1945

Developing power in word recognition

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SCHOOL OF EDUCATION

Service Paper
DEVELOPING POWER
IN WORD RECOGNITION

Submitted By
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(B. S. in Ed. BOSTON UNIVERSITY 1941)

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Requirements for the Degree of
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Second Reader: W. Linwood Chase, Professor of Education
Third Reader: Helen A. Murphy, Assistant Professor of Education
Tilting of H.R. Lunch
May 11, 1946
Scholar and Student
26950
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To Miss Ida E. Scheib of the Franklin School West Newton, the author is indebted for her encouragement in formulating the investigation and her continued interest in the development of the experiment.
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CHAPTER ONE
STATEMENT OF THE PROBLEM
Introduction

The findings and implications of a general diagnostic survey of the reading program in our elementary school (Franklin, West Newton) shocked and disturbed the teachers, especially of the first three grades upon whose professional shoulders rested the burden of responsibility for adequate preparation. It revealed serious weaknesses and shortages; it implied difficult remedial tasks in grades four, five, and six; it challenged all to vigorous effort to correct the current deficiencies and to prevent a recurrence of the same or a similar situation.

Further study through such standardized tests as "Iowa Every Pupil Test of Basic Skills", Gates reading tests, and teacher-made informal tests corroborated the preliminary survey results and pointed to a definite lack of functioning phonetic knowledge and power not only on the primary level but especially in the grades above.

Concrete evidences of these same handicaps were tragically apparent in writings in the composition field, social studies, science, arithmetic problems, and wherever written spelling was required.

Corresponding limitations were also keenly felt not only in the regular reading program but whenever a desire had been
aroused for creative writing or for research. Motivation was weakened, interest slackened, and many an activity was left incomplete or relegated to the uncertain future. The general situation was discouraging and disheartening but not hopeless.

The handwriting on the wall indicated the necessity for an immediate remedial program for the older pupils to supplement conscious emphasis within the basal curriculum in the first three grades with special emphasis and attention on the intermediate level to develop knowledge, powers, and skill in word analysis in order to promote facility, speed, comprehension, and enjoyment in reading.
CHAPTER TWO
RESEARCH

Dr. Betts states that phonetics is the science of speech and that phonics is a term which is used when phonetics is applied to reading. However, many of the authorities use the terms synonymously.

As far back as 1790, Noah Webster included phonics in his American Spelling Book. About the year 1840 phonetic and word methods for teaching beginners were substituted for the A. B. C. method. Then followed the McGuffy readers. In 1912 the Beacon, Aldine, and other readers published were built strictly around phonetics. This procedure was predominant in classrooms for many years to follow. Then the pendulum swung from extreme phonetic systems and methods to no phonetic instruction.

Most writers, however, believe that some phonetic skills should be a part of children's background, if the child is to be independent in recognizing new words.

As a result of pros and cons of the case of phonetics the following questions are raised.

1. Should phonic instruction be included in a reading program?
2. What type of phonic program is most effective?
3. What preparatory activities should precede phonic instruction?

1. Betts Emmett Albert, The Prevention and Correction of Reading Difficulties Rowe, Peterson, N. Y. 1936 p. 809-(2)
4. When should phonics be introduced?

5. How should phonics instruction be given?

6. What are the limitations of phonics instruction?

In the Teachers' Guidebook for the Elson Basic Readers, William S. Gray and Edna Leek state that the recognition of word elements and their sounds is only a subordinate clue to the recognition of a word and that the ultimate aim is simply to be proficient in the ability to recognize isolated elements but to enable the child to grasp the meaning of a selection quickly and accurately. Except in unusual cases the authors felt isolated drills were inadvisable.

In Arthur I. Gates' book The Improvement of Reading he feels that a course in phonics is rarely indispensable to learning to read. He sights deaf mutes as evidence of this fact. Some children who have not had phonetic training show a weakness in word recognition and pronunciation of new words and depend a great deal upon context clues. If these same children were familiar with word forms and word sounds their inability to cope with new words could be remedied.

In the Teachers' Manual for the Do and Hear Books Mary White and Alice Hanthorn bring out the idea that all children do

1. Gray, William S. and Leek, Edna E. Teachers' Guidebook for Elson Basic Readers Book II Chicago; Scott Foresman & Co. 1921
not require the same amount of phonetic training and therefore in the light of their needs, children should be given the necessary preparation and training in phonetic power. The warning is given that a child might easily be confused if too many combinations are given. These two authors feel that phonics should be taught in separate lessons.


2. D. D. Durrell in Improvement of Basic Reading Abilities states that lack of attention to word analysis results in guessing at words without any regard to word form or context. Although some bright children may be able to acquire the ability to see the difference in word elements and have fluency in visual and auditory discrimination without an organized course or plan the great majority of children profit with some training in visual and auditory discrimination.

One of the greatest weaknesses of the old style of teaching phonics was the lack of transfer from the drills to actual application in the reading situation. The author felt that phonics might be more profitable if taught in connection with spelling.

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2. Durrell D. D. Improvement of Basic Reading Abilities World Book Co., Yonkers-on-Hudson N.Y. 1940, p. 197-230
since the reading lessons should be a time for pleasure and enjoyment, as well as meaningful. Since phonics is really the calling of attention to word structure, it would tend to deprive the child of his pleasure in reading.

The earlier method of teaching phonics started with single letter sounds gradually growing into blends. Later the instruction in phonics changed and words were analyzed into their phonetic parts and then these elements were blended. Because the dictionary divided words into syllables, the beginning blend became important since it followed the idea carried out in the dictionary.

Worth J. Osburn in "The Relative Values of Letter Sounds and Consonants" published in the State Department of Public Instruction, Wisconsin listed the following initial consonant sounds according to their importance: s, t, c, p, d, f, b, r, n, l, w, z, n, h, v, th, st, pr, and ch also r, n, l, s, t, d, m, r, nt, re, ce, se, th, nd, st, re, ng, te, ch, c and f.

In an article entitled "Phonics" published in the Classroom Teacher II 1928, Anna D. Cordts and Maude McBroom list the following initials sounds: c, l, b, h, s, m, r, p, c, d, t, f, n, w, sh and the following final sounds: t, ll, n, m, d, r, g, ck, sh, ng.

2. Cordts, Anna D and McBroom, Maude "Phonics" Classroom Teacher II 1928 p. 233-428
Guy L. and Eva Bond discussed word analysis in their book *Teaching the Child to Read*. They feel that inability to master certain definite techniques gives the child on the intermediate grade level the same difficulties as the child on the primary level. The child will neglect beginning letters which follows along into other phases of work such as incorrect interpretation of multiple choice questions for he tends to reverse letters. Many children have never learned or acquired the habit of finding small words within compound words. Others have little or no ability in word recognition.

The ability to divide words into syllables is an aid to both spelling and reading efficiency.

Most of the books one reads devote many pages to word analysis but few if any of the books are concerned with the problem above the primary level. However, lack of visual and word analysis difficulties do not cease at the primary level. On the contrary many and varied are the problems in word analysis found in the intermediate grades especially since these are the children, not all, but many, who came through school when the pendulum was swinging away from phonetic training to little or no word analysis.

In their discussion of phonics, the authors of "Effective Reading Instruction" state that in the primary grades children are taught to recognize words that they are familiar with orally.

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and that in the upper grades we try to teach pupils how to pronounce words independently. As an aid to independent word recognition we provide work which allows for word recognition by phonetic clues or context clues and also aid from the dictionary.

