do not fall into the same category as "Papal Decrees". The evidence in fact is mounting to the contrary. Spanish speaking students for example are at a disadvantage from the start in the taking of these mandated tests. The fact of the matter is that much of the material contained in these tests has little to do with the "low income student" in his real world environment.

It may seem unrelated to this project to question test validity but at the same time these were not all inferior teachers or inferior students and yet no single approach or unique combination of approaches significantly raised test scores. How then can the assumption reasonably be made that the test is testing what the teachers are trying to teach?

Beyond the child's economic and social factors there is yet another factor to be considered in the effort to teach reading, and that is the child's age. When speaking of reading readiness the term maturity is often used. While there are several schools of thought on the proper age to begin reading instruction this project would tend to endorse a somewhat later age. This conclusion is drawn after observing the narrowness of test scores in grades one and two as compared with the more normal variances in the third grade level. For although there was great pressure

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for test performance during the 1971 school year, this could still not completely account for the greater variation within the level.

There seems to be two schools of thought on teaching immature children to read. One is that the teacher should attempt to identify these children early so that steps might be taken to help alleviate the problem. The second approach works from the standpoint that the best way to deal with children unready to read is to provide more first hand experiences. These would seem to be the really important issues. All people soar to their highest achievements in things they enjoy and this would apply to reading too. The methods tested were not producing significant results, and yet that might not be the most important issue. What if you were a six year old failure? Would this project be of any hope to you if it simply concluded that no method could really help you?

Approach to the child and not approach to the subject matter is the real learning factor, and the results live on rather than dying coldly on some print out sheet. Since method does not effect achievement scores, and since the teacher has little control of the child's environment then the final controllable factor in teaching must be the student - teacher relationship; unmeasurable perhaps but also unmistakeable.
