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A READING IMPROVEMENT PROGRAM IN THE UPPER GRADES  
OF A RURAL SCHOOL

by

EVELYN JOHNSON DANIEL

B. A. Montana State University, 1947


Presented in partial fulfillment  
of the requirements for the degree of


Master of Education

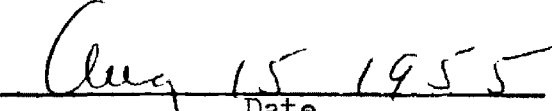
MONTANA STATE UNIVERSITY

1955

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## CHAPTER I

### INTRODUCTION

This paper describes a program to improve the reading of students in the fifth, sixth, seventh, and eighth grades of a Montana rural school. The evaluation of the program is based upon periodically kept informal records and upon the results of a formal standardized test given before and after the program.

#### Statement of the Problem

In the upper grades of the Potomac Grade School, marked differences in academic ability and achievement were apparent, a situation common to many schools today. At the time this study was being carried on, there was no service at the county level which provided supplementary material for taking care of the individual differences that existed in the upper grades. Any remedial or improvement work had to be done, therefore, by the classroom teacher, in addition to the regular school work.

The purpose of this study was to improve the reading ability of the students by bringing them as near to their reading capacity as possible and to enrich the reading experiences of any students who were already reading up to their capacity.

#### Importance of the Problem

With the present day policy of promoting children based to a great degree upon social, physical, and personality factors,



parents' wishes for factors other than the factor of academic achievement, one expects to find great differences in scholastic ability and scholastic achievement in the upper grades. Therefore, an upper grade teacher today needs to have an understanding of how to teach reading skills that are taught before these grades if she is going to provide adequate reading services to some of the children in her grade. Kottmeyer says:

We know, too that the children who do not learn to read reasonably well in the primary grades are less likely to learn when the diet of carefully controlled and gradually expanded vocabulary of basal readers is discontinued and the children are required to deal with the uncontrolled vocabulary of content area textbooks.<sup>1</sup>

After a child leaves the primary grades he is expected to have adequate basic reading skills to handle the content reading material. Since a large number of pupils in the upper grades today do not have adequate skills for such, something has to be done to alleviate this problem. Kottmeyer emphatically states that "reading instruction and reading materials must be adjusted to individual differences without regard for grade level placement of children."<sup>2</sup>

Russell and Karp back this up when they write:

Perhaps the most successful attempts to meet the needs of children varying widely in their reading abilities

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<sup>1</sup>William Kottmeyer, Handbook for Remedial Reading ( St. Louis, Missouri: Webster Publishing Company, 1947), p. 2.

<sup>2</sup>Ibid., p. 3.

is the use of reading materials of different sorts and on various levels of difficulty.<sup>3</sup>

### Limitations

This program is concerned with reading improvement in the upper grade classroom of the Potomac Grade School, School District No. 11, Missoula County, Montana. At the outset of the program, twelve students were enrolled in the four upper grades. Two of them moved away before the program was completed and so are not included in this report. This left only ten students as subjects for this study.

Another limitation, in addition to that of the size of the group, was the length of time of the study, approximately four months. The first part of the year was spent in going through an accelerated regular reading program in which the Scott-Foresman texts were used.<sup>4</sup> During this time the teacher, mainly through personal observation made during daily reading class sessions, became better acquainted with the individual's reading strengths and weaknesses. Then, during the latter part of the year, the reading time in the day's schedule was devoted to intensive work in reading improvement.

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<sup>3</sup>David H. Russell and Etta E. Karp, Reading Aids Through the Grades (New York: Bureau of Publications, Teachers College, Columbia University, 1951), p. 2.

<sup>4</sup>William S. Gray, Marion Monroe, and May Hill Arbuthnot, Basic Readers: Curriculum Foundation Series (Chicago: Scott-Foresman and Company, 1947).

Since only one standardized reading test, the Stanford Achievement Test, was given to the students before and after the program, the reading improvement of some, particularly of those who scored high on the first test, may not have been measured as completely as would have been possible with the use of more than one test.

Definition of Terms Used

Reading achievement. When reading achievement is referred to in this paper, it means the grade level at which the student is actually reading at the time of testing.

Reading capacity. This refers to the level at which the child, judging by his mental age, is able to read.

Auditory discrimination. This means the ability of the child to hear and distinguish between different sounds.

## CHAPTER II

### RELATED LITERATURE AND BACKGROUND INFORMATION

#### I. RELATED LITERATURE

Although no material was found regarding a reading improvement program in a rural multi-graded schoolroom, much material about the importance of reading and about both general and special reading programs is available.

Gates says about the importance of reading:

Reading is both the most important and the most troublesome subject in the elementary school curriculum. It is most important since it is a tool the mastery of which is essential to the learning of nearly every other school subject. It is most troublesome since pupils fail in reading far more frequently than in any other elementary skill.

. . . . .  
. . . parents and school executives alike expect the teacher to develop in the pupils with promptness and efficiency the reading skills desirable at each stage of advancement.<sup>1</sup>

Since reading is so important, then, the question may well be asked, "What constitutes a good reading program?" Durrell lists and discusses the following characteristics of an effective reading program:

1. The teacher is familiar with the individual differences of her pupils.

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<sup>1</sup>Arthur I. Gates, The Improvement of Reading (New York: The Macmillan Company, 1947), pp. 1, 2.

2. The teacher has specific objectives for each child or each group of children in her class.
3. There is a definite plan for observation of pupils' growth in voluntary reading habits.
4. The teacher knows the books that are available to the children.
5. There is adequate provision for differences in the reading abilities of the pupils.
6. The teacher has definite plans for motivation of reading.
7. There is full attention to growth in vocabulary.
8. Oral reading instruction is made effective by maintaining interest.
9. The instruction in silent reading is characterized by insight into many problems and needs.
10. There is training in oral and written recall.
11. There is definite instruction for improvement of study skills.<sup>2</sup>

Kirk, in writing about slow learning children, states his idea of a good reading program for such children:

A reading program should provide for prolonging the reading stage at each period of development in harmony with the slow rate of learning, presenting the materials in a variety of settings to avoid rigidity and stereotyped responses, and developing the reading process in a systematic fashion.<sup>3</sup>

He goes on to say that there should be the following four levels of instruction in a reading program: "(1) a reading readiness program to prepare children for success in reading; (2) a prolonged beginning reading period which will give them a good start in reading; (3) a program which develops methods of word recognition and efficiency in independent reading; and

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<sup>2</sup>Donald D. Durrell, Improvement of Basic Reading Abilities (New York: World Book Company, 1940), pp. 4-10.

<sup>3</sup>Samuel A. Kirk and G. Orville Johnson, Educating the Retarded Child (Boston: Houghton Mifflin Company, 1951), p. 257.

(4) definite guidance in the comprehension of more complex reading materials."<sup>4</sup>

Russell and Karp list the following characteristics of good remedial programs as suggested by Gates in The Improvement of Reading:

1. Remedial instruction should not be substituted for highly cherished activities.
2. Remedial instruction should be managed so as not to classify the pupil in an embarrassing way.
3. Remedial reading periods should occur once a day (or oftener) as such, and should also occur in connection with other subjects.
4. The teacher should have sufficient time to plan and supervise the remedial work.
5. Remedial work may be either individual or group.
6. Remedial work should be begun when the pupil is rested and cooperative.
7. Successes should be emphasized when they occur.
8. Improvement should be measured and the record shown.
9. Materials used should be highly interesting to the pupil and, at first, relatively easy; as success and improvement result, the materials are gradually made more difficult.
10. The pupil's particular errors and successes should be detected.
11. The teacher's attitude should be optimistic and encouraging.
12. Practice should be so distributed as to avoid fatigue and boredom.
13. A variety of exercises and activities should be provided.
14. A plan should be dropped when it fails to produce results after a fair trial.
15. Individual supervision should be continued until the pupil has his improved techniques well habituated.<sup>5</sup>

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<sup>4</sup>Ibid. pp. 258-259.

<sup>5</sup>David H. Russell and Etta E. Karp, Reading Aids Through the Grades (New York: Bureau of Publications, Teachers College, Columbia University, 1951), pp. 8-9.

After a discussion as to the causes of reading difficulties in the middle grades, McKee makes five suggestions for the improvement of reading in these grades. The first is that the fundamentals of reading should be taught at each grade level during some definite period each day, although the length of time spent might vary from day to day.

The second suggestion is that the time should be used in at least two different ways. On some days the time should be used for reading different types of reading selections and using the ideas gained through that reading, while on other days definite lessons in how to read should be skillfully taught. On the latter days the child would be taught how to successfully cope with his difficulties.

The third suggestion is that the basal and supplementary readers should include both varied and interesting selections and definite lessons in how to read. The fourth suggestion is that the content subjects should be taught in such a way as to encourage the child to make use of the reading abilities he acquires in his reading period. Also, the textbooks for the content subjects should not require more skills than the pupils have learned at that grade level.

The last suggestion is that each child must have individual attention and be supplied with books which he can read. His special needs must be located and provided for immediately.<sup>6</sup>

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<sup>6</sup> Paul McKee, The Teaching of Reading in the Elementary School (Boston: Houghton Mifflin Company, 1948), pp. 352-353.

Gates suggests six points to bear in mind in choosing and organizing materials for remedial work in reading:

1. The material should be highly interesting to the pupil.
2. Materials of outstanding popularity among children should be chosen.
3. The materials should be of proper difficulty.
4. The materials should be of various types.
5. An abundance of easy reading should be provided as a substitute for review.
6. The teacher should help the pupil develop the need for reading.<sup>7</sup>

## II. BACKGROUND INFORMATION

Several professional papers have been written at Montana State University which describe special programs for particular schools.

Martha Jones outlined in detail a program for diagnosing and treating reading difficulties in special classes in a large school system and gave the case history of several students so diagnosed and treated.<sup>8</sup>

By the use of case studies, Donald Harrington compared the benefits of an individualized reading program with those of a general reading program. He described the methods used to find the child's reading level and the steps taken to interest

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<sup>7</sup>Gates, op. cit., pp. 124-128.

<sup>8</sup>Martha Jean Jones, "A Program for the Diagnosis and Remedial Treatment of Reading Difficulties" (unpublished professional paper, Montana State University, Missoula, Montana, 1950).



the child in reading and in improving. He found that the pupils tended to have a better attitude under the individualized reading program, developed a more genuine interest in reading, and gained new reading skills because of more attention to meaning.<sup>9</sup>

Willard E. Ellis made a study of remedial classes set up for children in grades four through eight whose reading ability, as determined by tests, did not come up to their grade placement. He described how the children were diagnosed, the help they received, and the progress they made. He concluded that children made rapid progress when they were given individual instruction and that the benefit carried over into the children's personal development.<sup>10</sup>

At the time this study was being conducted, other work of a similar nature was being carried on in the state.

At Frenchtown, Mr. Delbert Lowman, from September, 1954, to the present, was reorganizing the remedial reading program for the elementary grades. In this school, the children who needed reading help were taken in daily half-hour class periods. Two days a week were spent on phonics drill, two days on comprehension skills, and one day in library reading.<sup>11</sup>

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<sup>9</sup>Donald Harrington, "An Analysis of Three Case Studies of Individual Development in Reading" (unpublished professional paper, Montana State University, Missoula, Montana, 1954), p. 41.

<sup>10</sup>Willard E. Ellis, "An Evaluation of an Experimental Remedial Reading Program in the Gettsburg, South Dakota, Public School" (unpublished professional paper, Montana State University, Missoula, Montana, 1953), p. 30.