Upon looking for material in phonics one is deluged with information, exercises, books, etc. for the primary level. However, with few exceptions, the authors say little or nothing in regard to phonetic training in the intermediate grades. It was with great difficulty that the writer secured even this limited material dealing with word power in the intermediate grades for although a vast number of children are secure in their ability to read independently, there are far too many who are lacking in this most useful tool subject.

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CHAPTER III

PROBLEM

The problem became first of all one of reeducation of teachers who had eschewed phonics as belonging to old-fashioned drill. They feared that the amount of phonetic training which they felt would serve reading, would be interpreted by supervisors and visitors as an overstatement of one of the mechanics. They could not decide just when word analysis would achieve its purpose and when their teaching would be serving phonics. All furtively welcomed the opportunity of more thorough phonetic teaching but felt very insecure as to its general acceptance in educational circles.

The enormity of the task became a second concern, but the organization and planning for a two year period instead of one eased this situation.

A third phase of the problem was to devise ways in which the writer could keep in close touch with every step of the experiment through a full-time teacher herself. Guidance, teaching, and checking along the way and a final study with a limited number of pupils seemed the expedient way to manage this though it incurred some loss enroute.

With these minor difficulties planned, the major problem silhouetted itself very clearly.

Pupils of grades four, five, and six were woefully lacking in reading ability. I.Q.'s ranging from 81 - 114 with a median I.Q. of 90 indicated that this deficiency was not in the
majority of cases due to poor mental equipment.

Three questions must be answered:

1. Was phonetic training in primary grades superficial and inadequate?

2. Should the teaching of phonics be extended to the grades above?

3. What type of program in all six grades would improve girls' and boys' reading to such an extent that not only would they love it but also it would serve them in all activities of school and life which involved the printed page?

It is the searching for answers to these questions which is recorded in subsequent pages.

*****
CHAPTER FOUR

INVESTIGATION

Subsequent to the preliminary and diagnostic program a series of study and discussion conferences for purposes of establishing a common philosophy determining the direction in which we were to travel and setting up specific objectives was launched under the direction of the principal with the cooperation of the teacher of remedial reading, the school psychologist, and including all teachers of grade one to six inclusive.

The following listing is suggestive of the pattern of the study program which formed the prelude to the major project related in this paper.

1. Faculty meeting for the purpose of discussion and understanding of the various ramifications of the problem.

2. Conference of teachers of grades four, five, and six with the remedial reading teacher in which the following topics were reviewed to insure common understanding:
   a. Auditory and visual discrimination
   b. Vocabulary of children
   c. Beginning consonants and blends; final consonants and blends
   d. Word elements
   e. Vowel sounds
   f. Vowel combinations
g. Prefixes and suffixes
h. Word roots
i. Syllables
j. Sight words
k. Richness and color through word meaning

3. Remedial reading teacher's conference with teachers of one, two, and three covering subject matter listed under a above as it applied to these grades.

4. Cooperative planning by remedial reading teacher and building assistant of procedures, materials, and content of her corrective program. (Preliminary to the subject of this paper)

5. Grouping of children according to performance on informal tests into three divisions, namely:
   a. Those who seemed well-grounded in phonics for word analysis
   b. Those who had acquired knowledge but were short in functioning practice.
   c. Those whose basic knowledge was seriously inadequate

Thus with grade lines erased the building assistant's program concentrated on core on problems, filling gaps, supplying needed skills, and developing latent abilities. A regular schedule of coaching for groups b and c was initiated in January 1943.
Method of Investigation

I First Year
   A. Re-education of teachers
   B. Testing program
   C. Grouping of pupils
   D. Teaching according to needs of groups
   E. Building assistant's coaching classes
   F. Re-testing for achievement

II Second Year
   A. Diagnosis to discover shortages in writer's group
   B. Conclusions

III Broadening of available facilities
   A. Reading Laboratory
   B. Branch Library

IV Outcomes
Investigation

The work of the building assistant was to consist of three periods a week in periods of twenty minutes each. There were five groups to be instructed which consisted of children from grades four, five, and six. However they were grouped not according to grade but rather according to ability as follows:

1. Those who had no knowledge of phonics,
2. Those with some knowledge of phonics but very slight application,
3. Those with a knowledge of phonics but no transfer value.

Using "Building Word Power" as a basis the following plan was evolved.

The first day the following letters were selected: b, f, g, c.

1. The children made lists using words with these consonants
2. The words were always written on the board for visual as well as auditory concepts.

The second day b, f, g, and c were reviewed and the following letters were presented: h, e, d, j, and h. Each day began with a review of the letters presented the day before. The building assistant asked the children to listen to some words which she had chosen. She of course chose words beginning with the letter she wished to teach. Then she asked the group to tell her the name of the letter. Next she asked different members to
give her some words starting with that same letter. As the child said his word the teacher wrote it on the board. However, she did not follow this exact procedure each day as it would become monotonous. Sometimes the teacher put lists of words on the board or gave a list of words orally to the children. Each time the list began with the letter she wished to stress. Another plan she used was that of putting a sentence on the board leaving a blank space for the word the child was to put in and of course if b was to be taught each blank was filled in with a word that started with b as; and Jane went to the and put their examples each other.

The third day the consonants b, f, g, and c were reviewed and the new letters n, p, m, qu, v, w, r, s, and t were taught. On the fourth day n, p, m, qu, v, w, r, s, and t were reviewed and the phonograms axe, ill were taught. The children gave the words on this particular day.

The fifth day axe and ill were reviewed and g, c, qu, h, and j.

On the sixth day the following blends were taught; st, wh, br, dr. The word and was put on the board and st added giving the word stand. Sand was put on the board and t added with the resulting word stand. This was the procedure used in word building and analysis.

On the seventh day the blends tr, cl, fr, gr were taught. The same system as had been employed was again followed always using variety.
The letters taught on the eighth day were pl, tw, sm, fl, dh, th.

The blends taught on the ninth day were sh, sw, sp, and sc with a few ending blends as pugh-sh. This was the first day ending blends had been presented but ending consonants had been taken up in conjunction with beginning consonants.

