

THE EFFECT OF REPEATED ORAL READINGS
ON ERROR TYPE AND RATE OF
READING OF SECOND GRADE
DEVELOPMENTAL READERS

By

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CHAPTER I

PRESENTATION OF THE PROBLEM

Introduction

Oral reading errors have been widely used by teachers, reading specialists, and clinicians when diagnosing reading difficulties of a child. The information gathered by a study of a reader's errors is used to aid the examiner in setting up a remedial program for the child.

There are several ways the errors of a reader have been used in diagnosing reading difficulties. One way is to classify the reader's errors as to type, and then tabulate them. A study of this tabulation has been used as a clue for determining which decoding skills a reader is unable to use in identifying an unfamiliar word.

A second way to use a reader's errors in diagnosing is to note the rate of particular types of errors. The error rate has been used to determine the independent level, instructional level, and frustration level of an individual reader. Determining these levels for a reader is an aid in locating material for use in his remedial program which is at a suitable difficulty level.

Another aspect of a reader's performance that needs to be examined in diagnosing his reading difficulties is to note his rate of reading. A subject who is reading too slowly may be reading material too difficult for him or may be using decoding skills incorrectly.

The use of types of reading errors, error rate, and rate of reading, as a tool in diagnosis of reading difficulties has been based on the reading of a passage orally at sight. The question arises as to what influence a second reading of the same passage would have on error type and rate of reading.

Need for the Study

In diagnosing reading difficulties, examiners have analyzed the types of errors, the error rate, and the reading rate of the subject to determine the specific areas in which he needed remediation. This analysis typically is done on a passage or passages which the child has read orally at sight.

By analyzing the types of errors a subject has made, it is possible to determine if the child has limited use of, overuses, or misuses decoding skills in one or more of three main categories, which include visual auditory, visual perception, and behavioral types of skills.

Gates (1962) used the visual-perceptual approach in analyzing reader's errors in context. Conversely, Monroe (1928) used the visual auditory approach in her error classification. She considered all errors to be caused by faulty sound-symbol relationships. The errors tabulated, were from words in context and words in isolation. Other test writers and investigators have used either the one or the other approach.

The Ray error analysis system (Ray, 1969) integrates the two approaches so that errors due to weaknesses in either visual-perceptual or visual-auditory skills will be detected. Behavioral errors--repetitions, omissions, additions, and corrections--are included in the

classification system. A reader's errors, using this system, are analyzed on an extended passage which is read at his instructional level.

The number of errors a subject makes in a passage reflects the difficulty of the material for him. A passage is at the reader's independent level when he makes so few errors while reading that he can function without the help of another person. A passage is within the reader's instructional level when the number of errors the subject makes are enough that he has opportunity to use skills at his command, but not so many that instruction breaks down. When the reader makes too many errors, he will refuse or reject reading. This is called his frustration level.

These three levels, independent, instructional, and frustration are important to accurately determine for each reader. Betts' (1946) criteria for determining these levels have been widely accepted. Some researchers (Spache, 1969; Powell, 1969) have questioned the validity of this criteria, suggesting that they are too high.

Another aspect to consider, besides error type and error rate in diagnosing reading difficulties, is the subject's reading rate. When a subject is reading a passage too slowly, he may well be reading at frustration level. Smith (1971) suggests that when a reader has to resort too much to mediated word identification, his short term memory, which can only handle four or five features at one time, be they words or parts of words, processes very little at each fixation. Thus, mediated word identification causes a slower reading rate. A child who is reading too slowly may be reading material too difficult for him, or may be overusing phonetic skills.

Much can be learned about the reader by examining his errors and rate of reading while he reads orally. However, this type of diagnosis is typically obtained on a subject's first reading. Many of the errors and a slow reading rate may be caused by unfamiliarity of the material. If the subject was permitted the opportunity to read the same material orally a second time, he would have the opportunity to use skills at his command on familiar material. The second reading may so affect the number of errors that material which was at his frustration level in the first reading is at instructional level when reread. A difference in rate of reading may be noted between the first and second reading.

This leads to some questions:

1. Would there be a change in the number of errors made in the second reading of the same passage at instructional and frustration levels. Would the functional level change in the second reading?
2. What effect would a repeated oral reading of the same passage have on types of errors made at instructional and frustration levels?
3. What effect would a repeated oral reading of the same passage have on rate of reading at instructional and frustration levels?

Hypotheses

The following hypotheses as stated in the null form were tested.

1. There is no significant difference between the types of errors produced on the first reading of an extended oral passage at instructional level and the types of errors produced on a second reading of the same passage.
2. There is no significant difference between the types of errors produced on the first reading of an extended oral passage at frustration level and the types of errors produced on a second reading of the same passage.

3. There is no significant difference between the types of errors incurred on the first reading of an extended oral passage at instructional level and the types of errors made on the second reading of a passage at frustration level.
4. There is no significant difference between the rate of reading an extended oral passage at instructional level and the rate of reading the same passage for a second time.
5. There is no significant difference between the rate of reading on the first reading and rate of reading on the second reading of an extended passage written at the frustration level.
6. There is no significant difference between the rate of the first reading of a passage at instructional level and the rate of the second reading at frustration level.

Definition of Terms

Developmental Readers are defined as second grade students reading at an instructional level between 2.0 and 3.0 as determined by the individual's performance on the Standard Reading Inventory. These readers were considered developmental because their instructional level was at a point within .5 of a year on either side of the midpoint of 2.5.

Rereading is defined in this study as reading the same selection immediately upon completion of a prior reading.

Instructional Level refers to the passage on the Standard Reading Inventory on which the reader meets the criteria of 91 percent to 94 percent word recognition with a comprehension of at least 70 percent.

Frustration Level refers to the passage on the Standard Reading Inventory on which the reader meets the criteria of 90 percent or less in word recognition and/or a comprehension criteria of less than 70 percent.

Error, Miscue, or Word Recognition Error refers to a reader's response which differs from the written stimuli while reading orally. The terms are used interchangeably.

B-S-R Error Analysis refers to an error classification system which synthesizes the sound-symbol association of Monroe (1928) and the visual-perceptual approach of Gates (1962). A complete description is given in Chapter III.

Extended Oral Passage refers to a passage of 200 words in length. The particular passages were prepared by Stuever (1969). Readabilities of these passages were checked with the Spache formula (1953) to make certain that they corresponded to the readability of the equivalent passage in the Standard Reading Inventory.

Error Type refers to a specific kind of error (e.g., word omission). The error types used in the study are more fully explained in the description of the B-S-R Error Analysis system in Chapter III.

Delimitations

Scope of the Study

This investigation included an analysis of the oral reading errors made by second grade developmental readers on first and second readings of extended oral passages at both instruction and frustration levels. Comparisons of the resulting error patterns, error rate, and reading rate were made on each of the four readings. Comparisons were made between the 21 kinds of possible errors (B-S-R Analysis) on each of the readings.

Nineteen subjects were selected for this investigation from second graders reading developmentally at the second grade level. The students were chosen from approximately 125 who were screened by the Standard Reading Inventory in southwestern Michigan in January, 1974.

Limitations of the Study

This study is limited to developmental second grade students from elementary schools in southwestern Michigan. The oral reading tests used reflect only a sample of the reading tests available. Different results may be found with different tests.

Assumptions

The tests used in this investigation accurately measure the factors they are designed to measure and are pertinent to this study. The use of oral reading errors to establish levels of reading performance is valid and the number of errors made by a student is indicative of the relative difficulty of the material for him.

Each word in a passage provided the reader with an opportunity to make any one of the types of errors analyzed and the errors were representative of his actual reading behavior.

CHAPTER II

RELATED LITERATURE

There is a voluminous amount of studies concerning oral reading, but this review is restricted to the studies in which rereading (silent or oral) of the passages is part of the research procedures. Studies of this nature have appeared in the literature during the last few years.

Kasdon (1967) tested a random sample of fourth, fifth, and sixth graders with the Spache Diagnostic Reading Scales. Each child read a passage orally-at-sight (O) and an equivalent passage, silently-then-orally (S-O). The comprehension check followed the oral reading in both treatments. Fifth and sixth graders were omitted from the study since many of them reached the highest score on the test before their instructional level was attained. There was a significant difference between the two treatments, with the S-O treatment being the superior. The S-O instructional levels were all higher than the O instructional levels. The instructional levels were established by either comprehension scores or word recognition scores. There was no significant difference in errors in word recognition between the two treatments.

In a later study, Kasdon (1970), used two samples of ninth graders randomly selected from two secondary schools in ghetto areas in New York City. The Gray Oral Reading Test with comprehension questions by Bormuth (1962) was administered to two groups of 23 students each. The test was administered to one group according to the directions of the

manual. These students read each paragraph once, orally at sight. The other group read each paragraph silently first, then orally. All subjects began three or four grades below grade level and continued until they had made at least seven errors on two successive paragraphs. Dialect was not recorded as scoreable errors. No difference was found between the reading rate of the two groups. Both read at approximately 111 words per minute; however, the silent-then-oral group made significantly better comprehension scores. Eight error types which were analyzed included: words aided, gross mispronunciations, partial mispronunciations, omissions, insertions, substitutions, repetitions, and inversions. In three error categories, the oral-at-sight group scored significantly fewer errors than the silent-then-oral group. These included gross mispronunciations, omissions, and insertions. The silent-then-oral group scored significantly fewer errors in the partial mispronunciations, and repetitions categories. Kasdon submits that while a person is reading silently, he is not thinking about the pronunciation of words. Therefore, he would not necessarily have fewer pronunciation errors because he read the passage silently but his comprehension would improve.