<sup>11</sup>Mr. Delbert Lowman, personal interview, July 6, 1955.

In Anaconda, Miss Ann Malloy did remedial work with the children in her fourth grade class who were reading below their reading capacity. The remedial work was done in the classroom in addition to the regular teaching duties.<sup>12</sup>

In Billings, Mr. Lundgren, the principal of a grade school, set up a remedial reading program for his school. The teachers of his fourth, fifth, and sixth grades gave individual help to the students who needed it, over and above their regular class work.<sup>13</sup>

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<sup>12</sup>Ann Malloy, "Setting Up a Diagnostic and Remedial Reading Program in a Fourth Grade Classroom, Anaconda, Montana" (unpublished professional paper, Montana State University, Missoula, Montana, 1955).

<sup>13</sup>Charles K. Lundgren, "A Plan for Improving Reading in Grades Four, Five, and Six at Lockwood School, District 26, Yellowstone County" (unpublished professional paper, Montana State University, Missoula, Montana, 1955).

## CHAPTER III

### SOURCES OF DATA AND MATERIALS USED

#### I. DIAGNOSTIC

##### The Henmon-Nelson Tests of Mental Ability

The Henmon-Nelson Tests of Mental Ability is a group of intelligence tests designed to be given in the elementary grades three to eight. The tests are for the purpose of measuring the mental ability of elementary school pupils and require thirty minutes to administer. Three forms of the test are available. Each form of the test consists of ninety items arranged in order of increasing difficulty. Many types of ability are measured by the wide variety of the types of questions used. The questions concern vocabulary, general knowledge, and spelling, as well as the ability to see relationships, to rearrange words to make sense, and to interpret proverbs.<sup>1</sup>

##### Stanford Achievement Test, Advanced Complete Battery

The Stanford Achievement Test is available in five forms and tests paragraph meaning, word meaning, spelling, language, arithmetic reasoning, arithmetic computation, social studies,

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<sup>1</sup>V. A. C. Henmon and M. J. Nelson, The Henmon-Nelson Tests of Mental Ability (Boston: The Houghton Mifflin Company, 1946).

science, and study skills. Its purpose is to provide a way to measure improvement from grade to grade.<sup>2</sup> Only the paragraph meaning and word meaning sections will be described in more detail.

The paragraph meaning test is made up of a series of paragraphs ranging from simple to very difficult. Two or more words have been omitted from each paragraph and the pupil's task is to show that he understands the paragraph by choosing the best word from four for each omission. The most difficult paragraphs require the pupil to draw inferences from several related sentences, thus testing his comprehension of connected discourse in addition to his word knowledge. This test emphasizes the idea of "reading as reasoning."<sup>3</sup>

The word meaning test is multiple choice, requiring the pupil to select the best answer from four for a given stimulus word. It consists of items measuring knowledge of synonyms, of simple definitions, of ready associations, and of understanding relationships of words.<sup>4</sup>

#### The "Stick-Wick" Test

The "Stick Test" is an informal diagnostic test designed to reveal the pupil's lack of auditory discrimination and

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<sup>2</sup>Truman L. Kelley and others, Stanford Achievement Test; Directions for Administering Intermediate and Advanced Complete Batteries (New York: World Book Company, 1953).

<sup>3</sup>Ibid. p. 3

<sup>4</sup>Ibid.

inadequacy in spelling. It contains the thirty-six most frequently used sound elements as found in the Kindergarten Union Word List. The "Stick Test" is the initial test and the "Wick Test" is given after follow-up remedial measures have been used. Each test is made up of sixteen one syllable words containing the thirty-six different sounds. The words are dictated to the pupil with the instructions to write the sounds he hears.<sup>5</sup> A sample of the "Stick-Wick" Test and the complete instructions for its use are in Appendix A.

#### Reading Troubleshooters Checklist

The Reading Troubleshooters Checklist is a free pamphlet obtained from the Webster Publishing Company, St. Louis 3, Missouri. It illustrates simple informal tests which can be given to the child who is having difficulty learning to read. The Checklist also explains what the results of the tests mean and gives a program that can be carried on in the classroom if help is needed. Fourteen short tests give the answers to these questions:

1. Does he know the names of the letters?
2. Does he try to use context clues?
3. Does he know consonant sounds?
4. Can he substitute beginning consonant sounds to unlock

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<sup>5</sup>"Diagnosing Phonics Ability," Bulletin No. 1 (Special Education Department, Missoula Elementary School System, Missoula, Montana).

words like his sight vocabulary words except for the first consonant?

5. Can he hear the short vowel sounds in words?
6. Can he tell when vowel sounds are long in words?
7. Does he know the common vowel diagraphs?
8. Can he blend letters to form words?
9. Does he see the common prefixes as units?
10. Does he see the common suffixes as units?
11. Does he see the compound words as units?
12. Can he divide long words into parts?
13. Can he understand simple expositional reading units?
14. At what level can the pupil read independently with ease and comfort?

A copy of the fourteen tests can be found in Appendix B.

### The 100-Word Test

The 100-Word Test is a quick, easy-to-give informal oral reading test used to determine a student's oral reading ability. The student is asked to read orally a selection from a book. If he mispronounces no more than two words per hundred, the book is right for recreational reading for him. If he misses from two to five words per hundred, the book is suitable for instruction; it is challenging but not frustrating. If he misses more than five words per hundred, the book is on the frustration level and should not be attempted by the child. By using a graded

series of books in which the vocabulary is carefully controlled, the teacher can use the 100-Word Test to find the correct instructional level for each child in the class in a short time.<sup>6</sup>

## II. REMEDIAL

### Spelling Magic

Spelling Magic is a supplementary workbook for the upper grades, Book One for grades four, five, and six, and Book Two for grades seven and above. These books provide phonics and spelling practice in (1) consonant sounds, (2) substituting beginning consonants, (3) short vowel sounds, (4) long vowel sounds, (5) vowel diagraphs, (6) sound blending, (7) prefixes, (8) suffixes, (9) compounds, and (10) syllabication. Thus they offer a complete coverage of phonics designed to appeal to upper grade students. They are good review for those who had a foundation in phonics and good teaching for those who reached the upper grades without having such a background.<sup>7</sup>

### Vowel Lotto; Consonant Lotto; Group Sounding Game

These are games developed by E. W. Dolch to teach reading and give motivation to learning. They provide the repetition

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<sup>6</sup>W. J. Osburn, "Remedial News Letter" (Seattle: University of Washington, November, 1950).

<sup>7</sup>William Kottmeyer and May Lambader, Spelling Magic (St. Louis, Missouri: Webster Publishing Company).

necessary to learn, and they are learning games which can be successfully played by the child who does not already know but who needs to learn.

Vowel Lotto gives practice for the third grade and up in hearing vowel sounds that come in the middle of words. It consists of ten lotto cards which each contain six pictures of familiar objects and sixty picture cover cards which have different pictures, the words for which have the same vowel sounds as the lotto card pictures. The players have to think to match the vowel sounds, since only the lotto card picture has a letter on it to match the sound. This game teaches short vowels, long vowels, vowel diagraphs, and diphthongs.

Consonant Lotto is similar to Vowel Lotto, but the matching is by the beginning sound of the word the picture represents.

The Group Sounding Game, for the third grade and up, provides a complete course in phonics, and is played like Bingo. There are fifteen sets of cards with six cards to a set and they teach how to attack words, going progressively from recognition of initial consonants to syllabication of three syllable words.<sup>8</sup>

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<sup>8</sup>Dolch Materials for Better Teaching of Reading, School and Teacher Catalog (Champaign, Illinois: The Garrard Press, 1955), pp. 4, 16, 17.



### Word Analysis Charts

The Word Analysis Charts are a group of five large charts to hang on the wall for easy reference. One page illustrates sounds the consonants make; another explains letters that work together; another is about one syllable words; one tells how prefixes help unlock words; and another is entitled "Reading Big Words."<sup>9</sup>

### Dynamic Vocabulary Exercises

In these vocabulary exercises the student not only looks up words he does not know the meanings of, but he must also think about the words in relation to other words. After looking up the unknown words in each group of five words, he has to determine the relationship of the four words, and cross out the one that does not belong.<sup>10</sup>

Bulletin No. 4 explains the exercises:

The unit of study is a group of words, not the usual single word. . . The dynamic vocabulary exercises teach the following relations between words: subject-verb, verb-object, adjective-noun, synonyms-antonyms, genus-species, part-whole, implicate and other functional relationships. Groups of words are presented to the pupil in which there is one word that does not belong in the relationship featured in the group. The pupil is asked to identify the relationship and the misplaced word, and tell why the word does not belong

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<sup>9</sup>Kottmeyer, Berkel, Rahn, and O'Hare, Word Analysis Charts (St. Louis 3, Missouri: Webster Publishing Company).

<sup>10</sup>W. J. Osburn, Dynamic Vocabulary Exercises (Seattle: University of Washington Bookstore).

in the group. Such exercises have proved to be immensely interesting to children. They offer a strong motivation for the learning of new words.<sup>11</sup>

### Practice Readers

The Practice Readers, by Stone, Grover, and Bayle, are designed for expanding growth in comprehension. They form a series of four carefully graded books for use above the third grade. The purpose of the books is the development of the seven basic skills essential to study reading.<sup>12</sup> These skills are:

1. Giving direct details. (Answer stated definitely in the reading matter.)
2. Giving implied details. (Answer inferred in reading matter but not directly stated.)
3. Giving meaning of the whole selection. (Answer involves meaning or impression of the whole selection rather than merely a part or detail.)
4. Determining whether a given idea is stated affirmatively, negatively, or not at all. Answer must be based on statements in the reading material and must not be supplemented by pupil's own knowledge.)
5. Giving references by selecting the word or words referred to by a given word, such as they, some, who, smallest, those, this, each, one, it, which.
6. Selecting statements not true according to the reading matter. (Again answer must be determined only by information contained in the reading.)

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<sup>11</sup>"Dynamic Vocabulary Development," Bulletin No. 4 (Department of Special Education, School District No. 1, Missoula, Montana).

<sup>12</sup>Stone, Grover, and Bayle, Practice Readers, Books I-IV (St. Louis, Missouri: Webster Publishing Company).

7. Selecting words from the reading matter similar in meaning to those listed in the questions. (Answers involve understanding the meanings of certain of the more difficult words appearing in the page of reading matter.)<sup>13</sup>

The books are all made up of practice exercises of a page of reading material followed by a page of questions. The exercises are of approximately equal difficulty. The books are divided into units of nine exercises each and before each unit are illustrations which picture for the reader the new concepts which are to be presented in the following reading matter, and thus provide the necessary readiness. Each book illustrates progress charts which the students may use to keep records of their growth in reading.

The Everyreader Series and the Junior Everyreaders

These are books, published by the Webster Publishing Company, St. Louis, Missouri, which have high level interest and low level reading difficulty. The Junior Everyreaders are made up of five books with stories of interest to upper graders but with an upper third grade reading level. The Everyreader Series has eleven books such as The Gold Bug, Ben Hur, and Ivanhoe, with a reading difficulty of upper fourth grade level. These books provide easy, frustration-free reading to readers with mature interest but low reading level.

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<sup>13</sup>C. R. Stone, Improving Study-Reading Skill; A Manual for the Practice Readers (St. Louis, Missouri: Webster Publishing Company, 1942), pp. 8-9.