Lists made by the children

<table>
<thead>
<tr>
<th>Beginning consonants</th>
<th>Ending consonants</th>
</tr>
</thead>
<tbody>
<tr>
<td>beacon</td>
<td>bulb</td>
</tr>
<tr>
<td>Stalingrad</td>
<td>bluff</td>
</tr>
<tr>
<td>fountain</td>
<td>concert</td>
</tr>
<tr>
<td>terror</td>
<td>electric</td>
</tr>
<tr>
<td>cabinet</td>
<td>aviator</td>
</tr>
<tr>
<td>root</td>
<td>bowl</td>
</tr>
<tr>
<td>linen</td>
<td>defend</td>
</tr>
<tr>
<td>dainty</td>
<td>crew</td>
</tr>
<tr>
<td>jewel</td>
<td>talk</td>
</tr>
<tr>
<td>keen</td>
<td>gallon</td>
</tr>
<tr>
<td>notice</td>
<td>shop</td>
</tr>
<tr>
<td>pioneer</td>
<td>beach</td>
</tr>
<tr>
<td>hostage</td>
<td>fencing</td>
</tr>
<tr>
<td>generator</td>
<td>film</td>
</tr>
<tr>
<td>murmur</td>
<td>boss</td>
</tr>
<tr>
<td>quietly</td>
<td></td>
</tr>
<tr>
<td>volcano</td>
<td></td>
</tr>
<tr>
<td>wander</td>
<td></td>
</tr>
<tr>
<td>cargo</td>
<td></td>
</tr>
<tr>
<td>garage</td>
<td></td>
</tr>
<tr>
<td>knowledge</td>
<td></td>
</tr>
<tr>
<td>Beginning Blends</td>
<td>Ending Blends</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------</td>
</tr>
<tr>
<td>black</td>
<td>clutch</td>
</tr>
<tr>
<td>challenge</td>
<td>mesh</td>
</tr>
<tr>
<td>drawbridge</td>
<td>march</td>
</tr>
<tr>
<td>crisis</td>
<td>wash</td>
</tr>
<tr>
<td>cry</td>
<td>rash</td>
</tr>
<tr>
<td>gravel</td>
<td>rack</td>
</tr>
<tr>
<td>frigid</td>
<td>rock</td>
</tr>
<tr>
<td>principal</td>
<td>teeth</td>
</tr>
<tr>
<td>scarf</td>
<td>check</td>
</tr>
<tr>
<td>triangle</td>
<td>rock</td>
</tr>
<tr>
<td>shark</td>
<td>wreck</td>
</tr>
<tr>
<td>whistle</td>
<td>click</td>
</tr>
<tr>
<td>stadium</td>
<td>clinch</td>
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<tr>
<td>thistle</td>
<td>flinch</td>
</tr>
<tr>
<td>whittle</td>
<td>quick</td>
</tr>
<tr>
<td>fleece</td>
<td>slick</td>
</tr>
<tr>
<td>cliff</td>
<td>chick</td>
</tr>
<tr>
<td>brilliant</td>
<td>brick</td>
</tr>
<tr>
<td>spring</td>
<td>stick</td>
</tr>
<tr>
<td>swallow</td>
<td></td>
</tr>
<tr>
<td>sugar</td>
<td></td>
</tr>
<tr>
<td>smile</td>
<td></td>
</tr>
<tr>
<td>Beginning blends</td>
<td>wh</td>
</tr>
<tr>
<td>------------------</td>
<td>--</td>
</tr>
<tr>
<td>st</td>
<td>which</td>
</tr>
<tr>
<td>stagger</td>
<td>what</td>
</tr>
<tr>
<td>stake</td>
<td>where</td>
</tr>
<tr>
<td>stale</td>
<td>when</td>
</tr>
<tr>
<td>startle</td>
<td>why</td>
</tr>
<tr>
<td>stingy</td>
<td></td>
</tr>
<tr>
<td>dr</td>
<td>cl</td>
</tr>
<tr>
<td>drain</td>
<td>click</td>
</tr>
<tr>
<td>drizzle</td>
<td>cloud</td>
</tr>
<tr>
<td>drug</td>
<td>cling</td>
</tr>
<tr>
<td>drop</td>
<td>clutch</td>
</tr>
<tr>
<td>drill</td>
<td>cliff</td>
</tr>
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<td>groove</td>
<td></td>
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<td>grieve</td>
<td>trickle</td>
</tr>
<tr>
<td>green</td>
<td>trench</td>
</tr>
<tr>
<td>graze</td>
<td>trail</td>
</tr>
<tr>
<td>grasp</td>
<td>trumpet</td>
</tr>
</tbody>
</table>

As the pupils began to show progress in their ability to see and hear word combinations, it was decided to work on syllabication in order to reinforce the spelling program.

The child divided the words into syllables, then pronounced them, showed accent marks and long and short mark over the
vowels. Such words as advertise, astonishment, appoint, discourage, alternate, fortunately, congress, contemptuous, cabin, cabinet, earthenware, governor, horizon, horizontally, ferocious, imagination, and extraordinary were used. These were words suggested by the children many of which were to be found in their social studies vocabulary.

Meanwhile the teachers in their classrooms were continuing their work by transferring the work of the building assistant to the reading and spelling lessons and letting the children continue making lists of words containing the beginning consonants and blends gradually stressing ending consonants and blends.

Words were taken from spelling, reading, and social studies which were divided into syllables showing the accent mark, and determining whether vowels were long or short after the words were pronounced by the children. The teachers tried not to isolate the work too much and therefore tried checking the results of the work by using short selections sometimes from the regular reading book, a library book, or social studies book to see if the transfer desired had been obtained. The results were most gratifying.

The children were encouraged to get the pronunciation from context. Short selections would be chosen with the child making a list of the difficult words found in the reading. Then the list was checked for recognition and meaning. Next the selection was read. Another check was made for new words learned through recognition or meaning. Children were urged and trained
to see words in their parts and sounds were derived from known parts of words.

This type of work was continued until June 1943 at which time the classroom teachers again checked as previously the children who had had this special work and noted the following weaknesses:

Strengths were noted in spelling, sight reading, and recognizing known parts of words.

Weaknesses were found in some beginning blends and such combinations as ai, tion, silent e, short and long vowels, the rule about e, and in some of the common prefixes and endings such as ir, ai, ar, re.

Upon the above weaknesses the program for the following year was based.

The following methods of procedure, as a continuance of this work, were suggested and carried out:—rhyming, discovering words within words, by saying them or by the flash card method to include auditory and visual perception. Classification of words under the same heading as cl or br was made. Then lists of words were made from both columns under these headings:—words which give strong action, words that are picture words, color words or words that help one to hear sounds.

Blend words were limited in categories such as social studies, and each visual lesson was preceded by an auditory lesson. Long words were built from short ones. Stress was put on clear enunciation.
The aim of this work was to hear and pronounce words correctly as well as to use them in written work to determine auditory and visual acuity. Meaning was kept high in all work to improve associative powers, vocabulary, word meanings as well as individual word power.

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CHAPTER FIVE
ANALYSIS OF DATA

Program for Testing Procedure

Fifteen minute periods were given so as not to tire the child or disrupt regular classroom work. Five minutes additional time was allowed for directions which in most cases were quite simple. Length of program - 15 days.

<table>
<thead>
<tr>
<th>Day</th>
<th>Type Test or Purpose of Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Beginning Consonants</td>
</tr>
<tr>
<td>2</td>
<td>Ending Consonants</td>
</tr>
<tr>
<td>3</td>
<td>Beginning and Ending Blends</td>
</tr>
<tr>
<td>4</td>
<td>Auditory discrimination</td>
</tr>
<tr>
<td>5</td>
<td>Visual perception</td>
</tr>
<tr>
<td>6</td>
<td>Visual perception</td>
</tr>
<tr>
<td>7</td>
<td>Auditory discrimination</td>
</tr>
<tr>
<td>8</td>
<td>Building Big Words from Small Words</td>
</tr>
<tr>
<td>9</td>
<td>Making Small Words from Big Words</td>
</tr>
<tr>
<td>10</td>
<td>Prefixes and Suffixes</td>
</tr>
<tr>
<td>11</td>
<td>Root or Kin Words</td>
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<tr>
<td>12</td>
<td>Perception of Word Similarities</td>
</tr>
<tr>
<td>13</td>
<td>Analytical Inspection - Vowels</td>
</tr>
<tr>
<td>14</td>
<td>Recognition of Word Forms</td>
</tr>
<tr>
<td>15</td>
<td>Noting Beginning Consonants Beginning and Ending Blends, and Vowels in Context</td>
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</table>
Data

Number of pupils involved the first year,

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number</th>
</tr>
</thead>
<tbody>
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<td>4</td>
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<td>5</td>
<td>58</td>
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<tr>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
</tr>
</tbody>
</table>

Number of pupils involved in the final study, - 20

Chronological ages 11 - 12

I.Q.'s

- I.Q. above 110 - 2
- I.Q. 90-110 - 11
- I.Q. below 90 - 7

I.Q.'s based on Kul. Anderson Tests given in Dec. 1944

Analysis of Data Secured

In the following test designed to measure ability to see and hear beginning and ending consonants the following letters were found to give the most difficulty when used as beginning consonants: b and d because of a tendency to reverse them and p and b because of their similarity in quick perception. The letters giving trouble as ending consonants were m and n due to the fact that many children are not careful in quick perception tests to concentrate long enough on the whole word. This difficulty with beginning and ending consonants was slight however and with one or two exceptions all the children had perfect scores on the test.