Lowell (1970) attacks the way in which the independent, instructional and frustration level is typically determined. Classroom teachers are admonished in college classes, textbooks, and manuals never to ask a child to read material orally at sight. If he reads material silently first, it is believed that he will read better and with less stress. But typically, in informal testing, a subject is asked to read orally at sight to identify levels of performance.

In the research conducted by Lowell (1970), an eleven year old boy read a 149 word passage orally five times. The error types analyzed were: repetitions, substitutions, omissions, additions, and words aided. The first time, he made 22 errors and read at a rate of 60 words per minute. In the second reading, he made half the errors and read at the rate of 89 words per minute. The fourth time his errors were reduced to six and his rate increased to 99 words per minute. The fifth reading was virtually the same as the fourth. Lowell contends that depending on which criteria you choose, the passage could be at independent, instructional, or frustration; or all three. Drawing conclusions on the basis of a sample of one, with no knowledge of functional level of the passage, is questionable.

Glenn (1971) studied the effect of silent and oral reading on literal comprehension and oral reading performance. He administered the Gilmore Reading Test to 180 second, third, and fourth graders. He randomly assigned 60 in each grade to three treatment groups: reading orally-at-sight, followed by a comprehension test (O); reading silently, then orally, followed by a comprehension test (S-O); and reading silently, followed by a comprehension test, then reading orally (S-C-O). Glenn found that the second graders made significantly more substitution errors and needed significantly more words pronounced than third graders. Also, the second graders made fewer mispronunciations than the third graders, and less mispronunciations and repetitions than the fourth graders. Glenn concluded that oral reading accuracy is not improved significantly when silent reading precedes the oral reading and that there is no evidence that oral reading interfered with comprehension.

He also concluded that an increase in repetition and omissions generally indicated a growing maturity in reading.

Waynant (1972) investigated the relationship between techniques of testing and oral reading performance. Thirty children in second grade and 30 children in fifth grade were tested using the Gilmore Reading Test. They read passages approximately on their grade level as determined by Botel Word Opposites. Each child read a passage orally at sight (0) and an equivalent passage silently, then orally (S-0). Waynant found no significant differences in oral reading accuracy or in comprehension between treatments. She did find a significant difference in the rate of reading favoring the S-0 treatment. The S-0 reading by the second graders was characterized by significantly fewer words aided than in the 0 reading. This tendency was not found among the fifth graders.

Busboom (1974) investigated the relationship among various testing techniques on an informal inventory at instructional and frustration levels. She included 204 students in grades two through five in her population who were randomly assigned to four different testing techniques: 1) O-C-0, oral reading of passage, followed by a comprehension test, followed by an oral reading of the same passage; 2) S-0-C, silent, then oral reading of the same passage, followed by a comprehension test; 3) S-C-0, silent reading, a comprehension test, and an oral reading of the same passage; and 4) O-0-C, repeated oral readings followed by a comprehension test. Busboom found that as the grade level went up, omissions increased and words aided decreased. She found no significant difference at either functional level for substitution.

Busboom (1974) found that, at frustration level, a comprehension check placed between two readings, as in S-C-0 and O-C-0 resulted in

significantly better word recognition scores on second readings than the word recognition scores obtained on the second readings for the S-O-C and O-O-C groups. Two sequential readings, however, as in S-O-C and O-O-C did not significantly improve the word recognition scores of the second readings because of having previous exposure to the passage. She also found that word recognition scores on second readings in O-C-O and S-C-O are comparable and the word recognition scores on second readings in O-O-C and S-O-C are comparable which indicated that the processes of silent and oral readings are similar. The same kinds of errors would most likely be made whichever process was used. She concludes that one reading, generally silently for instructional purposes and orally for diagnostic purposes would be sufficient. Busboom reports that over 50 percent of her population, even at the second grade level frustrated because of the comprehension criteria. This obscured what effect the second readings had on word recognition. This present study focuses wholly on word recognition. In her recommendations, she mentioned the fact that her word recognition categories were broad, and that further study could be made with the substitutions category, which accounted for most errors, broken up into subcategories. She found no significant differences in her substitutions between the four treatments. The investigator's study does break the substitutions category into two categories with subcategories.

Gonzales (1974) investigated the effect of repeated oral readings on error patterns and rate of reading of third grade developmental readers. Each of his 26 subjects orally read and reread a passage at his instructional and frustration levels.

Comparing the four readings, Gonzales (1974) found that the error patterns for third grade developmental readers are "remarkably similar." When the errors are tabulated according to the categories and subcategories of the B-S-R Error Analysis System, the percentage of errors, more so than the numbers, reflect these patterns. Table I is an exact replica of a table Gonzales presented in his study which clearly shows these patterns, especially in the main categories. For most categories, there was a decrease in errors in the second readings at both instructional and frustration levels. The behavioral category had the highest percentage of errors. The visual perception category had a high percentage also. The percentage of repetitions subcategory increased during the second readings at both functional levels.

Gonzales (1974) used the sum of all error categories, excluding the subcategories of repetitions and corrections, to compute the percentage of word recognition. He found that the second reading at instructional level changed to independent level and the second reading at frustration level changed to instructional level.

There were significantly fewer errors in the second reading at the instructional level for the category of structural analysis ($p < .05$) and refusals, ($p < .02$). At the frustration level in the second readings there were significantly fewer errors at the $p < .05$ or higher for the categories visual perception, visual auditory, and structural analysis; and for the subcategories of ending letter wrong (++)-, entire word wrong (---), directional confusion, one consonant wrong (c) and one vowel wrong (v). Comparing the first instructional reading and the second frustration reading, there was a significant increase at the $p < .05$ in the subcategory of ending letter wrong (++)-.

TABLE I

TYPES OF ERRORS MADE BY THIRD GRADE
DEVELOPMENTAL READERS CATEGORIZED IN
THE B-S-R ERROR ANALYSIS SYSTEM

Types of Errors	1st Instructional		2nd Instructional		1st Frustration		2nd Frustration	
Visual Perception	(135)	27.0%	(119)	28.0%	(249)	35.0%	(175)	31.0%
--+	(8)	6.0%	(6)	5.0%	(18)	7.0%	(12)	7.0%
++	(43)	32.0%	(38)	32.0%	(80)	32.0%	(49)	28.0%
+-	(7)	5.0%	(9)	8.0%	(24)	9.6%	(18)	10.0%
--+	(2)	1.5%	(3)	2.5%	(4)	1.6%	(4)	2.0%
+-	(11)	8.0%	(11)	9.0%	(20)	8.0%	(20)	11.0%
+	(3)	2.0%	(0)	0	(2)	.8%	(1)	.6%
---	(58)	43.0%	(47)	39.5%	(89)	36.0%	(65)	37.0%
S. D.	(0)	0	(0)	0	(4)	1.6%	(2)	1.0%
Dir.	(3)	2.0%	(5)	4.0%	(8)	3.2%	(4)	2.0%
Visual Auditory	(36)	7.0%	(27)	6.0%	(84)	12.0%	(47)	8.0%
c	(4)	11.0%	(0)	0	(17)	20.0%	(3)	6.0%
cc	(0)	0	(2)	7.0%	(5)	6.0%	(5)	11.0%
v	(5)	14.0%	(2)	7.0%	(13)	15.0%	(5)	11.0%
vv	(10)	28.0%	(3)	11.0%	(11)	13.0%	(6)	12.0%
ccvv	(17)	47.0%	(20)	74.0%	(38)	45.0%	(28)	60.0%
Refusals	(39)	8.0%	(19)	4.0%	(50)	7.0%	(37)	7.0%
Behavioral	(240)	48.0%	(248)	58.0%	(271)	37.0%	(259)	46.0%
Omission	(31)	13.0%	(43)	17.0%	(41)	15.0%	(36)	14.0%
Addition	(18)	7.4%	(8)	3.0%	(23)	8.0%	(16)	6.0%
Repeat	(91)	38.0%	(105)	42.0%	(97)	36.0%	(100)	39.0%
Correct	(100)	41.6%	(92)	37.0%	(110)	41.0%	(107)	41.0%
Structural Analysis	(45)	9.0%	(28)	6.0%	(64)	9.0%	(39)	7.0%
TOTALS	(495)		(441)		(718)		(557)	

A significant increase in rate was found between the two readings at instructional level and the two readings at frustration levels at $p < .01$. There was no significant difference between the rate in the first reading at instructional level and second reading at frustration level.

Summary

There have been studies in the last few years concerning the effects of second readings of the same passage on reading performance. It is difficult to compare the results of these studies because of the different designs and ways of reporting results. Different error analysis classification systems were used. Names for different error categories did not necessarily mean the same thing. Results were not reported in a uniform way. Some studies reported differences between grade levels and some reported differences between treatments.