## CHAPTER IV

### PROCEDURE AND PRESENTATION OF DATA

#### I. DIAGNOSTIC TESTING PROGRAM

The first step in the program was to give all the students in grades five, six, seven, and eight a group I. Q. test, The Henmon-Nelson Test of Mental Abilities. Table I, p. 22, column 3, shows that the range of I. Q. is from 67 to 119, with four of the students below the average range of 90--110, four above the average range, and two in the average range in intelligence. The mental ages range from 7-8 to 16-0. It may be noted in Table I, column 5, that four cases, Numbers 3, 4, 9, and 10, do not have the average mental age representative of their grade placement level. For the purposes of this study, the mental age and corresponding grade equivalent and the achievement grade equivalent were used as a basis for evaluating improvement.

The next step was the administering of the Paragraph Meaning and Word Meaning Tests from the Stanford Achievement Test. Every spring, standardized tests which contain a reading test are given to schools in the county. Although these results were available last spring, 1954, they were not used in this study because they represented a period of one scholastic year, rather than only the period of the improvement program. (Note Table I for the results of the Stanford Achievement Test.)

TABLE I  
INTELLIGENCE AND ACHIEVEMENT TEST RESULTS

Case No.	Grade Placement	Intelligence Test			Equivalent Grade Age for M.A.*	Achievement Test			Expected Change
		I. Q.	C. A.	M. A.		1st. Grade	2nd. Grade	Change	
Col. 1	2	3	4	5	6	7	8	9	10
1	8.5	113	13-7	15-3	10.2	9.9	10.4	.5	.38
2	8.5	119	13-7	16-0	10.9	9.5	10.5	1.0	.4
3	8.5	76	15-0	11-5	6.45	7.25	8.45	1.2	.25
4	8.5	78	15-0	11-8	6.7	6.1	6.35	.25	.26
5	7.5	119	11-3	13-4	8.3	9.2	8.5	-.7	.4
6	6.5	97	12-0	11-8	6.7	6.55	7.2	.65	.32
7	6.5	105	11-10	12-4	7.4	6.0	5.4	-.6	.35
8	5.5	117	10-3	12-0	7.0	4.8	5.6	.8	.39
9	5.5	67	11-6	7-8	2.6	3.45	3.2	-.25	.22
10	5.5	73	12-10	9-3	4.2	4.3	4.4	.1	.24

\* Determined from Table 4, "Modal Age Corresponding to Grade (Age-Grade Couplets)," Stanford Achievement Test; Directions for Administering Intermediate and Advanced Complete Batteries, p. 16.

The mental ability test and the Stanford Achievement Tests were given at approximately the same time. Therefore, the grade age values of the achievement test, column 7, were compared with the capacity or mental age grade equivalents in column 6. Using the values of the latter as an indication of present grade level potential or capacity, it may be noted that four pupils, Case Numbers 2, 4, 7, and 8, performed below capacity; three pupils, Case Numbers 1, 6, and 10, were performing approximately at capacity; and three pupils, Case Numbers 3, 5, and 9, apparently performed at above capacity--a theoretically impossible situation. Unreliability of test scores and the imperfectness of the mental age, taken from the intelligence test, used as an indication of reading potential, are probable reasons why the achievement ages of Case Numbers 3, 5, and 9 were greater in value than the corresponding grade equivalents of the mental ages.

The "Stick Test" was then administered to the group, and eight out of the ten made perfect scores. This may have been at least partly due to the fact that the words in the test were words which they already knew how to spell and which therefore offered no challenge to the students. This thought is supported by the fact that none of the students made perfect scores on a simple auditory discrimination test to see if they could accurately hear the vowel sounds in the initial, medial, and final syllables of a word.

Each student was then individually given the "100-Word

Oral Reading Test" and the series of informal diagnostic tests taken from the "Reading Troubleshooters Checklist." Since many of the test words in the "Reading Troubleshooters Checklist" were nonsense words, and therefore unknown, most of these simple tests were of value for even the eighth graders and showed that all of the students needed help in one or more of the areas being tested. Figure 1, page 25, shows the Troubleshooters Analysis Chart. It will be noted that all of the students needed corrective teaching in context clues, vowel diagraphs, common suffixes, and syllabication. Eight students needed corrective teaching in long vowel sounds, blending, and common prefixes. Seven needed help in compound words and paragraph context, six in substituting blending sounds, four in easy recreational reading, three in short vowel sounds, and one in consonant sounds.

## II. REMEDIAL AND FINAL TESTING PROGRAM

The teacher carefully explained to the students the purpose of the reading improvement program, and after a discussion of the value of reading and ways of improving reading, the cooperation of the majority of the students was secured. Four of the students were enthusiastic about the program throughout its duration, but the interest of the others varied and lagged at times, despite the attempts of the teacher to maintain interest by using a variety of materials.

PUPIL'S NAME	TROUBLESHOOTER'S ANALYSIS CHART													
	Names of Letters	Context Clues	Consonant Sounds	Substitute Beginning Sounds	Short Vowel Sounds	Long Vowel Sounds	Vowel Digraphs	Blending	Common Prefixes	Common Suffixes	Compound Words	Syllabication	Paragraph Content	Easy Recreational Reading
1		✓					✓			✓				
2		✓					✓			✓			✓	
3		✓			✓		✓			✓			✓	
4		✓			✓		✓			✓			✓	
5		✓		✓	✓		✓			✓			✓	
6		✓		✓	✓		✓			✓			✓	
7		✓		✓	✓		✓			✓			✓	
8		✓		✓	✓		✓			✓			✓	
9		✓	✓	✓	✓		✓			✓			✓	
10		✓		✓	✓		✓			✓			✓	

✓ = A Need for Corrective Teaching

FIGURE I  
TROUBLESHOOTER'S ANALYSIS CHART



### Remedial Program

The testing program revealed that help was needed in three specific areas: (1) basic reading skills, or phonics, (2) vocabulary, and (3) comprehension (with speed as an incidental factor). The results of the informal testing program indicated the students' lack of basic reading skills, and the results of the Stanford Achievement Test indicated the need for work in vocabulary and comprehension.

Phonics. To meet the need for developing the skills of independent word attack, the students were each given a copy of Spelling Magic, the Webster "Dr. Spello" workbooks. Book One was used by the fifth and sixth grades and Book Two by the seventh and eighth grades. "Dr. Spello," the spelling professor in the workbook, was quite a favorite with the students, who would urge the teacher to let them work with "Dr. Spello" and protest when the books had to be put away. The unique presentation and colorful illustrations made the students very receptive to this type of teaching. Two of the older boys were at first scornful of "this baby stuff," but after they made several mistakes in the first few exercises, they changed their attitudes and agreed that they, too, needed to review some of the things in the workbooks.

Spelling Magic is, as the name indicates, a spelling book, but it is also an excellent teacher of basic word attack skills. Since in this experiment the emphasis was on reading

improvement, spelling was not stressed, but the teacher did note an improvement in spelling which may have been partly due to "Dr. Spello."

The students were at first kept together in the Spelling Magic workbooks and then later were allowed to work at their own speed, the teacher giving individual help where help was needed.

The games of Vowel Lotto, Consonant Lotto, and Group Sounding Game were played by the students to help them with phonics, at first during class time and then afterwards during recesses and free periods when the other work was finished.

To eliminate the embarrassment the pupil sometimes feels when he has to ask the teacher for help when he has forgotten some basic reading skill, the Word Analysis Charts were kept hanging on the wall for ready reference. The charts are large enough to be seen by the students from their seats and the ones having difficulty could refer to the particular help needed without bothering anyone else, or for that matter, without anyone else even being aware when such help was needed and being acquired.

Vocabulary. The exercises for grades four through nine of the Dynamic Vocabulary Exercises were used for vocabulary improvement. Each student was given a copy of the grade level booklet near which he scored on the standardized test. The students then worked in groups of two or three (this was their desire) and discussed answers with the teacher when they had

completed a set. Because of the heterogeneous class arrangement, this discussion was accomplished in appropriate groups rather than by the class performing as a whole.

Comprehension and speed. The Practice Readers were chosen as the technique for improving comprehension. Book I was given to the fifth graders, Book II to the sixth graders, Book III to the two eighth graders reading below grade level, and Book IV to the seventh grader and the other two eighth graders. In every case the book chosen proved to be challenging but not frustrating.

Each day the students read one story from the Practice Readers, answered the questions following it (rereading when necessary to find the answer), and recorded the time it took for the entire process. They determined their time in the following manner. As each one finished, he looked at the large clock on the wall with a sweep-second hand to determine the number of seconds and then at the chalkboard where the teacher was recording the number of minutes that had passed. Thus, if the second hand had just passed 8 on the clock and the number on the board was 3, the time spent on the exercise was three minutes and forty seconds.

The instructions in the manual were to call time when ninety per cent of the class had finished, but in this program all were allowed to finish because the class was small and because the same slow child was almost always the last to finish. This person needed to be encouraged by success

rather than discouraged by not having time to finish. As a result, he made progress in increasing his speed. When all of the students were finished, the answers were discussed orally, one group at a time. Each day the teacher discussed the answers with a different group first so that the groups took turns being first, second, third, and last. While one group was discussing the lesson, the other groups were studying spelling, so that a minimum of time was wasted.

Each student made his own charts on which to record his progress. In addition to the charts suggested in the Practice Readers, each one recorded his daily progress by recording the number right and the speed. Figures 2 through 7 show the charts of two students, Case Numbers 3 and 5. The aim was to get the answers all correct and then increase the speed. They were cautioned that speed was secondary to comprehension and that they should not read so rapidly that they could get only a few test answers correct. The graphs made them aware of speed, but not at the sacrifice of accuracy.

The Everyreader Series (upper fourth grade level) and the Junior Everyreader (upper third grade level), a total of sixteen books, were purchased for the purpose of trying to get some of the students to do more outside reading. The books were kept near the teacher's desk and she encouraged the slower and poorer readers to try them. They proved to be very popular, judging from the number of books checked out and reported on.