The directions for the test were as follows: I am going
to say a word. You listen and then find a word in the row
marked 1 that has the same sound at the beginning as the word I
say. Draw a circle around the word. You are to circle only one
word in each row.

This test served a two-fold purpose since it was possible
to use the same test for ending consonants. The directions
were the same except that the examiner changed the words from
"a word that begins with the same sound at the beginning of the
word" to "a word that ends with the same sound as the word I
say."

The first day the test was used for beginning consonants.

Number tested - 20
Number of perfect scores - 18
Number having one error - 1
Number having two errors - 1

The second day the test was given to discover the children
who still showed definite weakness in ending consonants. The
results were:

Number tested - 20
Number of perfect scores - 19
Number having one error - 1

This error was a confusion of m and n at the end of a word
in the second row. The word asked for was ran and am was cir-
cled.

The results of both tests showed a growth in ability to
hear and see beginning and ending consonants.
Test for beginning and ending consonants

<table>
<thead>
<tr>
<th></th>
<th>Beginning Con.</th>
<th>Ending Con.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>sit, big, right, rest</td>
<td>s (sit)</td>
</tr>
<tr>
<td>2.</td>
<td>am, same, rain, fan</td>
<td>f (fan)</td>
</tr>
<tr>
<td>3.</td>
<td>back, bake, day, lace</td>
<td>d (day)</td>
</tr>
<tr>
<td>4.</td>
<td>now, horse, rose, house</td>
<td>r (rose)</td>
</tr>
<tr>
<td>5.</td>
<td>held, cold, rolled, spell</td>
<td>c (cold)</td>
</tr>
<tr>
<td>6.</td>
<td>beat, seat, soot, said</td>
<td>m (meet)</td>
</tr>
<tr>
<td>7.</td>
<td>stand, say, win, make</td>
<td>w (win)</td>
</tr>
<tr>
<td>8.</td>
<td>book, lick, this, but</td>
<td>l (lick)</td>
</tr>
<tr>
<td>9.</td>
<td>like, pan, buzz, bake</td>
<td>p (pan)</td>
</tr>
<tr>
<td>10.</td>
<td>stall, push, beat, luck</td>
<td>b (beat)</td>
</tr>
</tbody>
</table>

In the columns to the right of the test are the beginning and ending consonants tested. The word to be circled is in brackets.

The beginning consonants tested were: b, c, d, f, l, m, p, r, s, w.

The ending consonants tested were: d, g, k, l, m, n, t, w, y, z.

However the test is so made that a teacher might also test other consonants by changing a few words.

On the third day a test was given to measure ability to hear beginning and ending blends.

The directions were as follows: In the row marked one draw a circle around the word that ends with the same sound as the word splash. (wash)
In the row marked **two**, draw a circle around the word that ends with the same sound as the word *latch*. (catch)

In the row marked **three**, draw a circle around the word that ends with the same sound as the word *tack*. (black)

In the row marked **four** draw a circle around the word that ends with the same sound as the word *pink*. (drink)

In the row marked **five** draw a circle around the word that ends with the same sound as the word *talk*. (walk)

In the row marked **six** draw a circle around the word that begins with the same sound as the word *prize*. (pretty)

In the row marked **seven** draw a circle around the word that begins with the same sound as the word *fly*. (leet)

In the row marked **eight** draw a circle around the word that begins with the same sound as the word *crown*. (crack)

In the row marked **nine** draw a circle around the word that begins with the same sound as the word *click*. (clear)

In the row marked **ten** draw a circle around the word that begins with the same sound as the word *drag*. (drive)
Test for beginning and ending blends

<table>
<thead>
<tr>
<th>1. watch</th>
<th>wash</th>
<th>wait</th>
<th>was</th>
<th>sh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. catch</td>
<td>cat</td>
<td>close</td>
<td>cover</td>
<td>ch</td>
</tr>
<tr>
<td>3. brown</td>
<td>black</td>
<td>born</td>
<td>big</td>
<td>ck</td>
</tr>
<tr>
<td>4. rain</td>
<td>chain</td>
<td>drink</td>
<td>ring</td>
<td>ink</td>
</tr>
<tr>
<td>5. wall</td>
<td>walk</td>
<td>wait</td>
<td>all</td>
<td>alk</td>
</tr>
<tr>
<td>6. try</td>
<td>badly</td>
<td>pretty</td>
<td>tie</td>
<td>pr</td>
</tr>
<tr>
<td>7. fleet</td>
<td>beat</td>
<td>seat</td>
<td>steel</td>
<td>il</td>
</tr>
<tr>
<td>8. crack</td>
<td>half</td>
<td>gave</td>
<td>close</td>
<td>cr</td>
</tr>
<tr>
<td>9. ear</td>
<td>deer</td>
<td>clear</td>
<td>hear</td>
<td>cl</td>
</tr>
<tr>
<td>10. give</td>
<td>live</td>
<td>drive</td>
<td>sieve</td>
<td>dr</td>
</tr>
</tbody>
</table>

The following beginning consonants were checked: pr, il, cr, cl, dr. All had perfect scores on this test.

The following ending blends were checked: sh, ch, ck, ink, all. The only combination which caused difficulty was ink.

Number tested for beginning blends - 20
Number of perfect scores - 20
Number tested for ending blends - 20
Number of perfect scores - 19
Number having 1 wrong - 1 (ink)

On the fourth day a test was administered to determine weaknesses in auditory discrimination.

The following directions were given by the teacher:

I am going to say a letter or a word. You will put a circle around one letter or one word in each row. Remember you circle only one letter or one word in each row. I will tell you which
row you are to look at. Be sure and look at the number found at the beginning of each row. Then find the letter or word I say.

The results of this test were as follows:

Out of 30 words tested
Number of children tested - 20
Number having perfect scores - 16
Number having one wrong - 1
Number having two wrong - 1
Number having three wrong - 2
<table>
<thead>
<tr>
<th>Name</th>
<th>Auditory</th>
</tr>
</thead>
<tbody>
<tr>
<td>laeodg</td>
<td>16 along around alone alone alone</td>
</tr>
<tr>
<td>sfrtk</td>
<td>17 forgot forget forgotten first</td>
</tr>
<tr>
<td>at ball ill all fall</td>
<td>18 would word world whirl wound</td>
</tr>
<tr>
<td>dog boy day boys play</td>
<td>19 duck daughter dollar drink doctor</td>
</tr>
<tr>
<td>me men name man run</td>
<td>20 terror tremble trouble terrible terribly</td>
</tr>
<tr>
<td>was ask saw say see</td>
<td>21 inform uniform reform information</td>
</tr>
<tr>
<td>told older elm oat old</td>
<td>22 curtain certain sustain c rtains maintain</td>
</tr>
<tr>
<td>his sit sat it site</td>
<td>23 radiate radiator radius radiation radiator</td>
</tr>
<tr>
<td>child ca bold cold call</td>
<td>24 hovel shave shovels shrivel shovel</td>
</tr>
<tr>
<td>king kind dare kin knit</td>
<td>25 gastric alkaline gasoline glycerine gasification</td>
</tr>
<tr>
<td>barn bun burn bar done</td>
<td>26 vocation vaccination vacation vacate vocalization</td>
</tr>
<tr>
<td>quick quick quickly queen quart</td>
<td>27 invent inverted imitation invention invitation</td>
</tr>
<tr>
<td>hard handy hardly had harden83</td>
<td>28 thermometer terminator through typewriter transformer</td>
</tr>
<tr>
<td>nose ice mice race nice</td>
<td>29 photograph autograph phonograph photogravure photographer</td>
</tr>
<tr>
<td>speak speck stick spice peck</td>
<td>30 respirator reporter reported importer report</td>
</tr>
</tbody>
</table>
On the fifth day the following test was given to check ability in quick visual perception.