Gonzales (1974) found a consistency in the pattern of errors made by third grade developmental readers in repeated oral readings at instructional and frustration levels. He also found that a second reading of the same passage at instructional and frustration levels resulted in reduction in the number of errors to the extent that the passage at instructional level became independent, and the passage at frustration level became instructional. He reported, further, that the rate of reading increased significantly ($p < .01$) between the first and second reading at both functional levels, but that no significant difference was found between the rate in the first reading at instructional level and the second reading at frustration level. He suggests since the error patterns of third grade developmental readers were similar in the

four readings, the determination of types of errors could be made from the first reading at instructional level orally at sight. The changes in functional level, as a result of repeated readings and the comparable reading rate found in the first reading at instructional and second reading at frustration level, suggest that these two readings are of comparable difficulty. Gonzales suggests, therefore, that an instructional level of 89 percent word recognition could be considered.

An investigation has been made of the effect of repeated oral readings on error type and rate of reading at instructional and frustration levels. A study of the influence of these repeated readings on functional levels was included. This investigation (Gonzales, 1974) was done with third grade developmental readers. The same type of investigation needs to be done with second grade developmental readers.

CHAPTER III

DESIGN AND METHODOLOGY

The population for this study consisted of second grade students who were considered to be second grade developmental readers, that is, those who were reading not more than one-half year above or below the 2.5 reading level. The students were selected from six Lutheran, one Catholic and one public school in southwestern Michigan. The population was Caucasian.

Students selected for this study were identified as follows:

1. The second grade teachers in the participating schools were requested to identify children whom they considered to be reading between 2.0 and 3.0.
2. Each of these students were screened with the use of the Standard Reading Inventory (SRI) to establish that his reading level was between 2.0 and 3.0.
3. Each of these students was administered the extended oral passage believed to be at his instructional level. If one of the three extended oral passages with readability levels between 2.0 and 3.0 were at his instructional level, the student was included in the study. From the original students identified by the teachers, 19 met the above criteria and were included in the study.

Testing Procedures

All of the tests were administered during three weeks in January. The schools provided rooms which were relatively free from distractions. The SRI was administered to all the children by the investigator. The extended oral passages were administered by three examiners living in

the locality of the schools and trained by the investigator. All three were certified as teachers, but none of them were classroom teachers during that particular school year.

The examiners explained to each child that this was an experiment that would help them to learn what happens when a second grader reads a story twice. Each was told that he would receive no help and if he came to a word he did not know, he should do his best and skip it if he could not figure it out. Errors on the extended oral passages were recorded on copies of the selections. The readings were timed and taped. Later the recordings were used to check the accuracy of the functional level obtained and the recorded time. Also the tapes were used for analysis of errors. The error types were tabulated and used in statistical analysis.

Instruments Used

McCracken Standard Reading Inventory (1966)

This test was used for two purposes: as a screening device to select 19 second graders whose reading level fell between 2.0 and 3.0 and to determine the instructional and frustration level of each of these students. This test is an individually administered test. It consists of eleven word lists to test words in isolation; eleven stories to test oral reading and eight stories to test silent reading. The difficulty level of the stories range from pre-primer to the seventh reader. Comprehension is checked with the use of the ten questions following each story. The length of the stories range from 44 words to 151 words. The test will determine independent, instructional, and

frustration levels. Only the instructional and frustration levels were pertinent to this study.

Studies show that concurrent validity of the instructional level of this test is relatively high. One study compared the instructional reading level of the SRI and California Reading Test for 79 second graders and the correlation was .87. Another study compared the SRI and the Stanford Achievement Test for 77 third graders and the correlation was .77. Evidence of the reliability of the two forms were demonstrated in two studies. In the one study, 60 children, 30 boys and 30 girls, distributed evenly in grades one through six, had the two forms administered to them. The median correlation was .91. In the other study, second grade children took both forms of the SRI and the correlation of the instructional level was .95.

Stories of the Stuever Reading Test (1969)

This test consists of a series of extended oral passages adapted from basal reader materials thought to be unfamiliar in most schools. Readability levels were established by the use of the Spache Formula (1953). These levels are comparable in readability with equivalent passages on the SRI (Stuever, 1969).

The passages selected for this study include: "To See the King" written at the 2.0 level; adapted from the Sword in the Tree by Clyde Robert Bulla, and published by Thomas Y. Crowell. The passage, "How Baseball Began," at the 3.0 level was adapted from How Baseball Began in Brooklyn, by LeGrand Henderson, Abingdon Press. "The Mystery of the Creaking Stairs," at the 3.6 level, written by Charlotte Jeanes and published in the Lyons Carnahan Curriculum Enrichment Series, New

Trails, was adapted. "Old Grouch Moves In," at the 4.0 level was written by Rutherford Montgomery and published by Doubleday and Company in the book Kildee House. The passage, "Mickey Mantle," at the 4.6 level, adapted from the story written by Gene Schoor was published by G. T. Putnam's Sons. Passages above the 3.0 level were used for some children for the extended oral passage at their frustration level. To obtain an accurate sample of error patterns, 200 words were used after the first 25 words of the passage (Stuever, 1969).

B-S-R Error Analysis (1969)

The B-S-R Error Analysis was devised by Berends, Stuever, and Ray (1969) at the Oklahoma State University Reading Center. Error classification systems including primarily visual-perception categories were combined with primarily visual-auditory categories. A model of the B-S-R Error Analysis is presented in Stuever's study (1969) as follows:

- I. Visual Perception--word parts. These occurred where it was evident that the reader quickly and frequently produced the word error, perhaps because of faulty perception.
 1. - + + middle end correct: pet for set
 2. + - + where the first and last letter are correct:
front for faint, want for went
 3. + + - end incorrect excluding s, ed, ing which were categorized under structure: as for ask, saw for sat
 4. - - + end only correct: at for out
 5. + - - beginning only correct: do for did, called for come
 6. - + - middle only correct: sat for ran
 7. - - - word completely wrong or if correct, word consisted of one or two letter word

II. Directional confusion

1. Rotations: dig for big
2. Reversals: Both whole and partial reversals and word sequence: was for saw, less for else

III. Visual Auditory Perception errors. These included errors of sound-symbol relationships, where it was evident that the reader was struggling with the sound-symbol relationships or gave the wrong sound for the symbol. Under these were categorized:

1. C Single consonant: raced for raised
2. CC Ka nights: knife for knight
3. VV eespecially for especially, cont for count
4. V lat for late
5. CCVV ex-min-sinned for examined

IV. Structure: This category included contractions, compound words, inflectional endings, and prefixes and suffixes.

V. Behavior: Included in this general heading were omissions of whole words, additions of whole words, repetitions, and corrections. These are symptomatic of various reading difficulties.

Counted as one error regardless of the number of words affected were additions, omissions, and repetitions. An addition to the B-S-R was made: Refusals was used in place of words aided and was recorded as a sixth major category for the purpose of this study.

Reliability was established by both Stuever (1969) and Russell (1973). Using the Scotts Coefficient formula, reliability coefficients of .94 and .96 respectively were found.

Statistical Techniques Used in the
Treatment of the Data

A design utilizing a t-test for dependent means was used to test for significant differences between first and second readings for all six hypotheses. Each child served as his own control. The t-values were calculated using the following formula:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{\sum D^2}{n(n-1)}}}$$

D = difference between the dependent variable for each pair of scores for each subject

n = number of subjects in a group

\bar{X}_1 = mean of scores for first reading

\bar{X}_2 = mean of scores for second reading

Critical t-values in determining significance are:

$t_{25, .01}$	=	2.787
$t_{25, .02}$	=	2.485
$t_{25, .05}$	=	2.060
$t_{25, .10}$	=	1.708

CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was to determine the effect of oral rereading of the same passage on the error patterns and rate of reading of second grade developmental readers. The error types were recorded, tabulated, and categorized according to the B-S-R Error Analysis system. In an examination of the resulting profiles, differences would be determined between error patterns of the two readings at instructional level, of the two readings at frustration level, and of the first reading at instructional and the second reading at frustration level.

The error profiles will be presented first. Next, the three hypotheses concerning the differences between the error patterns in the first and second readings of the instructional and frustration passages. Finally, the three hypotheses concerning differences in rate of reading between the two readings at the two functional levels.

Reading Profile of the Second Grade

Developmental Reader

The types of errors made in the two readings at the two functional levels are presented in Table II in B-S-R Error Analysis system (Stuever, (1969)).

An examination of Table II reveals a pattern for the four readings that bears a similarity, especially in the main categories. The

percentages reflect the pattern better than the actual number of errors. In the visual perception category, the error types most prevalent were: word completely wrong (---), beginning and ending letter correct (+--+), and beginning only correct (+--). In the visual auditory category, wrong in several parts was the most prevalent error (ccvv). Refusals decreased in the second reading of both instructional and frustration levels. Repetitions was the only behavioral subcategory with fewer errors in the second readings at both instructional and frustration levels. The structural analysis category increased more than any other category or subcategory from instructional to frustration level. In most categories and subcategories, there was an increase in the number of errors in the second reading at both the instructional and frustration levels.