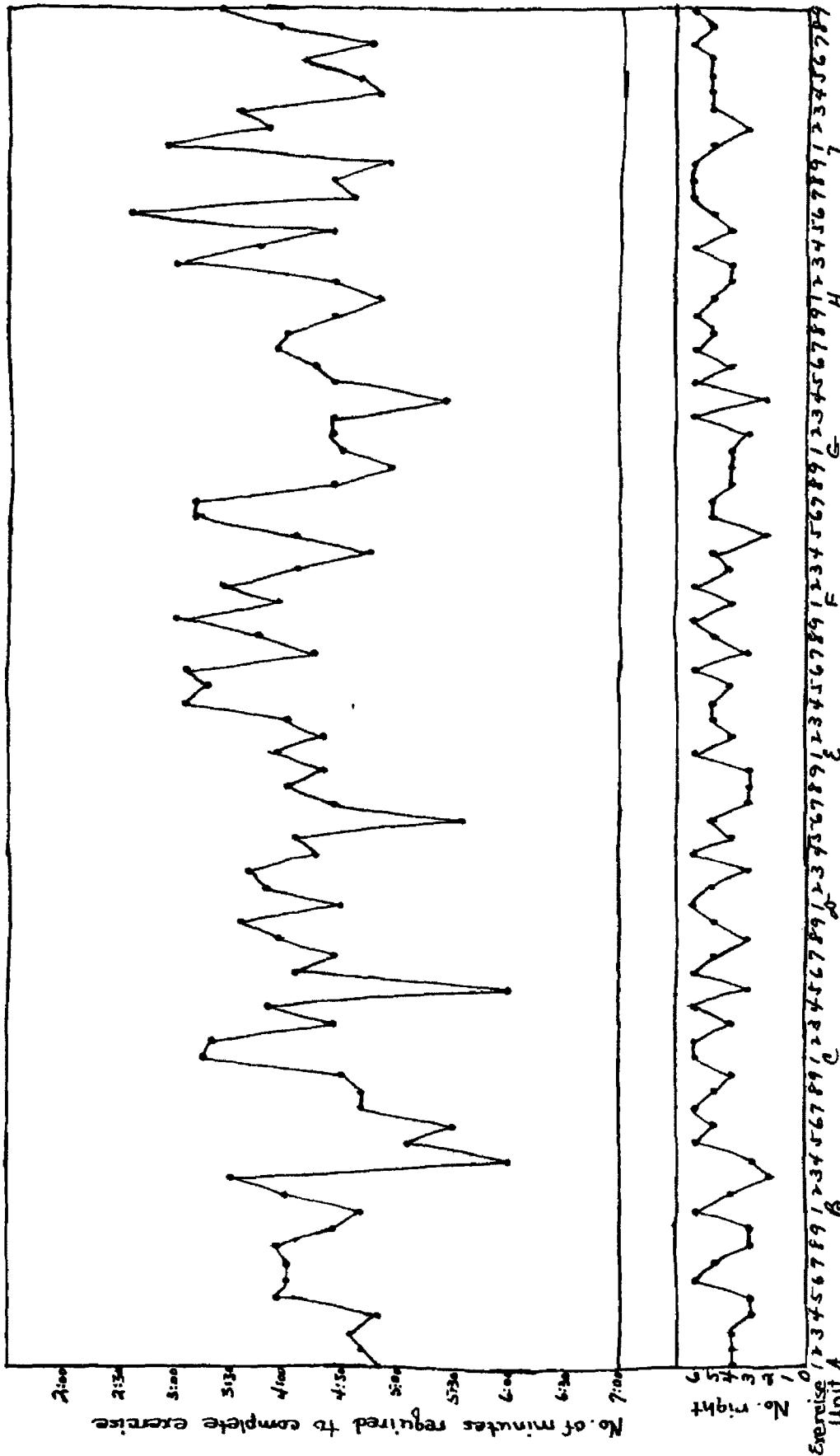


FIGURE 2  
 DAILY PROGRESS CHART -- NUMBER OF QUESTIONS CORRECT AND TIME REQUIRED TO  
 COMPLETE EXERCISES -- CASE NO. 5

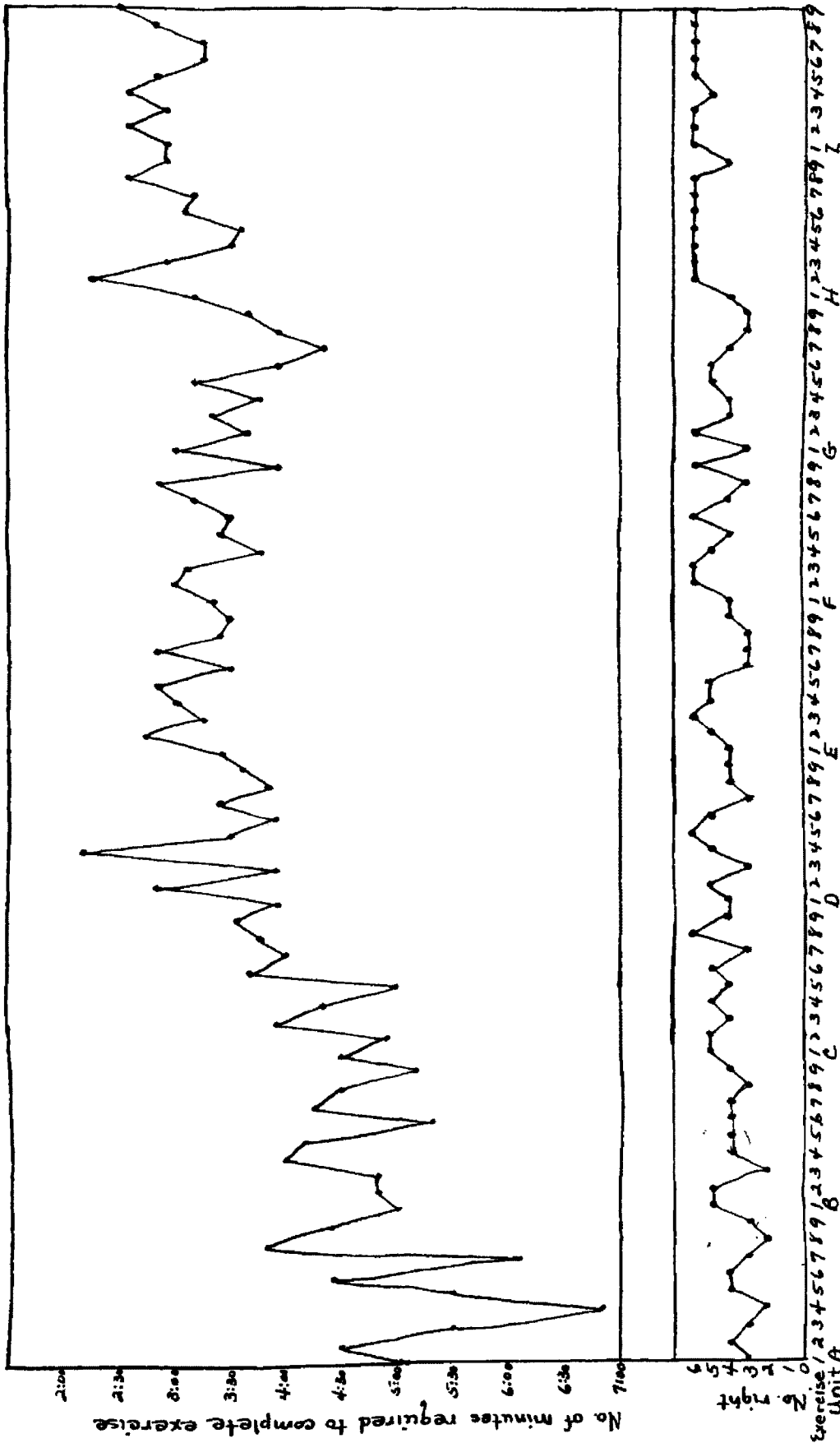


FIGURE 3  
DAILY PROGRESS CHART -- NUMBER OF QUESTIONS CORRECT AND TIME REQUIRED TO COMPLETE EXERCISES -- CASE NO. 3

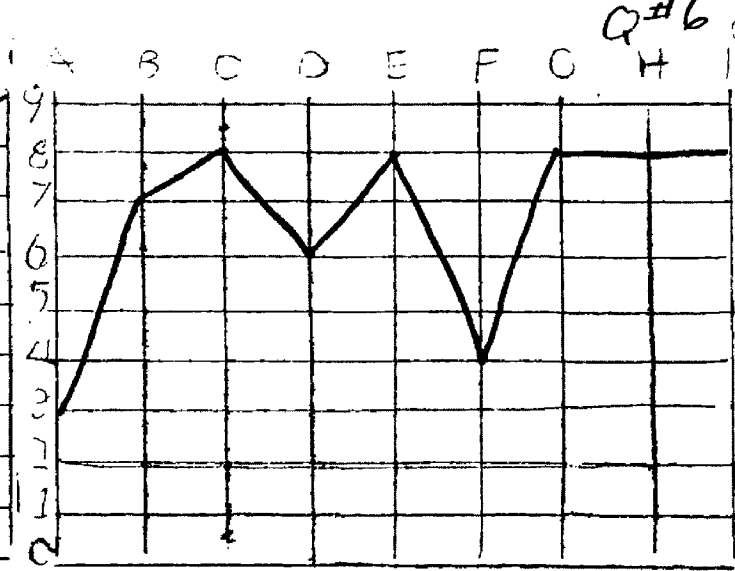
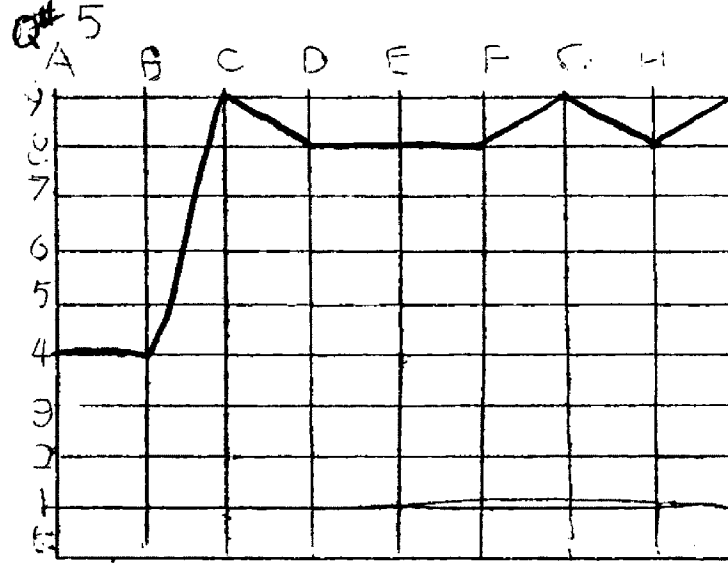
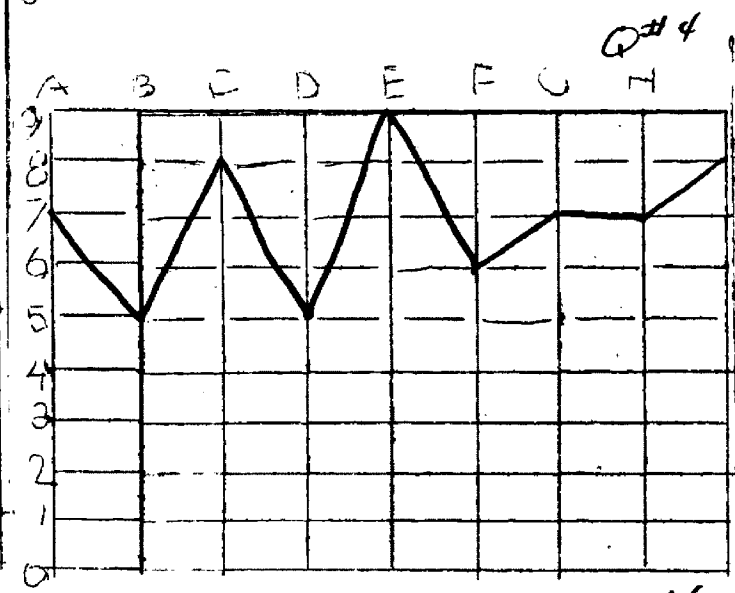
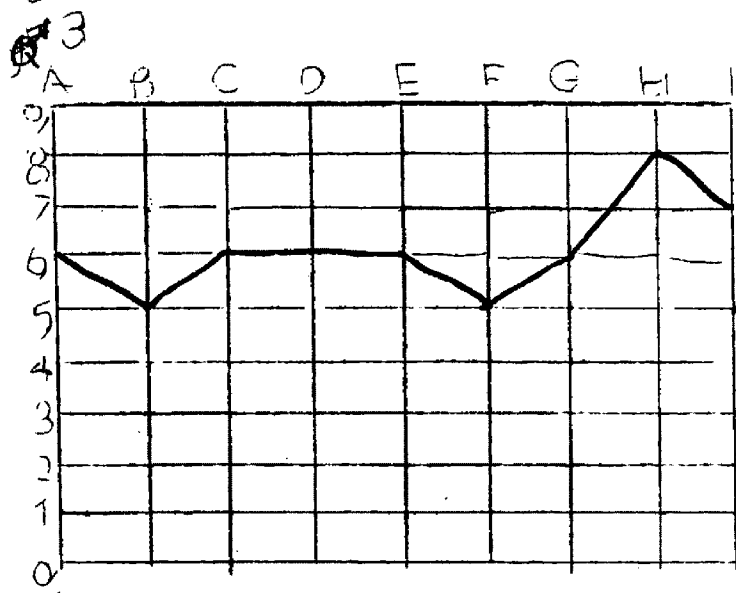
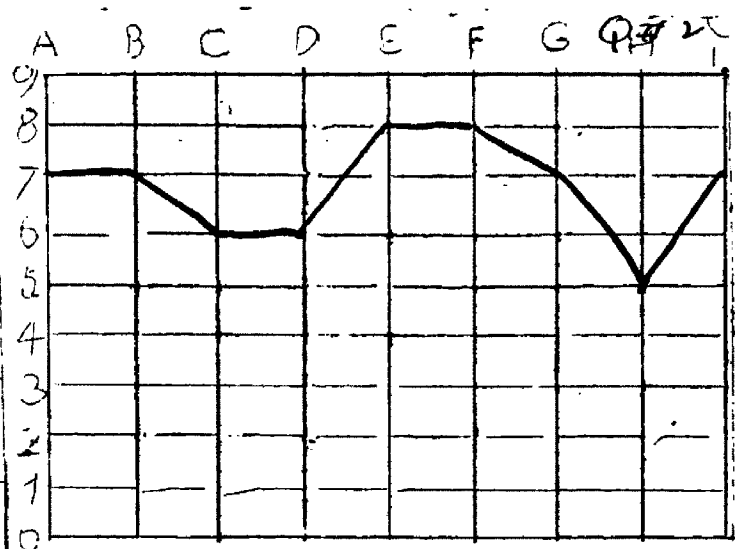
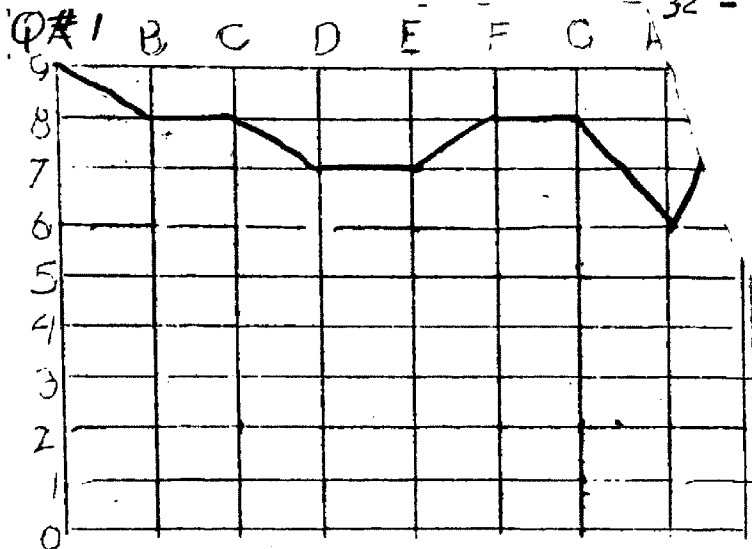