The directions were as follows:

I will show you a card on which will be one letter, a group of letters, or a word. You are to look at the card and then look at your paper to find a word that is exactly the same as the one I will show you. I will tell you the number of the row you are to look at. Circle one word only in each row. Be sure that you look at the row that is numbered the same as the row I tell you to look at.

The flash card was shown for a short interval.

The results of the tests showed that the longer the word the more confusions.

The results were as follows:

Out of thirty words tested
Number of children tested - 20
Number having one word wrong 1
Number having two words wrong - 5
Number having three words wrong - 4
Number having four words wrong - 2
Number having five words wrong - 1
Number having six words wrong - 1
Number having seven words wrong - 2
Number having eight words wrong - 3
Number having nine words wrong - 1

There were no perfect scores on this test.
1. y b d g f
2. m h n r t
3. no on imp in nip
4. goes do go ago dog
5. saw was as was waste
6. pot tab tap pat
7. girl dog boy dig day
8. won no now mow was
9. and tend on ended and
10. lack clock black block dark
11. frost first fast firm trust
12. same came name some somebody
13. slat last lost lot blast
14. jump jest just jot must
15. drip prop drops rap drop
16. clear clean close climb lean
17. bar park trap party quart dark part
18. sight sought rough ought taught aught tough
19. quite quick quack point quiet question quit
20. state elation tasted station stationed started skating
21. dinner differ difference different deference deferent
22. nomination notion mention mountain mountains motion mentioned
23. quarter portion bracelet particle practice practical poultice
24. other the weather wealth whether whither wealthier
25. obscure advice above advise advances dance advance
26. sure obscure scare see re second server sure
27. portable possible probably probable problem practical desirable
28. contact contain contract convict contacts capital contracts
29. immediate editates ediate meditate material mediatative
30. regular regulate regulation regulation negotiation recognition negotiation
The following visual test was given on the sixth day to test for visual discrimination.

The directions were as follows:

I will show you a card on which you will see a word. You are to find that same word on your paper. Circle only one word in a row. I will tell you the row you are to look at and you notice the number at the beginning of each row to make sure that you do not lose your place.

A card was shown for a short interval. Thirty six words were checked. The words at the end of the test were longer and of course more difficult. The results were as follows:

Number of children tested - 10
Number of perfect scores - 1
Number having one word wrong - 3
Number having two words wrong - 2
Number having three words wrong - 10
Number having four words wrong - 1
Number having five words wrong - 1
Number having six words wrong - 2

The results were satisfying since quick visual perception had been a weakness in this particular group.
The seventh day an auditory test was given with the following purposes. Part one tested ability to hear beginning consonants. Part two checked beginning blends of two letters. Part three tested ability to hear beginning blends of three letters. Part four was check on ending blends. Part five noted ability to hear phonograms.

The directions for part one were as follows:

This is a listening test. Listen carefully. Put a circle around the word which begins with the same letter as the word I say.

Number taking the test - 20
Number of perfect scores - 20

It was expected and hoped that at this time this group of children would be able to obtain perfect scores. Therefore the writer was pleased at the results.

Then part two was administered with the following directions:

Listen carefully. Put a circle around the word which begins with the same two letters as the word I say.

Number taking the test - 20
Number of perfect scores - 17
Number having no wrong - 3

The third section of the test was to check three letters at the beginning of a word and of course proved a little more difficult.

The directions: Listen carefully. Put a circle around the
word which begins with the same three letters as the word I say.

Number taking the test - 20
Number of perfect scores - 17
Number having one wrong - 2
Number having two wrong - 1

The fourth part continued right after part three with the following directions: Listen carefully. Circle the word which ends with the same two letters as the word I say.

Number taking the test - 20
Number having perfect scores - 19
Number having one wrong - 0
Number having two wrong - 1

As a result of this auditory test, it was found that

1. Beginning consonants were known
2. With the exception of three people, who made one error, words of two letter blend beginnings were known.
3. With the exception of three people, words of three letter blend beginnings were known.
4. Two letter blends at the end of a word were known by all but one person.
5. Phonograms proved to be very slight difficulty.

It was also noted that the one person who did not obtain a perfect score in parts two, three, four, and five was the same individual which indicates a need for further remedial work. His I.Q. is also low...
Division of Research & Guidance
Newton Public Schools

Listening Tests

Listen carefully. Put a circle around the word which begins with the same letter as the word I say.

1. feet  beet  seat  seal
2. doll  ball  all  call
3. hard  half  gave  have
4. hold  cold  sold  told
5. ear  deer  clear  hear
6. give  live  drive  sieve

Listen carefully. Put a circle around the word which begins with the same two letters as the word I say.

1. then  times  two  toe
2. hope  stop  top  hop
3. her  where  here  there
4. she  school  same  sleep
5. black  blue  bear  brown
6. care  chair  catch  hear

Listen carefully. Put a circle around the word which begins with the same three letters as the word I say.

1. stand  street  beat  feet
2. spring  ring  sing  sell
3. we  tree  three  those
4. ink  sing  link  shrill
Listen carefully. Circle the word which ends with the same two letters as the word I say.

1. watch  wash  wait  was
2. catch  cat  close  cover
3. brown  black  blast  blot
4. rain  chain  drink  ring
5. wall  walk  wait  all
6. try  badly  pretty  tie

Listen carefully. Circle the word which has the same family of letters as the word I say.

1. sit  big  right  rest
2. am  same  rain  ran
3. back  bake  day  lake
4. how  horse  rose  house
5. held  cold  rolled  spell
6. best  meet  seat  said
On the eighth day the following matching test was given. Its purpose was to build big words from small words.

The directions were as follows:

Below are two columns of small words. You are to match the words in the left column (show column) marked A with a word in the right column (show column) marked B. The idea is to make one big word from two small words. Use lines to connect your words.

1. whom   house
2. sub    light
3. light  shoes
4. ink     well
5. tooth  deer
6. over   ever
7. head   not
8. rein   marine
9. workman  paste
10. can    place
11. pin    ship
12. fire    case
13. stair  cushion
14. air    head
15. table  where
16. eye    cloth
17. every  knot
18. over  phones
19. ear   glasses
20. bow   plane
All scored in this test.

On the ninth day the following matching test was given. Its purpose was to find small words in big words.

The directions were as follows:

Below is a list of words. You will find each word has at least two little words in it. In the space to the right you will put in the little word you find in the big word.

1. then - hen, the, he
2. seesaw - see and saw
3. notebook - note and book, no not
4. following - follow and wing and low
5. small - all
6. around - round
7. telephone - phone
8. transport - pot, ran, sport
9. window - wind, in win
10. snowball - snow, ball, all
11. tailor - tail, or
12. throughout - through, rough, out
13. stagecoach - stage, coach, age, tag
14. trail - rail
15. hinge - in
16. donkey - key, do, on
17. stone - tow, on, tone
18. somebody - some, body, so, me
19. sink - in, sit, in
20. blotter - blot, lot
Out of the twenty words given there was a possibility of getting fifty words.