Information needed to establish the percentage of word recognition in the four readings can be extracted from Table II. The categories generally used to establish the functional level are: visual perception, visual auditory, refusals, omissions, additions, and structural analysis. The errors in these categories are referred to as scoreable errors. In Chapter I the word recognition criteria for the instructional level was defined as 91 to 94 percent word recognition accuracy. Frustration level was defined as 90 percent or below. In Table III are the mean scores for scoreable errors recorded in each of the error types in the four readings. The errors upon which the tabulation was based were from the 200 words following the first 25 words of the extended passages. On rereading, the second reading at instructional level remained instructional and second reading at frustration level remained frustration.

Table IV shows the percentage change in errors. The greatest percentage of reduction in errors at instructional level was in the

TABLE II

TYPES OF ERRORS CATEGORIZED IN THE
B-S-R ERROR ANALYSIS SYSTEM

Types Errors	1st Instructional	2nd Instructional	1st Frustration	2nd Frustration
Visual Perception	(121) 35.0%	(122) 37.0%	(182) 38.0%	(156) 32.5%
--+	(12) 10.0%	(11) 9.0%	(13) 7.0%	(17) 11.0%
++	(34) 28.0%	(27) 22.0%	(44) 24.2%	(43) 21.0%
+-	(6) 5.0%	(3) 2.5%	(13) 7.0%	(6) 3.8%
--+	(2) 1.6%	(1) .8%	(4) 2.2%	(3) 2.0%
+-	(21) 17.3%	(26) 21.0%	(37) 20.3%	(33) 21.0%
+-	(0) 0	(2) 1.6%	(0) 0	(1) .6%
---	(36) 29.8%	(41) 33.6%	(63) 34.6%	(49) 31.4%
Dir.	(10) 8.3%	(11) 9.0%	(8) 4.4%	(4) 2.6%
Visual Auditory	(38) 11.0%	(32) 10.0%	(56) 12.0%	(56) 12.0%
C	(4) 10.6%	(4) 12.5%	(3) 5.4%	(7) 12.5%
CC	(0) 0	(0) 0	(3) 5.4%	(1) 1.8%
V	(8) 21.0%	(7) 22.0%	(8) 14.3%	(13) 23.2%
VV	(2) 5.0%	(4) 12.5%	(2) 3.6%	(1) 1.8%
CCVV	(24) 63.4%	(17) 56.3%	(40) 71.4%	(34) 60.7%
Refusals	(20) 6.0%	(7) 2.0%	(42) 9.0%	(36) 7.0%
Behavioral	(129) 37.0%	(136) 42.0%	(122) 25.0%	(153) 32.0%
Omission	(25) 19.4%	(23) 17.0%	(27) 22.0%	(36) 23.5%
Addition	(9) 7.0%	(17) 12.5%	(15) 12.3%	(26) 23.6%
Repeat	(45) 35.0%	(41) 30.0%	(36) 29.5%	(32) 21.0%
Correct	(50) 38.0%	(56) 41.2%	(44) 36.0%	(59) 38.6%
Structural Analysis	(39) 11.0%	(27) 8.0%	(78) 16.0%	(79) 16.0%
TOTALS	(347)	(324)	(480)	(480)

TABLE III

MEAN SCORES FOR SCOREABLE ERRORS IN EACH
ERROR TYPE IN THE FOUR READINGS

Types of Scoreable Errors	Inst. I	Inst. II	Frust. I	Frust. II
Visual Perception	6.3	6.4	9.4	8.2
Visual Auditory	2.0	1.7	2.9	.2
Refusals	1.3	1.2	1.4	1.9
Omissions	.5	.9	.8	1.4
Additions	2.1	1.4	4.1	4.2
Structural Analysis	<u>1.1</u>	<u>.4</u>	<u>2.2</u>	<u>1.9</u>
TOTALS	13.3	12.0	20.8	20.5
Word Recognition per 200 word sample	93.4%	94.0%	89.6%	89.75%

category of refusals where there was a reduction of 65 percent. There was the sizable percent of reduction, 23 percent, in the structural analysis category. The largest percentage of change at frustration level was in the behavioral category, where there was 20.3 percent increase. The total number of errors and number of visual auditory errors remained exactly the same which is reflected by the zero percentage of change.

In figures 1, 2, and 3 comparisons of the errors were made according to the B-S-R Error Analysis System - first between the two instructional level readings and finally between the first instructional and the second frustration readings. Figure 1 graphically showed a substantial decrease

TABLE IV

PERCENTAGE CHANGE IN ERRORS BETWEEN
THE TWO READINGS AT INSTRUCTIONAL
AND FRUSTRATION LEVELS

Types of Errors	Instructional	Frustration
Visual Perception	+ .8%	-14.3%
-++	- 8.3%	+23.5%
+--+	-20.6%	- 2.3%
++-	-50.0%	-53.8%
--+	+50.0%	-25.0%
+--	+19.2%	-11.0%
-+-	+ 2.0%	+ 1.0%
---	+12.2%	-22.2%
Directional	+10.0%	-50.0%
Visual Auditory	-15.8%	0
C	0	+57.1%
V	0	-66.7%
CC	-12.5%	+38.5%
VV	+50.0%	-50.0%
CCVV	-29.2%	-15.0%
Refusals	-65.0%	-14.3%
Behavioral	+ 5.1%	+20.3%
Omissions	- 8.0%	+25.0%
Additions	+47.1%	+42.3%
Repetitions	- 8.8%	-11.1%
Corrections	+10.7%	+25.4%
Structural Analysis	-23.0%	- 1.3%
TOTAL ERRORS	- 6.7%	0

in refusals in the second reading at instructional level. There was also a noticeable decrease in structural analysis errors. A second reading had some effect on this category within these second graders instructional level. Behavioral errors and visual perception errors were the most prominent in both readings. There was a slight decrease of behavioral errors in the second reading.

Figure 2 indicated increases in all behavioral subcategories except repetitions in the second reading at frustration level. This caused the behavioral category to have quite an increase. The errors in the structural analysis category increased substantially from instructional to frustration level (compare figures 1 and 2). A second reading at frustration level did not cause a decrease. It is expected that a second grade developmental reader would have difficulty in a frustration passage in this category. He would not be expected to have mastered the skills necessary to be able to attack these words.

In Figure 3, the pattern between the first reading at instructional and second reading at frustration level is much the same except for the structural analysis category and the repetitions subcategory. As would be expected, there is a large increase in structural analysis for reasons already stated. The number of repetitions decreased with each successive reading in all four readings.

Any study, in which the substitutions category includes any word given which differs from the printed page, is including in this category all errors in the visual perception category and its subcategories and all errors in the visual auditory category with its subcategories according to the B-S-R Error Analysis System. Busboom (1974) is one investigator who has included all these errors into her substitution