FIGURE 11

PROGRESS RECORD FOR EACH OF THE SIX QUESTIONS -- CASE NO. 5

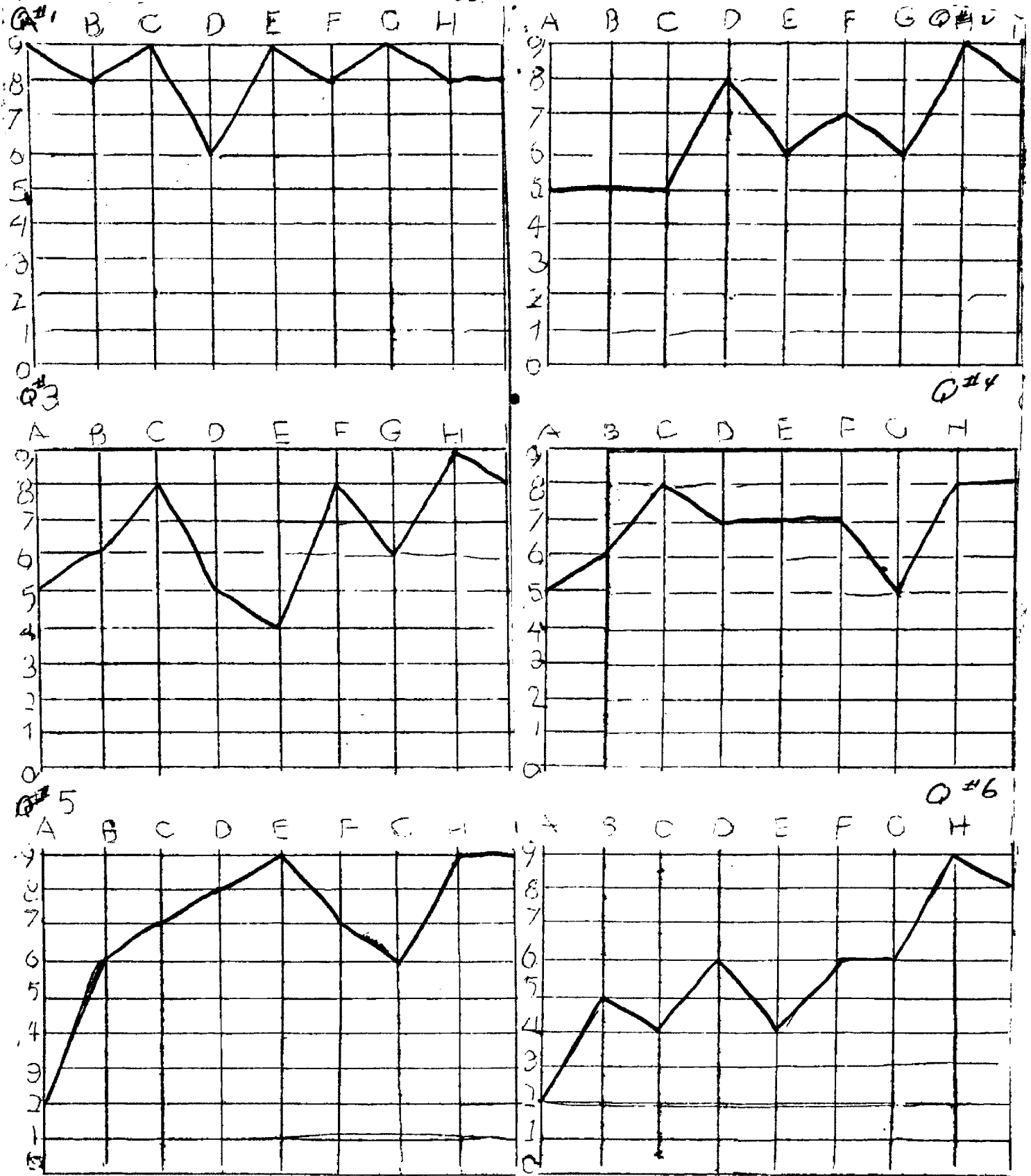


FIGURE 5

PROGRESS RECORD FOR EACH OF THE WEEK  
UTERINE -- CASE NO. 3



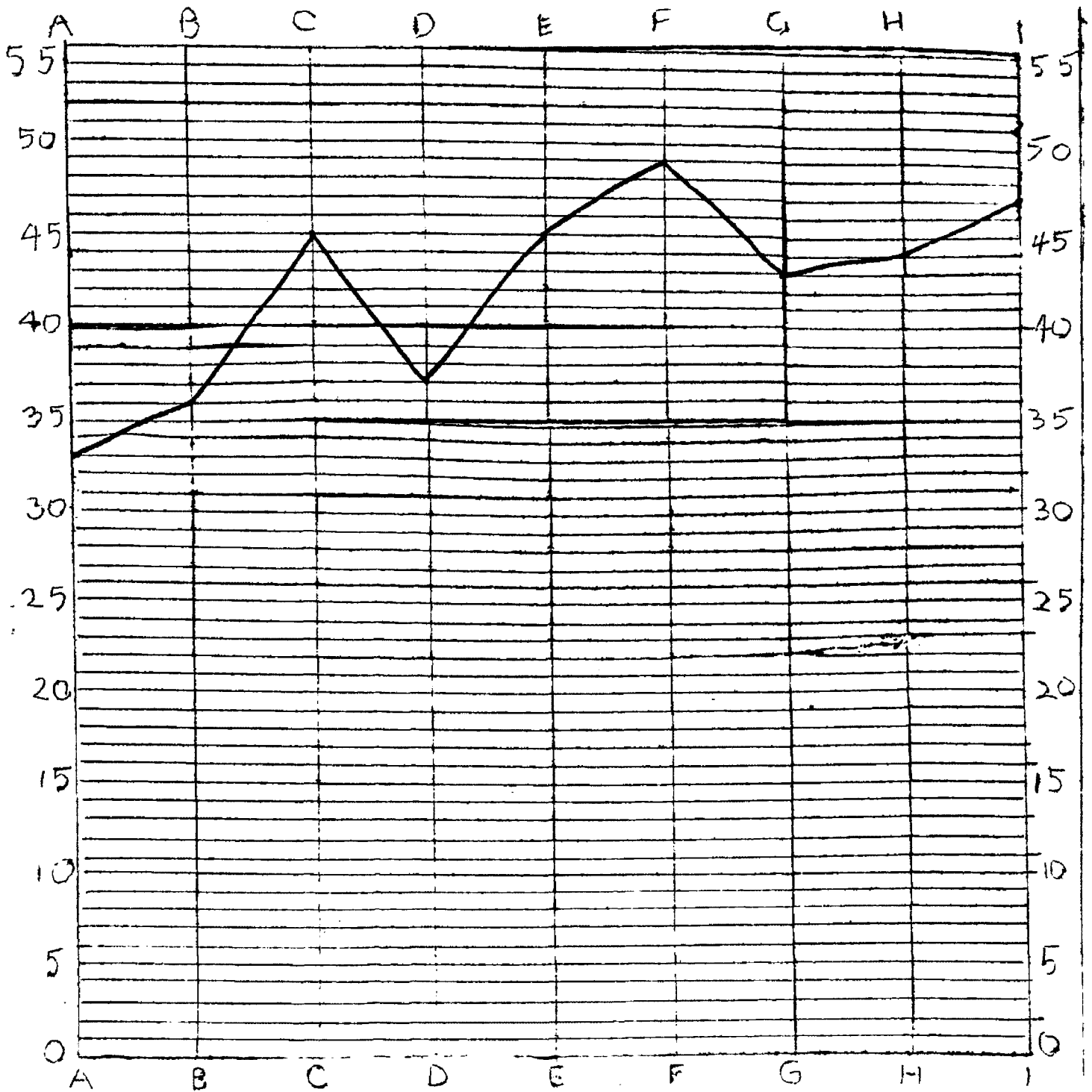


FIGURE 6

GENERAL PROGRAM RECORD SHOWING TOTAL SCORES  
ON EACH UNIT -- CASE NO. 5

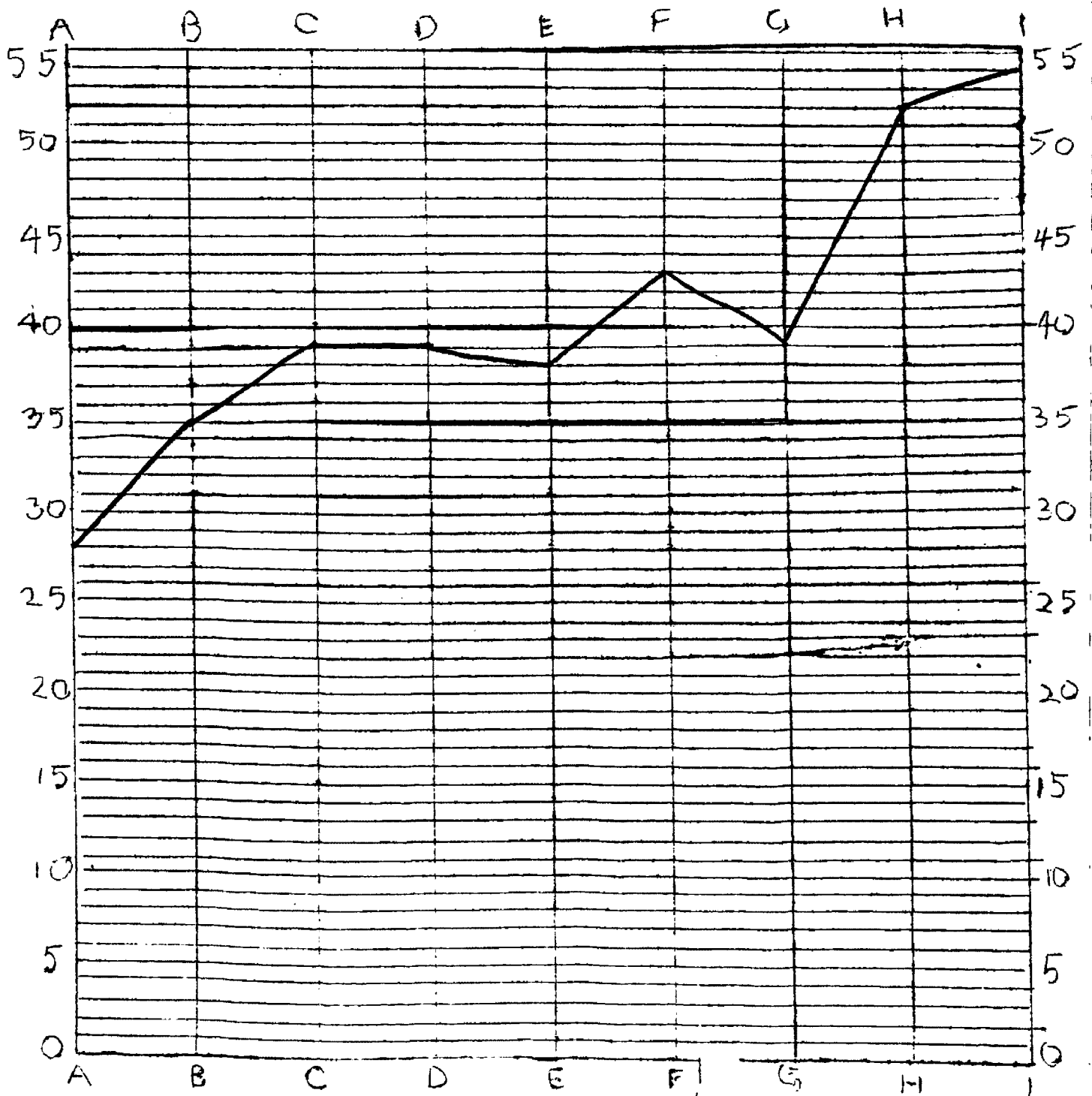


FIGURE 7

GENERAL PROGRESS RECORD SHOWING TOTAL SCORES  
ON EACH UNIT -- CASE NO. 3

### Final Testing

At the completion of the reading improvement program, an alternate Stanford Achievement test was administered. The results, in Table I, column 9, and Table II, column 12, show that the change in grade level placement ranged from  $-.7$  to  $1.2$  for the period of approximately four months. The greatest gain was made by Case Number 3, whose gain in terms of months' growth, was almost four and one-half times the expected gain for that student.

The expected gain for each student was determined by multiplying his I. Q. divided by 100, times the fraction of a year represented by the reading improvement program, or the expected gain in months by an average learning child. Thus the student with an I. Q. of 100 would be expected to gain four months or  $.333$  in terms of a portion of a year. The student with an I. Q. of 119 would be expected to gain  $.4$  ( $.333 \text{ yr.} \times 1.19 = .4 \text{ yr.}$ ) and the one with an I. Q. of 76 would be expected to gain  $.25$ .

Because of great individual differences in learning ability, the I. Q. should be considered an index of rate of learning in determining the expected gain over a certain period of time. Obviously, a person with an I. Q. of 75, for example, should not be expected to learn as much in the same length of time as a person with an I. Q. of 100 or 120. Rather than use an expected four months' achievement gain in a four month period as a standard for all children regardless of I. Q., a more

TABLE II

## COMPARISON OF RESULTS OF FIRST AND SECOND ACHIEVEMENT TESTS

Case No.	Paragraph Meaning			Word Meaning			Average Reading Test			Expected Change		
	1st.	2nd.	Change	1st.	2nd.	Change	1st.	2nd.	Change	1st.	2nd.	Change
Col. 1	2	3	4	5	6	7	8	9	10	11	12	13
1	10.9	11.3	.4	.38	8.9	9.5	.6	.38	9.9	10.4	.5	.38
2	9.7	11.5	1.8	.4	9.3	9.5	.2	.4	9.5	10.5	1.0	.4
3	7.8	9.0	1.2	.25	6.7	7.9	1.2	.25	7.25	8.45	1.2	.25
4.	7.1	7.2	.1	.26	5.1	5.5	.4	.26	6.1	6.36	.25	.26
5	10.3	9.2	-1.1	.4	8.1	7.8	-.3	.4	9.2	8.5	-.7	.4
6	7.8	8.5	.7	.32	5.3	5.9	.6	.32	6.55	7.2	.65	.32
7	5.9	6.2	.3	.35	6.1	4.5	-1.6	.35	6.0	5.4	-.6	.35
8	5.6	6.3	.7	.39	4.05	4.9	.85	.39	4.8	5.6	.8	.39
9	3.2	3.05	-.15	.22	3.7	3.35	-.35	.22	3.45	3.2	-.25	.22
10	4.65	4.65	0	.24	4.05	4.15	.1	.24	4.35	4.4	.1	.24

accurate, but rough, estimate of the expected gain was determined for each child with consideration given to his I. Q. On the assumption that a person with an I. Q. of 75 learns at about 75 per cent of the speed with which a person with an I. Q. of 100 learns, this slower person could be expected to achieve a gain of about 75 per cent of four months. Similarly, a person with an I. Q. of 120 would be expected to achieve 120 per cent of four months' gain. In general, a person with a very high I. Q. is not able to proceed through a basic curriculum at his own rate. Therefore, this estimate is somewhat spurious, although it seems more correct to use this estimate than it would be to use an expected gain of four months, which is more suitable for the average child.

Table II, column 4, shows that the change in the results of the first and second tests of paragraph meaning ranged from -1.1 to 1.8, with five pupils, Case Numbers 1, 2, 3, 6, and 8, making more than the expected gain. Column 8 shows that the change in the results of the first and second word meaning tests ranged from -.35 to 1.6 and five pupils, Case Numbers 1, 3, 4, 6, and 8, made more than the expected gain.

During the reading improvement program several events happened that presented difficulties for all concerned in the program. The mother of one of the boys, Case Number 2, was very ill in the hospital when the first test was taken and died shortly afterwards. The father of the same boy died just a few

days before the final test was taken. In a small rural community where the people are very close to one another, such things affect the entire school tremendously. Some of the other students did not bear up as well under the tragedy as did Case Number 2, who adjusted quite well. Another mother had several heart attacks and her son, Case Number 7, was very worried and afraid that she, too, would pass away. To what extent the results of the program were invalidated by these circumstances can not, of course, be definitely determined.

Shortly after the improvement program started, one of the boys, Case Number 5 (see Table II), became obsessed with the idea that he was "going to fail anyway, so what's the use of trying?" apparently because his mother threatened him with retainment at the end of the school year if he did not work harder. Actually, the boy had been doing satisfactory work and the teacher had told both him and his mother so, to no avail. Nothing the teacher or students did changed his attitude, and on his achievement test at the end of the year, as well as on his second reading test, he deliberately made poor scores.