<table>
<thead>
<tr>
<th>Number taking the test - 20</th>
<th>Number getting 50 words</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>&quot; &quot; 40 &quot; 0</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 48 &quot; 1</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 47 &quot; 0</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 46 &quot; 2</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 45 &quot; 1</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 44 &quot; 0</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 43 &quot; 0</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 42 &quot; 8</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 41 &quot; 4</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 40 &quot; 0</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 39 &quot; 2</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 38 &quot; 0</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 37 &quot; 1</td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; 36 &quot; 1</td>
<td></td>
</tr>
</tbody>
</table>

On the tenth day the test consisted of prefixes and suffixes were tested: sub, con, dis, ex, dic, trans, pro, un, re, in, to. Total 12, pro, re, in used twice.

The following suffixes were tested: ing, or, est, ay, y, all, ment, ent, tion, ed, al, alk.

The directions: Circle the prefixes in the following sentences and underline the suffixes.

1. Be prepared to give your oral talk tomorrow.
2. Did you remember your dentist appointment for Thursday?
3. The little puppy was disobedient until he was punished.
4. We must protect our natural resources.
5. Transportation is a problem in war time.
6. Bob is going to play basketball instead of hockey.
7. Henry looked in his dictionary for the meaning of the new words in spelling.
8. The stranger inquired about the shortest route to the railroad.
9. The early train will connect with the New York express.
10. Jim wants to go for a ride in a submarine some day.

There were twelve prefixes and twelve suffixes used. Some were used more than once making a total of thirty three prefix-es combined.

The prefixes were well known.
The following suffixes gave trouble: or, ay, ary, al.

Number taking test - 20
Number of perfect scores - 0
Number having 1 wrong - 1

<table>
<thead>
<tr>
<th>Number having</th>
<th>Wrong</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>-1</td>
</tr>
<tr>
<td>3</td>
<td>-1</td>
</tr>
<tr>
<td>4</td>
<td>-2</td>
</tr>
<tr>
<td>5</td>
<td>-8</td>
</tr>
<tr>
<td>6</td>
<td>-6</td>
</tr>
<tr>
<td>7</td>
<td>-0</td>
</tr>
<tr>
<td>8</td>
<td>-1</td>
</tr>
</tbody>
</table>
On the eleventh day to vary the program a simple check test was given. It was entitled words and their kin. The children enjoyed it and filled each block to capacity. It is useful especially in breaking down words in reading or enlarging words for written composition especially in creative writing.

The twelfth day a check was made for perception of word similarities in context.

The directions were given as follows:

Draw a circle in red crayon around all the small words.
found in large words.

1. James left his notebook upon the shelf.
2. Do not run in the hallway; you will not fall.
3. Bobby has a new seesaw in his playroom.
4. Bill has a new overcoat.
5. Do not leave without your overshoes.
6. The boy's snowball broke the window in the garage.
7. The boys cheered their team throughout the game.
8. Barbara and Dick accompanied their parents to the railroad station yesterday.
9. Sue's birthday comes on Friday this year.
10. Nineteen children took part in the games on the playground today.

The words found in the first sentence were:
1. jam, am, me, is, no, note, book, not up, on, he, see, all, he.
2. do, not, no, he, hall, all, why, the, he, hen, no, all.
3. Bob, by, as, see, saw, is, play, room, lay.
4. ill, as, over, coat, at.
5. do, not, no, with out, eave, you, over, shoes, hoe.
6. he, snow, now, ball, all, he, win, in, wind, he, age, rage.
7. he, cheer, red, he, the, he, tea, am, through, rough, out, he, am, me.
8. bar, ay, the, he, rent, pan, he, rail, road, at, on, yes, day.
9. birth, day, me, day, his, is, ear.
10. nine, child, to, art, he, as, re, lay, play, ground, round, to, day.

There was a possibility of 109 words.
The number taking the test - 20
The largest number of words - 95
The smallest number of words - 64

The purpose of the test on the thirteenth day was for analytical inspection with attention to vowels.

The children were told to fill in the blank in each sentence with one of the words from the row of words under each sentence.

1. The pilot guided the______s crossfully.
   slip, strip, grip, slip

2. The submarine______beneath the surface.
   flank, sank, blank, tank

3. The plane______into the air.
   soared, soared, board, hoard

4. Did he______his sister's book?
   take, be, e, rake, flake

5. The children enlarged the______of Spain.
   map, tap, cap, rap

6. Marion wants to______a cake.
   bake, take, late, rake

7. John is going to______a piano solo tonight.
   away, stay, play, boy
8. We saw a____of birds today.
   rock, stock, block, lock
9. Mother did not_____the children.
   near, fear, hear, dear
10. Use a____color against a dark color.
    right, bright, might, flight

The children did very well in this test.

Number taking the test - 20
Number getting 0 wrong - 18
Number getting 1 wrong - 0
Number getting 2 wrong - 2

The purpose of the test on the fourteenth day was recognition of word forms.

The directions: draw a line through the word that is incorrect in the following sentences.

roll
1. The ball rolled down the street.
   cost
2. Jim's bicycle costing fifty dollars.
   there
3. Did you see their new car?
   flour
4. The rose is a sweet smelling flower.
   to
5. John and Bill bought two fishing rods.
   too
6. Some of the children know how to swim very well.
   though no
7. Bill walked through the assembly hall.
   saw
8. I was late for the performance today.
   throne
9. She has thrown the basketball into the basket.
   lose
10. Hurry or we will loose our place on the train.

Although this test involved spelling it proved most inter-
testing from a reading standpoint also.

Number taking test - 30
Number of perfect scores - 17
Number having one wrong - 1
Number having two wrong - 1
Number having three wrong - 1

The fifteenth day was the final testing day. In a teacher
made test intended to measure ability to see beginning conson-
ants, beginning blends and vowels in context the following test
was given.

The directions were as follows:

Draw one line through each beginning consonant. Put a cir-
cle around each beginning blend and underline each ending blend.

In your art work you mix red and yellow to make orange. In
words two sounds are put together to make one. The new sound
is called a blend just as you blend colors. Hyphenated words
are treated as one word.

The paragraph was read first by one of the members of the
class.

After they marked beginning consonants, beginning blends
and ending blends the children put their pencils down. After a
rest of about one minute they were told to take their red and
blue crayons. Since they had been taught long and short vowels
they understood the terms. Draw a circle around all short
vowels with your red crayon. Draw a circle around all long
vowels with your blue crayon.
The following is a list of words with beginning consonants:
the, name, means, great, country, has, proved, to, be, this, to,
te, states, the, fars, minerals, fish, lumber, strange, climate
frigid, same, parts, but, very, pleasant, near, the, capital,
three-fourths, the days, have, some, rain, soldiers, know, how,
much, fog; there, The midnight, sun, northern, lights, glassy,
glaciers, bleak, snow-capped, mountains, huge, flowers, make,
beautiful, scenery, would be, wrong, not, to, see, sometime.

There were 66 words beginning with consonants. This number
included the hyphenated words as single words.