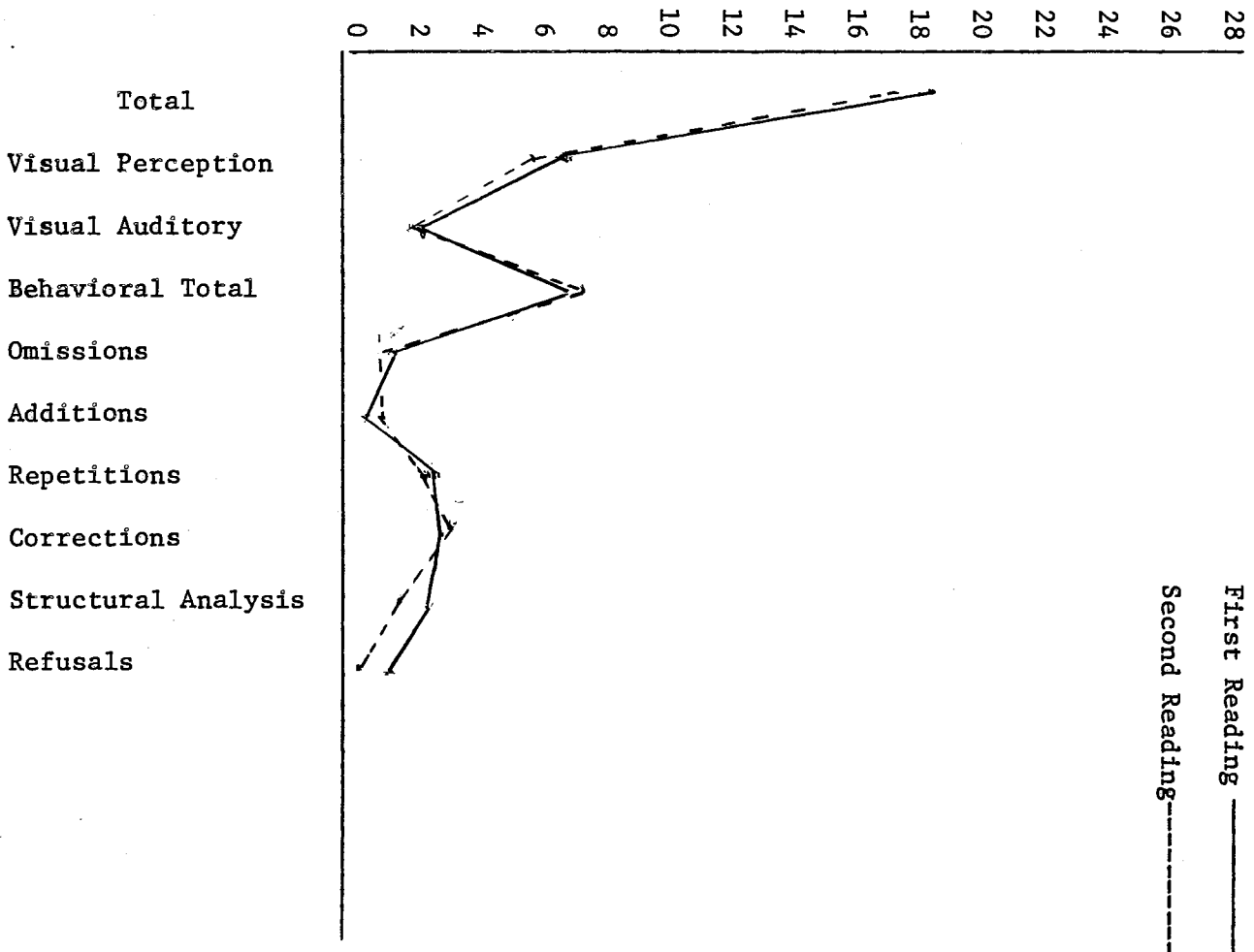


Figure 1. B-S-R Error Analysis, Instructional Level

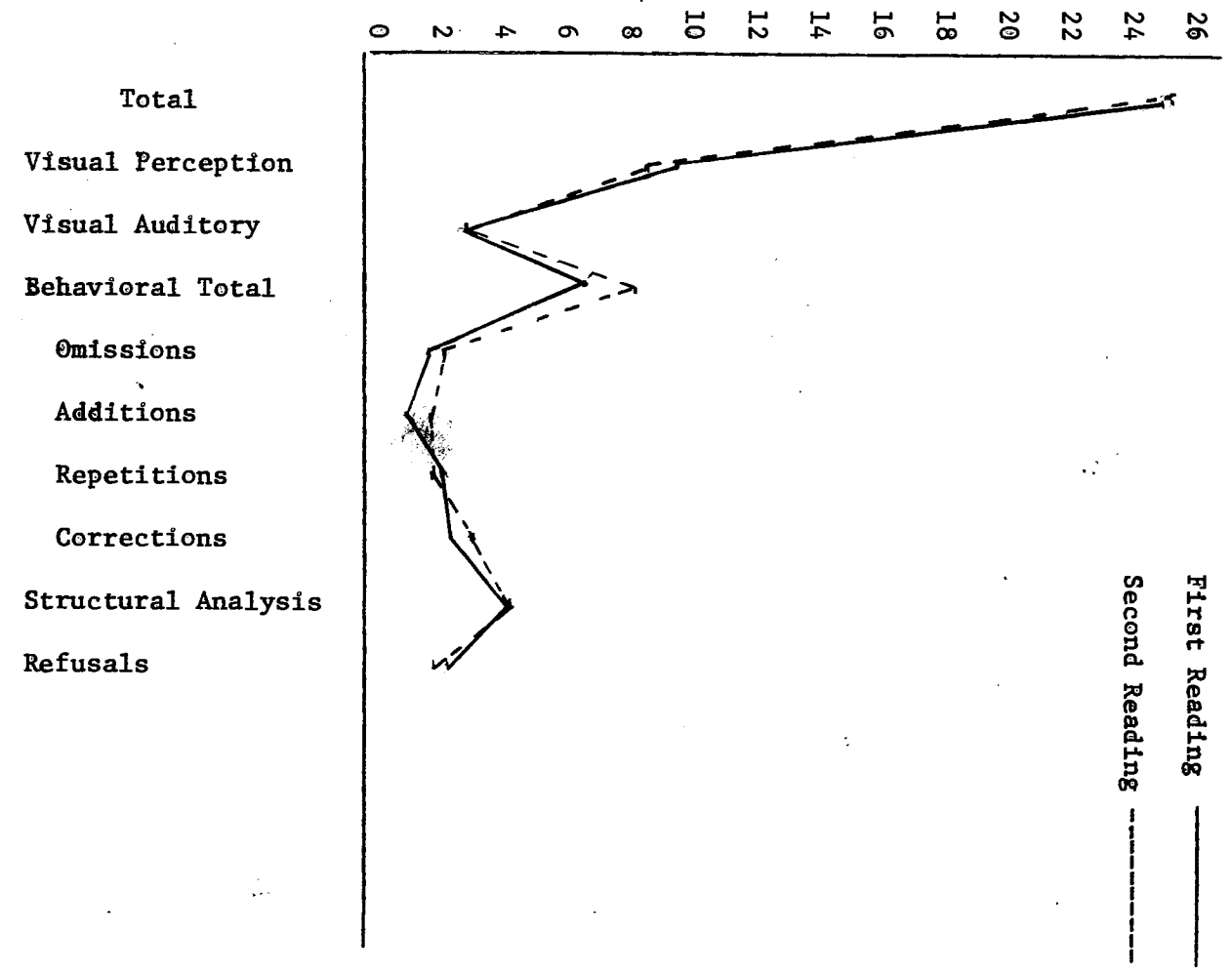


Figure 2. B-S-R Error Analysis, Frustration Level

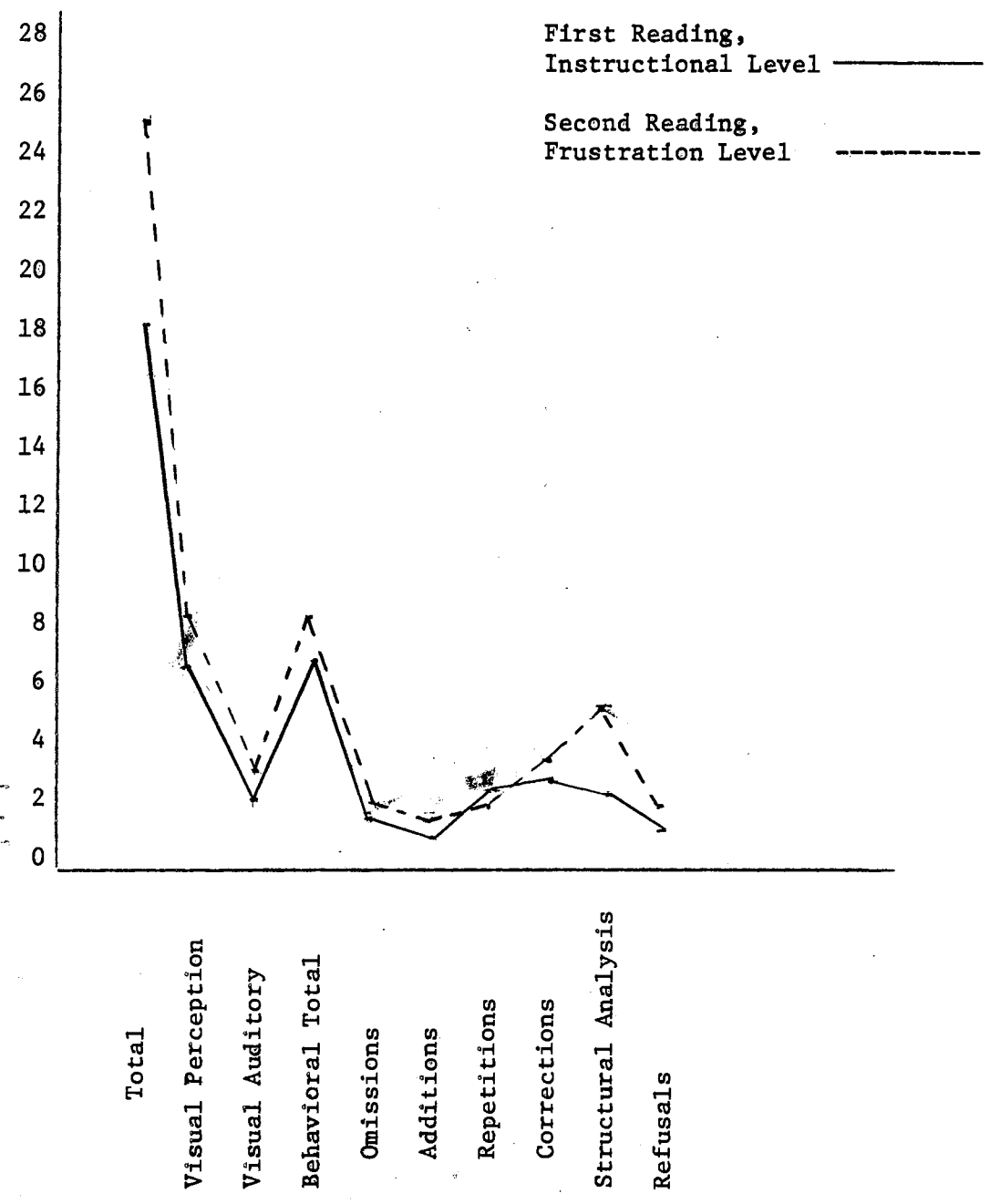


Figure 3. B-S-R Error Analysis, First Reading Instructional Level and Second Reading Frustration Level

category. In her study she found no significant differences among the four treatments in substitution. In her recommendations she suggested that in a future study this category be broken down to see if there is a shift.