The Practice Reader charts of all the students show improvement in both comprehension and speed. (See Figures 2, 4, and 6 for the charts of Case Number 5, the pupil who made the least improvement on the Stanford Achievement Test, and Figures 3, 5, and 7 for those of Case Number 3, the pupil who

made the most improvement.)

It may be noted in Table I that Case Number 5, although showing a loss of  $-.7$ , was still achieving above his grade placement at the time of final testing. Similarly, Case Number 9 shows a loss of  $-.25$ , but his final score of  $3.2$  is still above the equivalent grade age for his mental age, which would have been  $2.8$  at the time of final testing.

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Summary

This was an experiment in improving reading to determine what could be done by a classroom teacher working with a population of ten students in grades five through eight in a rural school. All of the ten students in the room were included in the program which lasted approximately four months. The students were tested with an I. Q. test and both standardized and informal tests to determine their particular strengths and weaknesses.

The improvement program was concerned with the areas of (1) phonics, (2) vocabulary, and (3) comprehension. The remedial materials used included spelling and phonics workbooks, word-attack games, the Webster Word Analysis Charts, vocabulary exercises, and the Practice Readers for developing comprehension. Daily and unit progress charts were kept by the students as a record of their work in the Practice Readers. These charts all showed progress, although three of the ten students made no progress on the second standardized test which was given at the completion of the improvement program. The least gain was  $-.7$  of a grade level and the greatest gain was 1.2 grade levels.



Conclusions and Recommendations

This study is not intended to be an example of an ideal program for anyone else to follow, but is intended to set forth a description of the techniques used in one particular school under certain circumstances. Some of the students made great enough progress to justify the program. Perhaps other techniques would have reached some of those who apparently failed to benefit by the methods used.

The following are recommendations if this program were to be repeated:

1. In addition to an I. Q. test, a reading test, such as the Dvorak-Van Wageningen Diagnostic Examination of Silent Reading Abilities, which has both reading capacity and reading achievement tests, should be used.
2. The program should be carried on in conjunction with the regular developmental reading program.
3. The program should be extended to cover the entire year.
4. As great a variety of materials as possible should be used.

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## BIBLIOGRAPHY

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APPENDIX A

DIAGNOSING PHONICS ABILITY

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SPECIAL EDUCATION DEPARTMENT  
Missoula Elementary School System

Bulletin No. 1

DIAGNOSING PHONICS ABILITY

We have excellent techniques for teaching sight words to beginners. These carry the beginning reader up to about the latter part of the second or the beginning of the third grade. From this point on new words pour in so rapidly that sight words techniques are no longer adequate. Many new words can be recognized from context, but often key words cannot. Here is where the teaching of phonics enters the picture.

Phonics constitute one part of word analysis. Strictly speaking it is not a method of teaching reading. It is a tool used in the teaching of reading. It is not an end in itself. It cannot be "taught" in a single grade, but must be built up over a period of years, each grade adding to that which was learned before.

The beginning in phonics training is auditory perception. This usually is learned in the kindergarten. First grade teachers must be certain that children have learned to distinguish the sound of the phonetic elements before trying to get them to apply phonics in word analysis. Too often too many students get up past the fourth grade with word attack skills that are inadequate to unlock new words. 58% of the children who attended the University of Pittsburgh remedial reading clinic and 71% of the children who entered the recent summer clinic at the University of Washington were deficient in phonics ability. In other words, these students were deficient in auditory discrimination needed for reading (and spelling).

Many pupils learn to associate symbols and sound with little trouble, but there are several who do not. The ones who do not become poor readers.