Number taking the test - 20
Number getting 66 words 5

```
   "   65   "   6
   "   64   "   3
   "   63   "   0
   "   62   "   2
   "   61   "   0
   "   60   "   3
   "   59   "   0
   "   58   "   0
   "   57   "   0
   "   56   "   0
   "   55   "   1
```

The beginning blends were gr, pr, sh, st, th, th, sr, dr,
sl, str, br, qu, fr, fl, th, wh, wh making a total of 17 begin-
ing blends.
The number tested - 20

Number getting 17 correct - 15
  "    "  16    "    - 2
  "    "  15    "    - 1
  "    "  14    "    - 2

This part of the test showed a definite knowledge of beginning blends.

The ending blends were:

<table>
<thead>
<tr>
<th>all</th>
<th>an</th>
<th>en</th>
<th>er</th>
<th>et</th>
</tr>
</thead>
<tbody>
<tr>
<td>call</td>
<td>pan</td>
<td>frozen</td>
<td>dinner</td>
<td>wet</td>
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<tr>
<td>small</td>
<td>Japan</td>
<td>when</td>
<td>silver</td>
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<td>copper</td>
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<td>lte</td>
<td>ough</td>
<td>round</td>
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<td>steaming</td>
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<tr>
<td>leaking</td>
<td>drizzling</td>
<td>gleaming</td>
<td>cooking</td>
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</tbody>
</table>

Many may not want to call ough, and sound blends but prefer to class them as phonograms. There was a total of 22 ending blends with the following results:

Number taking the test - 20
Number getting 22 correct - 0
Number getting 22 correct - 1

<p>| | | |</p>
<table>
<thead>
<tr>
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<tbody>
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<td>18</td>
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<tr>
<td>17</td>
<td>16</td>
<td>15</td>
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</tbody>
</table>

Next the short vowels were checked:

1. The sound of a as in hat:
   Alaska Japan
   pan and
   Canada handle
   and and

2. The sound of e as in pet:
   very wet yet
   let's when

3. The sound of i as in sit:
   it it with silver it
   it in it fish grim
   is dipper dripping fill is

4. The sound of o as in top:
   north of
   or copper
   bottom of

5. Sound of u as in cup:
up us
must up
lumber

There was a total of 43 short vowels with the following results:

Number taking the test - 20

Number getting 43 short vowels correct - 0

<table>
<thead>
<tr>
<th>Number</th>
<th>42</th>
<th>41</th>
<th>40</th>
<th>39</th>
<th>38</th>
<th>37</th>
<th>36</th>
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<th>34</th>
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<th>32</th>
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<td>0</td>
<td>3</td>
<td>0</td>
<td>2</td>
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</tbody>
</table>

This showed a weakness in vowels when found in context.

The next section of the test was to check ability in locating long vowels in context. The vowels were as follows:

1. Long a as in cake:
   name way shaped
2. Sound of e as in me:
means be gleaming
we because each
neatly keep we
steaming leaking

3. Sound of i as in kite:
like fire
quite islands

4. Sound of o as in rope:
own gold
hole frozen
though older

5. Sound of u as in tube:
huge

There was a total of 25 long vowels with the following results:

<table>
<thead>
<tr>
<th>Number taking the test -</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number getting 25 correct long vowels -</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>24</th>
<th>23</th>
<th>22</th>
<th>21</th>
<th>20</th>
<th>19</th>
<th>18</th>
<th>17</th>
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</thead>
<tbody>
<tr>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>1</td>
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<tr>
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<td>4</td>
<td></td>
<td></td>
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</tbody>
</table>
Number getting 16 correct long vowels - 0
    "    15 "    "    "   - 0
    "    14 "    "    "   - 1

The results of both vowels test showed a weakness whereas a sense of security was noted in beginning consonants and beginning blends and ending blends.

The results of the test also showed the combinations involving l and r as the second or third letter caused little difficulty except in a negative way. The blends kn, wr, and re were seldom recognized which might indicate an unfamiliarity with them visually. In few cases did these same pupils fail to sound blends correctly.

As a result of the fifteen days' testing it was noted that a firm knowledge of consonants both at the beginning and end of words, beginning and ending blends, prefixes, suffixes were established. Vowels still caused some difficulty and would continue to require attention.
The name Alaska means "Great Country. It has proved to be this to the United States in the amount of furs, minerals, fish, and lumber. Its strange climate is frigid in some parts but very pleasant in others. Near the capital three-fourths of the days have some rain, and our soldiers know how much fog there is. The midnight sun, northern lights, glassy glaciers, bleak, snow-topped mountains and huge flowers make beautiful scenery. It would be wrong not to see Alaska sometime.

The paragraph above is a sample of the story used for the test given on the fifteenth day.

****
CHAPTER SIX
SUMMARY AND CONCLUSIONS RELATED TO FINDINGS

Summary

1. Investigation

Present status of reading levels of grades 4, 5, 6.

2. Set up remedial program based on phonetic shortages.

3. Inaugurated a series of lessons in word analysis as extension of the primary grade work.

4. Retested to determine new status.

5. Reteaching program for small control group including both standardized and teacher made tests.

Conclusions

It has long been a matter of discussion in educational circles whether a phonetic background for children in the primary grades is advisable and necessary.

This survey showed concrete evidences of insecurity in independent word analysis with its resulting breakdown in phrasing and sentence sense and a general feeling of instability on the part of teachers receiving such groups of children.

It was the opinion of this writer that as a result of the work done with this group over a period of two years that there was more confidence in sight reading, more ability was seen in recognizing known parts of new words, with a more secure foundation in word analysis.

This study indicated that:

1. Phonetic training in the primary grades has been
superficial and inadequate.

2. The teaching of phonics should be extended to the upper elementary grades.

3. A program of word analysis in all six grades would improve boys' and girls' reading to such an extent that not only would they love it but also it would serve them in all activities of school and life which involved the printed page.

4. Outside activities such as a school reading laboratory or school library would stimulate their reading. (A branch of the public library was opened in the school in the spring of 1944 with a monthly circulation of 1600 books for 325 pupils)

5. There is a definite need for books in science, social studies, and reading lessons, so written as to have high interest level with easy vocabulary. Such a book will prove to be most useful and valuable to teachers on the intermediate level.

*****
CHAPTER VII

SUGGESTIONS REGARDING FURTHER INVESTIGATION

It would be most interesting to see a study made of children in the same grade levels—four, five, and six—in a system that had emphasized phonetic training to compare the results against those not having had phonetic training.

It would also be interesting to test these children either in the seventh or eighth grade to see if this work has carried into their reading a greater part of which is silent and independent study habits must be firmly established.

It would be most worthwhile to have a book of high interest level and a low vocabulary for intermediate grade level.

*****
CHAPTER EIGHT

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CHAPTER NINE

APPENDIX
### Test for Beginning and Ending Consonants

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<thead>
<tr>
<th>1. sit</th>
<th>big</th>
<th>right</th>
<th>rest</th>
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<tbody>
<tr>
<td>2. am</td>
<td>same</td>
<td>rain</td>
<td>rain</td>
</tr>
<tr>
<td>3. back</td>
<td>bake</td>
<td>day</td>
<td>lake</td>
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<tr>
<td>4. how</td>
<td>horse</td>
<td>rose</td>
<td>house</td>
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<tr>
<td>5. held</td>
<td>cold</td>
<td>rolled</td>
<td>spell</td>
</tr>
<tr>
<td>6. best</td>
<td>meet</td>
<td>seat</td>
<td>said</td>
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<tr>
<td>7. stand</td>
<td>say</td>
<td>win</td>
<td>make</td>
</tr>
<tr>
<td>8. book</td>
<td>lick</td>
<td>this</td>
<td>but</td>
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<tr>
<td>9. like</td>
<td>pan</td>
<td>lost</td>
<td>bake</td>
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<tr>
<td>10. stake</td>
<td>push</td>
<td>beat</td>
<td>mile</td>
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### Test for Beginning Blends