Figures 4, 5, and 6 portray the differences in the number of errors in the subcategories of the visual perception and visual auditory categories - first between the two instructional level readings, then, between the two frustration level readings, and finally between the first instructional and second frustration reading. The general pattern is what would be expected in second grade developmental readers. In examining Figure 4, it is evident from the visual perception category that the subjects looked primarily at the first and last of the word, or just the first, or perceived the first letter wrong. In the visual auditory category the subjects missed words most in the subcategory-- wrong in many parts.

In Figure 5, the sight word errors at frustration increased substantially from the instructional level. The second reading caused a decrease. Wrong in all parts subcategory of the visual auditory category also increased substantially. Figure 6 indicates a similarity in pattern between the first instructional reading and the second frustration reading. The subcategory of last letter wrong was exactly the same in the two readings.

The error patterns of second grade developmental readers based on two readings at instructional level and two readings at frustration level have been presented in tables and graphs. These will be discussed further in Chapter V. The number of errors did not change enough as a result of a second reading to change functional level at either instructional or frustration levels.

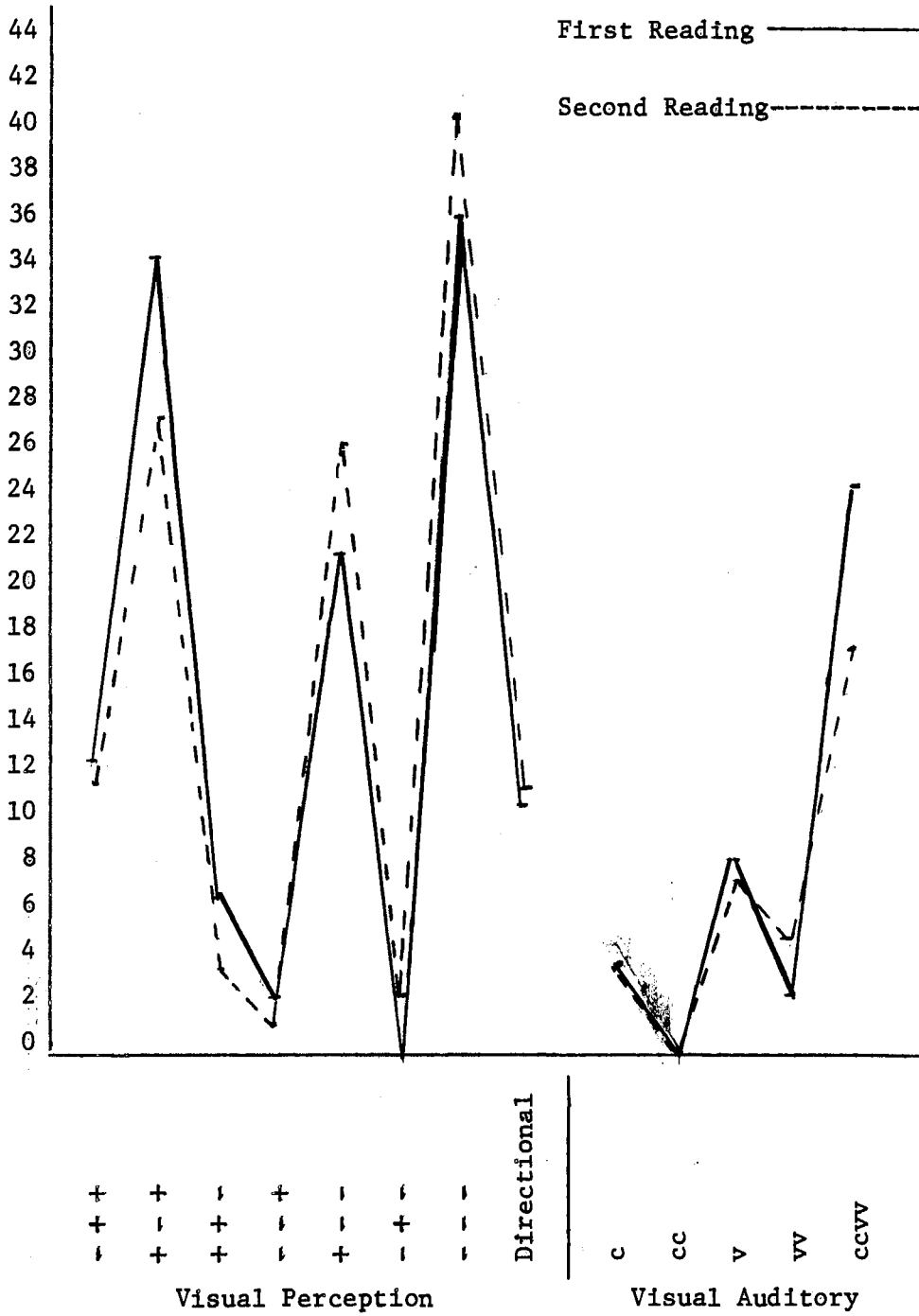


Figure 4. Substitution Category Breakdown According to B-S-R Error Analysis system, Instructional Level First and Second Reading

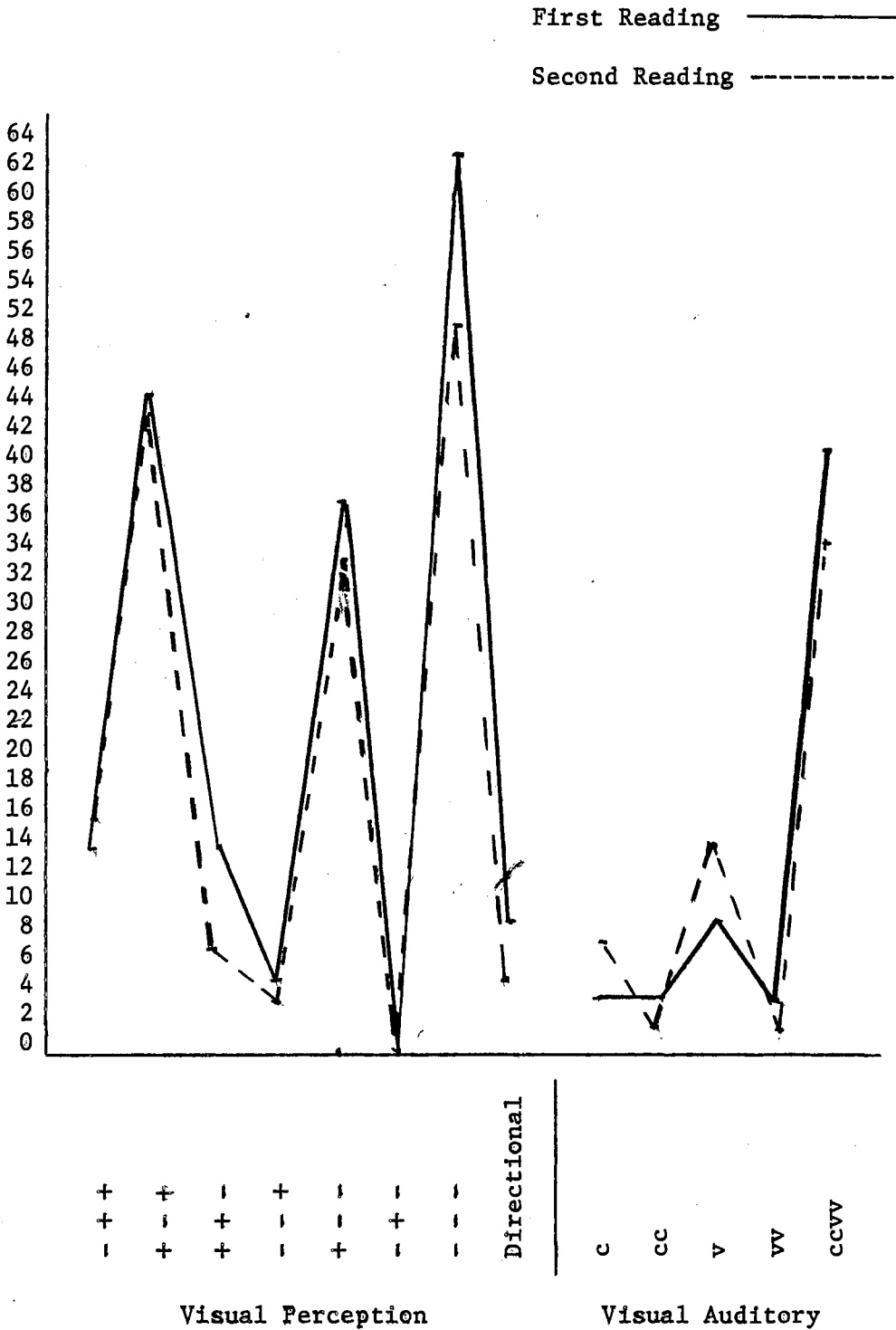


Figure 5. Substitution Category Breakdown According to B-S-R Error Analysis system, Frustration Level First and Second Reading