An important step in the right direction would be for the teacher as early as possible in the school term to locate those deficient in phonics and who will fail to make progress until they have had the proper auditory and perceptual discrimination training, (the former coming first).

The rest of this report will be a description of a diagnostic procedure by which a teacher can determine the words

or parts of words that involve special difficulty and also identify pupils who are most in need of help. Included will be directions for making a class analysis which the teacher can use in guiding subsequent class remedial instruction. Also, suggestions for remedial follow-up will be outlined.

#### ON THE USE OF THE STICK - WICK TEST

The Stick Test is a diagnostic test designed to aid the teacher in determining the words or parts of words that present special difficulties for particular students and for the class as a whole. By analysis of the spelling of the 16 words, lack of auditory discrimination and inadequacy in spelling are revealed.

It should be remembered that the Stick - Wick tests contain the most frequently used sound elements (36) as found in the kindergarten Union Word List.

There are several more phonetic elements that are important, too, but which as far as frequency of occurrence is concerned are not so important. Hence it is important to locate as soon as possible at the beginning of the school term those pupils who do not hear accurately nor spell correctly these sounds. These are the students who are in most need of remedial work in phonics. These are the students who often hold up the class - the "tail enders." Students who do not have adequate auditory discrimination ability as detected by such as the "Stick" test are ones who encounter extreme reading difficulty beyond the third grade.

Since only the most important sounds are found in the Stick Test, some students will do well on it who are considered by the teacher to be poor readers and poor at word attack. However, these students are not as bad off as those who miss the Stick Test words. The former students need remedial work that differs somewhat from that for the latter group. Students who do well on the Stick Test and poorly in reading, spelling, and phonics need aid in such as phonics training that includes less frequently appearing but important sounds, syllabication, silent phrase reading and spelling, etc.



Page 3 - Bulletin No. 1      Diagnosing Phonics Ability

Below are two alternative lists of 16 words each, one called the "Stick Test", the other the "Wick Test." These words were selected from the Kindergarten Union Word List. The words in each test contain some 49 phonetics which occur most frequently in the KU word list. With the children who fail to hear more than one-third of these sounds, independent word recognition is quite impossible. This means that they are blocked, to a considerable extent, in reading above the second grade level.

The "Stick Test" is used as the initial test, and the "Wick Test" as the final one, given after follow-up remedial measures have been employed.

STICK TEST	WICK TEST
1. st-i-ck	w-i-ck
2. s-o-ng	st-a-k-es
3. b-a-t	t-ar
4. t-e-nt	w-e-nt
5. c-a-ns	p-a-ns
6. p-o-t	h-u-sh-ed
7. b-ar	b-a-d
8. c-a-k-es	c-ar-s
9. m-a-d	p-ea-ch
10. l-e-nd	h-o-t
11. r-u-sh-ed	m-e-nd
12. h-i-ll	n-e-t
13. r-ea-ch	s-a-t
14. n-u-ts	r-u-ts
15. w-e-t	b-i-ll
16. st-ar-s	l-o-ng

There are 36 different sounds included. Duplicates were included for practical reasons and for increase of reliability.

Procedure for Administering the Stick Test (and Wick Test)

Each student should have a Form A test sheet.

1. Pronounce each word distinctly, correctly, and naturally. Be careful not to overemphasize pronunciation. This often results in the student's hearing a false sound, like uh at the end of the word "stick."
2. For each word give a context sentence. For example, say "stick, I used a stick to hit the snake."
3. Pronounce the word again.

Directions for Analysis of Results

Compare the spelling of words of Form A with the words on the stick test which have been divided into phonetic elements. Circle each error.

These errors will include sound errors due to lack of auditory discrimination, known as word deafness. In these, wrong letters are given for a given sound. Examples of this are: "sarns" for "stars", "vashed" for "rushed", "weht" for "reach".

There are also spelling errors, where the sound is apparently heard. Examples are "stik" for "stick", "bil" for "bill", and "reech" for "reach."

An example of Form A has been worked out. It will be noted that Joe Doe did not hear seven different phonetic elements and misspelled three that he apparently heard. Totals include duplicate errors.

$$\text{The \% error (sound and spelling errors)} = \frac{\text{total all errors}}{49} = \frac{11}{49}$$

$$\text{The \% error (sound only)} = \frac{\text{total sound errors}}{49} = \frac{8}{49}$$

Form B is used to make a class analysis for best results.

Three per centages of errors can be obtained for the entire class.

(1) Misspelled words.  $\% \text{ error} = \frac{\text{total of all errors made by class}}{\text{No. of students} \times 16}$

(2) Counting as an error a misspelled phonetic element,  
 $\% \text{ error} = \frac{\text{total no. of element errors}}{\text{no. students} \times 49}$

(3) Counting as an error a phonetic element for which the wrong letters are used, i. e., when the sound was not heard correctly.  
 $\% \text{ error} = \frac{\text{total sound errors made by class}}{\text{no. students} \times 49}$

(Sample)

Page 5 - FORM A

Test Stick

Name Joe Doe Age: Years 10 Mo. 3 Date Sept. 28, '52

School Lincoln Grade 5 Teacher: Miss X

(for student)

(for teacher)

sound errors

spelling errors

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

Total no. misspelled words	Total number sound errors _____	Total number spelling errors _____
----------------------------	---------------------------------	------------------------------------

List different sounds to be learned	Total sound and spelling errors _____
-------------------------------------	---------------------------------------

Sounds known - total different sounds - total different sounds to be learned

Total % error =  $\frac{\quad}{49} \times 100 -$

Sounds % error =  $\frac{\quad}{49} \times 100 -$

Page 6 -- FORM B (Stick)

CLASS ANALYSIS OF PHONETIC ELEMENTS

School \_\_\_\_\_ Teacher \_\_\_\_\_

Grade \_\_\_\_\_ Date \_\_\_\_\_

<u>Words</u>	<u>Times Misspelled</u>	<u>No. of times each phonetic element was missed</u>	<u>total</u>
stick		st - i - ck s - o - ng	_____
song		b - a - t t - e - nt	_____
bat		c - a - ns p - o - t	_____
tent		b - ar c - a - k - es	_____
cans		m - a - d l - e - nd	_____
pot		r - u - sh - ed h - i - ll	_____
bar		r - ea - ch n - u - ts	_____
cakes		w - e - t st - a - rs	_____
mad			
lend			
rushed			
hill			
reach			
nuts			
wet			
stars			

total \_\_\_\_\_

% error of words missed =

% error of elements missed =

$\frac{\text{Total}}{\text{No. pupils} \times 16} =$  \_\_\_\_\_

$\frac{\text{Total}}{\text{No. pupils} \times 49} =$  \_\_\_\_\_

Most frequent sound errors:

APPENDIX B

READING TROUBLESHOOTERS CHECKLIST TESTS

For each child experiencing difficulty learning to read, ask yourself these questions:

Use these easy-to-give tests to get your answers.

**Does he know the names of the letters?**

Show the alphabet in random order as shown below. Teacher: "Read these letters." Draw a circle around those not known, write in the incorrect letters called in error.

I A B S C D F E P T M L R            r o h l m y t v k p z i a  
Z J U H G W X Q K V Y N O            j u s h b c g w d f x g e

**Does he try to use context clues?**

Have the following story reproduced on cardboard or durable paper. Be sure to include the "x" marks that indicate the number of letters in the missing word. Tell the pupil, "This story has some words missing. Try to read the story by guessing the missing words."

"Dick," xxxx Mother, "will you go to the store for me?"  
"Surely, Xxxxxx," said Xxxx. "What shall I get?"  
"I need a xxxxx of butter, a loaf of xxxxx, and a xxxxx eggs," said Xxxxxx. "Hurry."  
Xxxx ran to the xxxxx and was soon back. "That's a good xxx, said Xxxxxx. "Thank xxx very much."  
"You're welcome, Mother," said Xxxx and ran off to xxxx ball with his xxxxxxxx.

**Does he know consonant sounds?**

Duplicate copies of the list of consonants shown below. With List A give these directions: "All letters have sounds. Can you make the sounds of these letters?"

List A: r n l m v z s f (These consonant sounds can be given without the addition of the characteristic "uh" vowel ending.)

With List B give these directions: "Show me how you would hold your mouth to say a word which started with each of these letters."

List B: y t k p j h b c g w d (These consonant sounds cannot be uttered in isolation and, when made audible are usually accompanied by the distorting vowel value "uh".)

With List C give these directions: "When these letters are together what sounds do they make?"

List C: sh ch th wh

Draw a circle around missed sounds and write in sounds made in error.

**Can he substitute beginning consonant sounds to unlock words like his sight vocabulary words except for the first consonant?**

Reproduce the test words and sight words on cardboard. Ask the child to read the sight words first. Tell him the words if he does not know them. Cover the sight words and ask him to read the test words with help. (This is a crude test of a mechanical skill. The pupil is not expected to know the meaning of the test words.)

SIGHT WORDS	man	sent	star	night	at	hen	blue	kite	hair	nest
TEST WORDS	ban	pent	mar	bright	gat	fen	clue	rite	lair	zest

**Can he hear the short vowel sound in words?**

Read these instructions to the pupil, "I am going to say some words. Listen and tell me which vowel sound you hear in each word."

**TEST WORDS:** bread (short e)    bunk (short u)    saddle (short a)    shrink (short i)    block (short o).

**Can he tell when vowel sounds are long in words?**

Reproduce the test words. Read these instructions to the pupil, "Try to read these words as well as you can even if you never saw them before."

**TEST WORDS:** teal    vie    shoal    breach    creel    maim    trite    gate    theme    hove    dune    lave  
 (Pupils are not expected to be familiar with the meaning of these words. This is a measure of word perception skill only.)

**Does he know the common vowel digraphs?**

Read these directions to the pupil: "Here are some words you probably don't know. Try to read them as well as you can."

**TEST WORDS:**    nook    owl    coy    flout    maul    foil    jowl  
 (The pupil is not expected to know the meanings of the words. This is a measure of his ability to recognize these vowel combinations in unfamiliar words.)

**Can he blend letters to form words?**

Reproduce the test words, then read these instructions to the pupil, "Here are some nonsense words—they really are not words at all, but I'd like to see if you can read them anyway."

**TEST WORDS:**    fis    late    gud    keat    hin    sut    jav  
                   tope    lort    tam    sive    muts    bame    grue  
                   nibs    pad    nebe    vin    wab    beed    nel  
                   bufe    kim    sult    faim    hife    doke    doam

**Does he see the common prefixes as units?**

Reproduce these test words on cardboard. Read these instructions to the pupil: "Here are some more nonsense words. Read them as well as you can."

**TEST WORDS:**    repant    conjump    inwell    delike    dispay    combent  
                   ungate    excry    preread    prehead    enstand

**Does he see the common suffixes as units?**

Reproduce the test words. Read these directions to the pupil: "Read these nonsense words as well as you can."

**TEST WORDS:**    balling    boaker    floorest    daytion    skinance  
                   meatness    chairly    waterful    burnant    truckaus  
                   cornment    cupable    sleepive    sickless

**Does he see the compound words as units?**

Reproduce the test words. Read these instructions to the pupil: "Read these nonsense words as well as you can."

**TEST WORDS:**    nightbank    dinnerplayer    basketmeet    broomfeather  
                   paperjumper    eatmobile    spaderoom    carthouse

**Can he divide long words into parts?**

Reproduce the list of test words. Read these instructions to the pupil: "Divide these words into parts by marking the parts. Read the words after you have marked the parts."