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<td>1.</td>
<td>which</td>
<td>wash</td>
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<td>2.</td>
<td>catch</td>
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<td>close</td>
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<td>3.</td>
<td>brown</td>
<td>black</td>
<td>blast</td>
<td>blot</td>
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<td>5.</td>
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<td>walk</td>
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<td>6.</td>
<td>try</td>
<td>badly</td>
<td>pretty</td>
<td>tie</td>
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<td>7.</td>
<td>feet</td>
<td>beet</td>
<td>seat</td>
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<td>8.</td>
<td>hard</td>
<td>half</td>
<td>gave</td>
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<td>9.</td>
<td>ear</td>
<td>deer</td>
<td>clear</td>
<td>hear</td>
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<tr>
<td>10.</td>
<td>give</td>
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<td>drive</td>
<td>sieve</td>
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### Auditory

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<td></td>
<td>2. s f r t k</td>
<td>17. forgot target forget forgotten first</td>
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<td></td>
<td>3. at ball ill all fall</td>
<td>18. would word world whirlwound</td>
</tr>
<tr>
<td></td>
<td>4. dog boy day boys play</td>
<td>19. duck daughter collar drink doctor</td>
</tr>
<tr>
<td></td>
<td>5. me name men man run</td>
<td>20. terror tremble trouble terribly terrible</td>
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<td></td>
<td>6. was ask saw see say</td>
<td>21. inform uniform reform information form</td>
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<td>7. told older elm oat old</td>
<td>22. curtain certain sustain curtains maintain</td>
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<td>8. tie sit eat it site</td>
<td>23. radiate radiator radish radiation mediator</td>
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<td>9. child can hold call cold</td>
<td>24. hovel shave shovels shrivel shovel</td>
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<td></td>
<td>10. king kind dark kin knit</td>
<td>25. gastric alkaline gasoline glycerine gasification</td>
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<td>11. barn hun burn bar done</td>
<td>26. vocation vaccination vacation vacate vocalization</td>
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<td>12. quack quick quickly queen quart</td>
<td>27. invent inverted imitation invention invitation</td>
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<td>13. hard handy hardly had harder</td>
<td>28. thermometer terminator through typewriter transformer</td>
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<td></td>
<td>14. nose nice ice race nice</td>
<td>29. photograph autograph phonograph photogravure photographer</td>
</tr>
<tr>
<td></td>
<td>15. speak speck stick spice peck</td>
<td>30. respirator reporter reported importer report</td>
</tr>
</tbody>
</table>
Visual

1. y b d g f 16. clear clean close climb lean
2. n h m r t 17. par park trap party quart dark part
3. no on imp in nip 18. sight sought rough sought taught
4. goes do go ago dog 19. quite quick quack point quiet
   quiet question quit
5. saw was as was waste 20. state elation tasted station
   stationed started skating
6. bot tab tap top pat 21. dinner differ difference deferent
   different deference
7. girl dog boy dig day 22. nomination notion mention mountain
   mountains motion mentioned
8. won no now mow was 23. quarter portion bracelet particle
   practice practical poultice
9. end tend on ended end 24. other the weather wealth whether
   whither wealthier
10. lack clock black block 25. obscure advice above advise
    dark advances dance advance
11. frost first fast firm 26. sure obscure scare secure second
    trust server cure
12. same came name some 27. portable possible probably problem
    somebody probable practical desirable
13. elat last lost lot 28. contact contain contract contracts
    blast contacts capital convict
14. jump jest just jot must 29. immediate meditates mediate
    meditate material meditative
15. drip prop drops rap 30. regular regulate regulation
    drop registration negotiation radiation
    recognition recognition
Newton Public Schools

Listen carefully. Put a circle around the word which begins with the same letter as the word I say.

1. feet  beet  seat  seal
2. doll  all  ball  call
3. hard  half  gave  have
4. hold  told  sold  cold
5. ear  deer  clear  hear
6. give  live  drive  sieve

Listen carefully. Put a circle around the word which begins with the same two letters as the word I say.

1. then  time  two  toe
2. hope  stop  top  hop
3. her  where  here  there
4. she  school  same  sleep
5. black  blue  bear  brown
6. care  chair  catch  bear

Listen carefully. Put a circle around the word which begins with the same three letters as the word I say.

1. stand  street  beat  feet
2. spring  ring  sing  spell
3. me  tree  those  three
4. ink  sink  link  shrink
Listen carefully. Circle the word which ends with the same two letters as the word I say.

1. watch   was   wait   wash
2. catch   cat   close  cover
3. brown   black  blast blot
4. rain    chain  drink  ring
5. wall    walk   wait   all
6. try     badly  pretty tie

Listen carefully. Circle the word which has the same family of letters as the word I say.

1. sit   big    right   best
2. am    same   rain   run
3. back  bake   day    lake
4. how   horse  rose   house
5. held  cold   rolled spell
6. best  meet   seat   said
1. whom
2. sub
3. light
4. ink
5. tooth
6. over
7. head
8. rein
9. workman
10. can
11. pin
12. fire
13. stair
14. air
15. table
16. eye
17. every
18. over
19. ear
20. bow

house
light
shoes
well
deer
ever
not
marine
paste
place
ship
case

head

where

cloth

knot

phones

glasses

plane
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<td>follow and wing and low</td>
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<td>blot, lot</td>
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1. The pilot guided the____ successfully.
   ship, strip, grip, slip

2. The submarine____ beneath the surface.
   flank, sink, blank, tank

3. The plane____ into the air.
   soared, soared, board, hoard

4. Did he____ his sister's book?
   take, bake, rake, flake

5. The children enlarged the____ of Spain.
   map, tap, cap, rap

6. Miriam wants to____ a cake.
   bake, take, lake, rake

7. John is going to____ a piano solo tonight.
   away, stay, play, bay

8. We saw a____ of birds today.
   rock, stock, block, flock

9. Mother did not____ the children.
   near, fear, hear, dear

10. Use a____ color against a dark color.
    right, bright, might, flight
1. the ball rolled down the street.

2. Jim's bicycle costing fifty dollars.

3. Did you see their new car?

4. The rose is a sweet smelling flower.

5. John and Bill bought two fishing rods. too

6. Some of the children know how to swim very well. though

7. Bill walked through the assembly hall.

8. I was late for the performance today.

9. She has thrown the basketball into the basket

10. Hurry or we will loose our place on the train.
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1. the sound of \( \_ \) as in hat:
   - Alaska
   - Japan
   - pan
   - and
   - Canada
   - handle
   - and

2. the sound of \( \_ \) as pet:
   - very
   - wet
   - yet
   - let's
   - when

3. the sound of \( \_ \) as in sit:
   - it
   - it
   - with
   - silver
   - it
   - in
   - it
   - fish
   - grim
   - is
   - dinner
   - dripping
   - fill
   - is

4. the sound of \( \_ \) as in top:
   - north
   - of
   - or
   - copper
   - bottom
   - of

5. Sound of \( \_ \) as in cup:
   - up
   - us
   - must
   - up
   - lumber
1. long \( \text{a} \) as in cake:
   name, way, shaped

2. sound of \( \text{e} \) as in me:
   means be gleaming
   we because each
   neatly keep we
   steaming leaking

3. sound of \( \text{i} \) as in kite:
   like fine
   quite islands

4. sound of \( \text{o} \) as in rope:
   own gold
   hole frozen
   though older

5. sound of \( \text{u} \) as in tube:
   huge
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