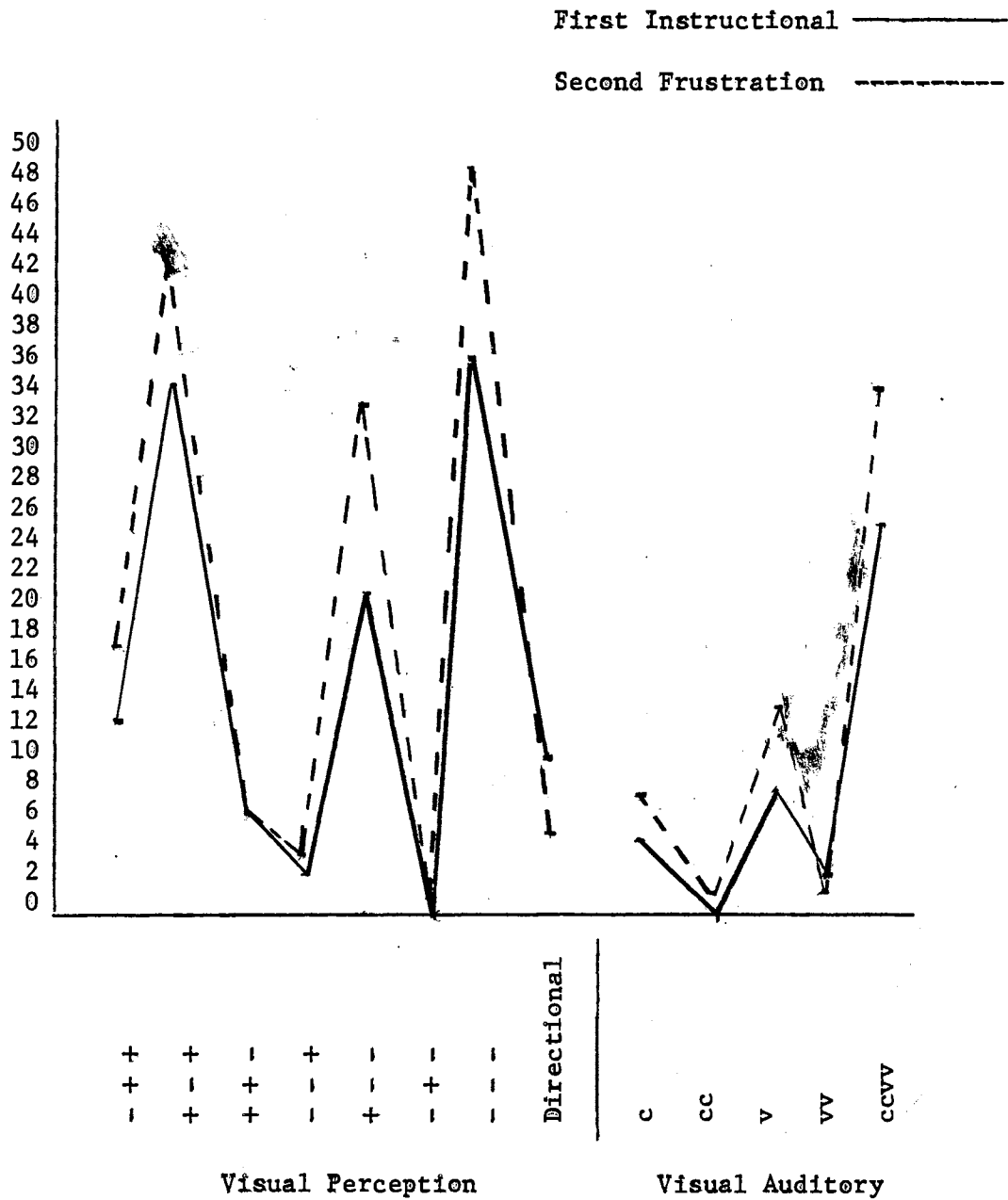


Figure 6. Substitution Category Breakdown According to B-S-R Error Analysis system, First Reading Instructional Level and Second Reading Frustration Level

Hypotheses

Hypotheses I, II, and III were tested in each of the following categories and subcategories: visual perception with eight subcategories, visual auditory with five subcategories, refusals, behavioral with four subcategories, and structural analysis. The .05 level of significance was accepted for this study.

Hypothesis I: There is no significant difference between the type of error produced on the first reading of an extended oral passage at instructional level and the type of error produced on a second reading of the same passage.

To test Hypothesis I, all recorded errors were tabulated and placed in the proper categories for each child for all four readings. The mean of all student's errors in each category and subcategory was computed. These means were totaled and a t-test for dependent means was computed to determine the significance of any differences. The resulting data pertinent to Hypothesis I is reported in Table V.

Hypothesis I can be rejected for one major category: refusals. At the $p < .10$, Hypothesis I could have been rejected for additions.

Hypothesis II: There is no significant difference between the type of error produced on the first reading of an extended oral passage at frustration level and the type of error produced on a second reading of the same passage.

Hypothesis II was tested in the same manner as Hypothesis I. The results are tabulated in Table VI.

Hypothesis II cannot be rejected for any category on the basis of the above data. This hypothesis could have been rejected for subcategories ~~++~~ and corrections at the $p < .10$.

TABLE V

DEPENDENT T-TEST FOR THE INSTRUCTIONAL
LEVELS I AND II (DF = 25)

Types of Errors	Level		Significance
Visual Perception		t = - .067	NS
-++	t = .325		NS
+--	t = 1.099		NS
++-	t = .900		NS
--+	t = .566		NS
+-	t = -1.157		NS
-+	t = -1.455		NS
---	t = - .582		NS
Directional	t = - .294		NS
Visual Auditory		t = .699	NS
C	t = 0		NS
CC	t = 0		NS
V	t = .307		NS
VV	t = -1.000		NS
CCVV	t = 1.128		NS
Refusals		t = 2.306	p < .05
Behavioral		t = - .399	NS
Omissions	t = .316		NS
Additions	t = -2.035		p < .10
Repetitions	t = .676		NS
Corrections	t = - .307		NS
Structural Analysis		t = 1.528	NS

TABLE VI

DEPENDENT T-TEST FOR THE FRUSTRATION
LEVELS I AND II (DF = 25)

Types Errors	Level		Significance
Visual Perception		t = 1.063	NS
--+	t = - .836		NS
+-+	t = .100		NS
++-	t = 1.794		p < .10
---+	t = .437		NS
+--	t = .676		NS
-+-	t = -1.000		NS
---	t = 1.016		NS
Directional	t = 1.455		NS
Visual Auditory		t = .419	NS
C	t = -1.165		NS
CC	t = 1.000		NS
V	t = -1.315		NS
VV	t = .566		NS
CCVV	t = .629		NS
Refusals		t = 1.302	NS
Behavioral		t = -1.464	NS
Omissions	t = - .473		NS
Additions	t = -1.504		NS
Repetitions	t = .506		NS
Corrections	t = -1.808		p < .10
Structural Analysis		t = - .112	NS

Hypothesis III: There is no significant difference between the type of errors incurred on the first reading of an extended oral passage at instructional level and the type of errors made on the second reading of a passage at frustration level.

Hypothesis III was tested in the same manner as Hypothesis I and II. The results are tabulated in Table VII.

Hypothesis III can be rejected for the structural analysis category at $p < .01$ and for the additions subcategory at $p < .05$. Otherwise there is little difference between the performance on the first reading at instructional and second reading at frustration.

Hypotheses IV, V, and VI concern rate of reading. The data for these will be combined in Table VIII and Table IX. Then each will be discussed separately.

Hypothesis IV: There is no significant difference between the rate of reading an extended oral passage at instructional level and the rate of reading the same passage for a second time.

On the basis of the following data in Table VIII and Table IX, this hypothesis can be rejected at the $p < .02$.

Hypothesis V: There is no significant difference between the rate of reading on the first reading and rate of reading on the second reading of an extended passage written at the frustration level.

On the basis of the following data in Tables VIII and IX, this hypothesis can also be rejected at the $p < .01$.

TABLE VII
DEPENDENT T-TEST FOR INSTRUCTIONAL I AND
FRUSTRATION II READINGS (DF = 25)

Types of Errors	Level	Significance
Visual Perception		$t = -1.444$ NS
--++	$t = - .864$	NS
+-+	$t = - .603$	NS
++-	$t = 0$	NS
---+	$t = - .369$	NS
+--	$t = -1.189$	NS
-+-	$t = -1.000$	NS
----	$t = -1.348$	NS
Directional	$t = 1.302$	NS
Visual Auditory		$t = -1.280$ NS
C	$t = - .766$	NS
CC	$t = -1.000$	NS
V	$t = -1.157$	NS
VV	$t = .566$	NS
CCVV	$t = .969$	NS
Refusals		$t = -1.384$ NS
Behavioral		$t = -1.058$ NS
Omissions	$t = -1.129$	NS
Additions	$t = -2.393$	$p < .05$
Repetitions	$t = 1.490$	NS
Corrections	$t = - .680$	NS
Structural Analysis		$t = -3.365$ $p < .01$

TABLE VIII

READING RATE

	Instr. I	Instr. II	Frust. I	Frust. II
Words per Minute	61	70	55	64

TABLE IX

T-TESTS FOR WORDS PER MINUTE

Instructional level - 1st and 2nd reading	t = -2.648	p .02
Frustration level - 1st and 2nd reading	t = -6.282	p .01
Instructional I and Frustration II reading	t = -1.130	NS

Hypothesis VI: There is no significant difference between the rate of the first reading of a passage at instructional level and the rate of the second reading at frustration level.