**TEST WORDS:** bombardment combination refreshment establishment  
revolver entertain calculate cucumber

**Can he understand simple expository reading units?**

Reproduce the unit below on a separate sheet. Duplicate the questions that follow. Allow the pupil to read the paragraph first. Give him as much time as he needs. Then, remove the paragraph copy and ask him to answer the six test questions. Check his answers.

**TRIAL PARAGRAPH**

The honeybee family is very interesting. It is a very big family. Thousands of bees live in one house called a hive.

Each bee family has one queen bee. She is larger than any of the others. She is the mother of the hive and has her own work to do. The queen lays hundreds of eggs from which the baby bees are hatched. During the spring large numbers of baby bees are hatched in the hive.

There are the drones who are the father bees. But they are queer fathers, for they do no work. When the babies are hatched in the spring and food needs to be saved, the drones are killed by the other bees.

The workers make up the bigger part of the bee family.

They guard the queen, care for the babies, and gather food for the whole family. They not only gather the honey from flowers, but also make the comb in which honey is stored for winter.

**TEST**

1. The largest bee in the hive is the .....
2. How many eggs does the queen bee lay?
3. Which of the bees has an easy time?  
(a) All of them. (c) The queen.  
(b) The drones. (d) The smaller ones.
4. Which is the best title for this story?  
(a) The Busy Bee  
(b) A Big Interesting Family  
(c) Where Our Honey Comes From  
(d) Why the Drones Are Killed
5. Every one in the hive must work.  
(a) yes (b) no (c) does not say
6. The bees gather honey and store it for food for the winter.  
(a) yes (b) no (c) does not say

**At what level can the pupil read independently with ease and comfort?**

Reproduce the selections. The first is four-high difficulty. Have the pupil read it aloud. Note each word that is missed. If the pupil has trouble with more than five words, have him read the second selection. It is three-high difficulty. Note again each word that he misses.

**FIRST SELECTION (From Cases of Sherlock Holmes)**

"About four months ago I bought that bust of Napoleon. I picked it up cheap from Harding Brothers' store. I bought it for this very room. I work in here at night, doing a lot of writing. I went to bed late last night. My bedroom is upstairs. I thought I heard a noise down here. I listened, but heard nothing more. Then about five minutes later I heard a yell. I'll never forget it. I grabbed a poker. I came down the stairs. That window there was

wide open. I saw that the bust was gone."

**SECOND SELECTION (From King Arthur and His Knights)**

"I do not know you," said Arthur, "but you are a strong knight. Get down and we will fight on foot with swords."

"Not yet," said the Black Knight. "Let us try again. Here are new spears."

Two boys now rode from the castle. Each carried a strong new spear. The Black Knight took one, King Arthur took the other. Again they rode away from each other and turned. Again they charged.

King Arthur's spear struck the Black Knight's shield hard and square. Again it flew into pieces. But this time the Black Knight's spear did not break. Straight through Arthur's shield it went.



APPENDIX C

DYNAMIC VOCABULARY DEVELOPMENT

Department of Special Education  
School District No. 1  
Missoula, Montana

Bulletin No. 4

DYNAMIC VOCABULARY DEVELOPMENT

The approach to vocabulary development as described below is a relatively new one in that it incorporates fundamental components of thinking. Dynamic vocabulary exercises differ from other vocabulary exercises in that they teach words in relation to other words. The unit of study is a group of words, not the usual single word. Some current vocabulary teaching tends to use sufficient reference to related work.

The dynamic vocabulary exercises teach the following relations between words; subject-verb, verb-object, adjective-noun, synonyms-antonyms, genus-species, part-whole, implicate and other functional relationships. Groups of words are presented to the pupil in which there is one word that does not belong in the relationship featured in that group. The pupil is asked to identify the relationship and the displaced word, and tell why the word does not belong in the group.

Such exercises have proved to be immensely interesting to children. They offer a strong motivation for the learning of new words. There is evidence to indicate that low intelligence quotients are due in some part to children's inadequate grasp of word meaning and to inability to express concepts (meanings) in words. Reports on the use of Dynamic Exercises indicate that higher achievement test scores have resulted from their use. The following is quoted from the University of Washington News Letter, Vol. II, No. 2, p. 3, 1940: "A very encouraging report comes also from Mrs. C. J. Sheldon of Douglas, Arizona. Last year Mrs. Sheldon used the Dynamic Vocabulary technique with a very slow class. This year on a test given by a state supervisor the same children as a whole led the entire city in reading ability on their grade level."

Procedure

The exercises on the first grade level have proved very helpful with children who are too immature to learn to read. Children below the fourth grade can hardly be expected to write down their reason for the cross-out, even when they know what the reason is. Oral work here is used for the kindergarten, and grades one, two, and three. In the first two levels three words are used. The following procedures are suggested for kindergarten or first grade.

Consider the pattern "dog, cat, flower." The teacher can draw or show pictures of the three items. Ask the children to cross or blot out the picture that does not belong and tell why. Or the teacher may put the three words on the board. Talk about each as first done. Then the children are asked to cross out the one that does not belong.

Here is a sample of a first grade response to man, miss, girl. Some interpreted miss as a verb and directed that it be taken out. Their several reasons follow: "A man takes a girl out for a ride and all sorts of things." "A man is a little girl's daddy." "A man and a girl stay together." "It should say 'mother,' not 'miss.'" "Miss ain't in the family." "The other two are people." "A man can take a girl." and "Man and girl can walk; miss can't."

Some would take out girl because, "A man and a Miss might live together." Three said, "A Miss and a man are married." "Man and Miss are both grown up." "A girl is not a lady or a man." Two would take out man because "Miss is a girl when she goes away." and "A man isn't a Miss or a girl." Two would take out Miss because, "You don't call your mother Miss" and "You miss something."

The reaction of children to these patterns is always interesting. They often see unexpected relationships. This pattern was made with the expectation that man would be crossed out because Miss indicates a girl. But, only one pupil looked at it that way. In such situations, we count every answer right that the pupil can defend logically. Nearly always some misinformation shows up, as, for example, the interpretation of Miss as a verb here. Often a child cannot hold all three words in his memory span as in, "You don't call your mother Miss," and "You miss something." Sometimes a pattern is sensed only very dimly, as in, "Miss is no man or girl." Five crossed out Miss but could give no reason.

None of these pupils could give a complete answer such as, "Cross out man because Miss is a name for a girl and not for a man." In this entire class only one pupil could use a compound sentence answer, and this was given in response to the pattern, laundry, soap, glass: "Cross out glass because you wash clothes with soap, but you cannot wash them with glass."

Above the first grade the patterns contain five words. In some there are four words that are alike. For example -- fiddle, play, spread, buy, touch. This is the noun-adjective type. Spread is to be crossed out because you can play a fiddle, buy a fiddle, and touch a fiddle, but you can't spread a fiddle. Other patterns are made of two pairs of words with an extra which does not belong, as in over, top, under, bottom, along. Along is to be

crossed out because over is the opposite of under and top is the opposite of bottom. The purpose of repeating a relationship in a single pattern is to stimulate transfer. Transfer takes place when the learner is conscious of identical elements.

Here is a report of five word patterns from a class of thirty-one pupils (fourth grade). The total number of erroneous responses for the whole class was ten. Since there were thirty-one pupils and five chances for each pupil to make an error, the total of possible errors for the entire class was  $5 \times 31$  or 155 errors. The class actually made only ten errors, yielding only a six per cent error which is very good in anyone's class. The following responses were considered as more or less incorrect: Horse, bug, spider. "Cross out horse because a bug is a spider." Experts in a nature study would probably call this incorrect information: "A horse is not a spider and a horse cannot crawl on its legs but a spider can crawl on its legs." Somehow the bug got lost. It looks like a short memory span. Over, top, bottom, under, along: "Cross out along because you can look over the top of a wagon and you can look under the bottom of a wagon but you cannot look over an along." This is not bad, but it could be better. Fiddle, play, spread, buy, touch: "You can play spread, buy and touch a post. Fiddle does not belong." This is muddled thinking. Where did the post come from?

The following sheet contains sample exercises from the booklet, Dynamic Exercises in Vocabulary, Grades I, II, and III. by W. J. Osburn, Professor of Education, University of Washington. These exercises (and those for grades four through fifteen) may be purchased at the University Book Store, University Way, Seattle 5, Washington.

DYNAMIC VOCABULARY EXERCISES MANUAL

The following sample exercises show how these exercises are to be used. The reasons which the children give have proved to be more important than the mere crossing out of one word. Any logical reason is to be counted as correct.

Sample Exercises

1. Opposites  
large      ~~good~~      high      small      low  
Good is crossed out because large is an anyonym (opposite) of small, and high is an anyonym of low.
2. Synonyms  
odd      insane      queer      crazy      ~~erect~~  
Queer is a synonym of odd, and insane is a synonym of crazy; hence erect does not belong here.
3. Classification  
~~sugar~~      lion      tiger      deer      bear  
Sugar does not belong here because all the other words are names of animals.
4. Function  
bluing      shirt      anchor      ship      ~~freed~~  
Freed does not belong here because bluing is used on shirts and anchors are used on ships.
5. Genus-species  
flask      amber      vessel      resin      ~~companion~~  
Flask is kind of vessel and amber is a kind of resin; so companion does not belong here.
6. Part-whole  
battery      troop      cell      soldier      ~~drygoods~~  
Drygoods is crossed out because a cell is part of a battery, and a soldier is part of a troop.
7. Implicate  
voters      ~~connection~~      votes      appetite      health  
Votes implies voters and appetite implies health; so connection does not belong here.
8. Mixed sentence  
water      ~~kind~~      of      lots      drink  
Kind does not belong here because drink lots of water makes a sentence.
9. Subject-verb  
pigs      ships      distress      squeal      land  
Pigs squeal and ships land; so distress does not belong here.
10. Verb-object  
display      ~~assassination~~      emblem      feature      actor  
We may display an emblem and feature an actor; assassination is not needed here.  
ring      ~~inch~~      bell  
You can ring a bell but you can't inch one.

11. Adjective-noun

- costume leather silk ~~/kɒstʊm~~ black  
We may have a black leather and a silk costume; so custom  
does not belong here.

carrot yellow ~~kræzi~~  
A carrot can be yellow but it can't be crazy.

12. Materials

bag paper ~~wed~~  
A bag may be made out of paper but not out of weed.

How to Grade a Pupil's Paper

Give full credit for all logical reasons, regardless of misspellings. A list of the misspellings may be kept for later study as a spelling exercise.

Levels of Performance

- Level 1 -- Correct thinking  
Crossing out but the correct word but unable to give the reason orally. Credit as perfect on Level 1.
- Level 2 -- Incomplete oral answers of the type:  
baboon badger ~~bobolink~~ bobolink falcon  
Cocoon is not an animal.  
Credit such answers as correct on level 2.
- Level 3 -- Complete oral answers.  
Cocoon is not an animal and the rest are.  
Credit as correct on level 3.
- Level 4 -- Answers as in Level 2, but written in incomplete form.  
Credit as correct on Level 4.
- Level 5 -- Answers as in Level 3, but written in incorrect form.  
Credit as correct on Level 5.
- Level 6 -- Complete written exercises in correct form (spelling, punctuation, capitalization). Give no credit on any level for answers like "Because cocoon is not a bobolink," which omit part of the words.

There is a wide gap of difficulty between oral and written answers. If a child fails to give an intelligible answer, give him a chance to give it orally. You will usually get a surprise.

DYNAMIC VOCABULARY EXERCISES BOOK VII

In each line cross out the word that does not belong. Tell why the rest belong together.

1. hoard collection hamlet village childhood
2. parallel church gang denomination crew
3. jury household nations panel league
4. auction craft duplicate sale guild