On the basis of the above data, this hypothesis cannot be rejected. This lends support to the position that these two readings are at the same level of difficulty.

CHAPTER V

SUMMARY AND RESULTS

General Summary of the Investigation

This study examined the effect of oral rereading on error type and the rate of reading of second grade developmental readers. Second graders who were identified by their teachers as reading between 2.0 and 3.0 were screened with the Standard Reading Inventory. Each child, identified by the SRI as reading at the second grade level, was tentatively included in this study. The reading performance of each child during the first reading of an extended passage was evaluated to establish that the selection was at his instructional level. Nineteen children, who read one of the three extended passages written at 2.0 to 3.0 reading level with 91 to 94 percent word recognition accuracy, became the final sample.

Each of these children read and reread a passage at his instructional level and another passage at his frustration level. The errors were recorded on copies of the selections. The readings were timed and taped. Later the recordings were used for analysis of errors. The errors were tabulated with the use of the B-S-R Error Analysis system, and the t-test for dependent means was used to test for differences between two readings for all six hypotheses. In addition, the average percent of word recognition accuracy for each reading was compared to note any change in functional level between first and second readings.

Hypotheses I, II, and III can be rejected for all error types with these exceptions. There was a significant decrease at the $p < .05$ in the refusals category between the first and second reading at instructional level. There was a significant decrease at the $p < .01$ in the structural analysis category and significant increase at the $p < .05$ level in the additions subcategory between the first reading at instructional level and the second reading at frustration level.

Hypotheses IV and V compare reading rate of the two readings at instructional and frustration levels. These two hypotheses can be rejected because there was a significant increase between first and second readings at instructional level at the $p < .02$ and a significant increase between first and second readings at frustration level at the $p < .01$. Hypothesis VI, dealing with a comparison of rate of reading between the first reading at instructional level and second reading at frustration level, cannot be rejected, as there was no significant difference.

Theoretical Considerations

Observations can be made of the reading behaviors exhibited by the second grade developmental readers who participated in this study. Because of the similar design and methodology of the investigation by Gonzales (1974) of third grade developmental readers, cross study comparisons can be made of the reading behaviors observed at the two developmental reading levels.

At the second grade, the second reading at instructional level remained instructional and the second reading at frustration level remained frustration. This suggests that difficulty level for second

grade developmental readers could be determined orally at sight. The third graders read the passages at frustration level with an 88.9 percent word recognition accuracy. At the second reading of the same passages, this average went up to 92.4, which is within the instructional range. This suggests that 89 percent word recognition accuracy may be tolerable for instructional level for third grade developmental readers.

The error patterns for the four readings remained quite similar at both developmental levels. These patterns at the two developmental levels differed from each other somewhat. The patterns of the four readings and the points at which they deviate at each of the developmental levels give clues to reading behaviors expected at the second grade developmental level and those expected at the third grade developmental level.

Included in the study by Gonzales was an analysis of the appropriateness of the errors in preceding and total sentence context. Analysis of that data indicates that the third graders were using contextual clues, particularly the preceding contextual clues.

The second graders used visual-perceptual skills in identification of words. They were restricted at this level in the use of other word identification skills. They used parts of words effectively, but without the benefit of a more mature use of context they did not have as much verification of the appropriateness of their word identification as did the third graders.

A less mature use of context by the second graders is apparent in examination of two other categories. There was a sharp rise in structural analysis errors among the second graders from instructional to frustration level reading. At instructional level, there was a decrease

in the second reading indicating that they could use this skill at their own developmental level. At a more difficult level (frustration), some words involved skills in the structural analysis category which they had not yet mastered. Their use of context skills was not mature enough to clue them on the inappropriateness of their choice of word structure. This is reflected by exactly the same percentage of errors in the structural analysis category in the first and second readings at frustration level. To a lesser degree this same phenomenon is apparent in the visual auditory category. The third graders demonstrated a greater mastery of structural analysis skills and visual auditory skills. With the aid of a more mature use of context, the third graders showed a significant decrease in these two categories in the second reading at frustration level. The second graders were restricted in the skills they were able to use. The third graders had a wider range of skills available to them. Errors, then, should not be thought of as bad or wrong, but as indicators of which skills the readers are using in relation to the developmental stage of the readers.

At the second grade developmental level, oral rereading increased the reading rate significantly at both instructional and frustration levels. There was, however, no significant difference in the rate of reading between the first reading at instructional and the second reading at frustration.

Other results of this study suggest that the common practice of diagnosing the reading difficulties on the basis of a passage read orally-at-sight is sufficient. The instructional level and the types of errors can be accurately established from the reading of an extended passage orally-at-sight.

For instructional purposes, also, it would seem that one reading is all that is necessary. If the selections are at instructional level, then silent, rather than oral, reading would be preferred much of the time. If, however, a child is asked to read orally, then he should be given the chance to read it first silently because there is a significant difference in rate of reading between the first and second readings. This increased rate implies a more fluent reading even if the number and type of errors have not changed.

BIBLIOGRAPHY

- Betts, Emmet A. Foundations of Reading Instruction. New York: American Book Company, 1946.
- Bormuth, John Robert. "Cloze Tests as Measures of Readability and Comprehension Ability." (Unpublished Doctoral Dissertation, Indiana University, 1962.)
- Busboom, Janet Blohowiak. "An Investigation of the Relationship Among Various Testing Techniques on an Informal Reading Inventory at Instructional and Frustration Level." (Unpublished Doctoral Dissertation, University of Illinois, 1974.)
- Gates, Arthur I. and A. S. McKillop. Gates-McKillop Reading Diagnostic Tests. New York: Bureau of Publications, Teachers College, Columbus University, 1962.
- Gates, Arthur I. and Walter H. MacGinitie. Gates-MacGinitie Reading Tests. New York: Bureau of Publications, Teachers College, Columbia University, 1965.
- Gilmore, John V. "The Relationship Between Certain Oral Reading Habits and Oral and Silent Reading Comprehension," (Unpublished Doctoral Dissertation, Harvard University, 1947.)
- Glenn, H. "The Effect of Silent and Oral Reading on Literal Comprehension and Oral Reading Performance." (Unpublished Doctoral Dissertation, University of Southern California, 1971.)
- Gonzales, Phillip. "The Effect of Repeated Oral Readings at Instructional and Frustration Levels on Reading Performance of Third Grade Developmental Readers." (Unpublished Doctoral Dissertation, Oklahoma State University, 1974.)
- Goodman, Kenneth S. "Reading: A Psycholinguistic Guessing Game." Journal of the Reading Specialist, Vol. VI (1967), 126-135.
- Kasdon, Lawrence M. "Silent Reading Before Oral Reading?" Ohio Reading Teacher, October 1967, 6-8.
- Kasdon, Lawrence M. "Oral Versus Silent-Oral Diagnosis." Reading Diagnosis and Evaluation. Ed. Dorothy L. DeBoer, Newark, Delaware; International Reading Association, 1970.

- Lowell, Robert E. "Problems in Identifying Reading Levels with Informal Reading Inventories." Reading Difficulties: Diagnosis, Correction and Remediation. Ed. W. K. Durr. Newark, Delaware: International Reading Association, 1970.
- Monroe, Marion. Children Who Cannot Read. Chicago: University of Chicago Press, 1932.
- McCracken, Robert A. "The Oral Reading Performance of a Second Grade Class Using an Informal Reading Test." Journal of Educational Research, Vol. VI (November, 1961), 113-117.
- McCracken, Robert A. Standard Reading Inventory. Klamath Falls, Oregon: Klamath Printing Company, 1966.
- Packman, Linda Arlene. "Relationships Between Selected Measures of Behavior and Levels of Reading Comprehension for Good, Average and Poor Readers." (Unpublished Doctoral Dissertation, University of Pennsylvania, 1970.)
- Powell, William R. "Acquisition of a Reading Repertoire." (Unpublished paper, University of Evansville, 1973.)
- Ray, Darrel. "A Qualitative Analysis of Oral Reading Behavior." (Unpublished paper, Oklahoma State University, 1969.)
- Robert, G. R. and E. A. Lunzar. "Reading and Learning to Read." Development in Human Learning. Ed. E. A. Lunzar and G. F. Morris. New York: American Elsevier Publishing Company, 1968, 192-224.
- Smith, Frank. Understanding Reading. New York: Holt, Rinehart, and Winston, Inc., 1971.
- Spache, George and Evelyn. Reading in the Elementary School. Second Edition. Boston: Allyn and Bacon, 1969.
- Stuever, Rita. "Analysis of Relationship of Length of Passage to Categories of Oral Reading Errors." (Unpublished Doctoral Dissertation, Oklahoma State University, 1969.)
- Waynant, Louise. "An Investigation of the Relationship Between Techniques of Testing and Oral Reading Performance," (Unpublished Doctoral Dissertation, University of Maryland, 1972.)
- Weber, Rose Marie. "A Linguistic Analysis of First Grade Reading Errors." Reading Research Quarterly, Vol. III, (Spring, 1970), 427-251.

VITA²

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