

A STUDY OF REMEDIAL READING STUDENTS:  
IDENTIFICATION, READING ACHIEVEMENT  
AND THE FOLLOW-UP OF A  
SELECT GROUP

By

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## TABLE OF CONTENTS

Chapter	Page
I. PRESENTATION OF THE PROBLEM . . . . .	1
Introduction . . . . .	1
Need for the Study . . . . .	3
Statement of the Problem . . . . .	3
Definition of Terms . . . . .	4
Limitations of the Study . . . . .	5
Assumptions . . . . .	5
Significance of the Study . . . . .	5
II. REVIEW OF THE LITERATURE . . . . .	7
Introduction . . . . .	7
Identification of Reading Disabilities . . . . .	7
Non-Promotion as a Measure of Intervention . . . . .	12
Gains and Relative Gains in Remedial Reading	
Instruction . . . . .	14
Summary . . . . .	18
III. METHODS AND PROCEDURES . . . . .	20
Introduction . . . . .	20
Sample and Population . . . . .	20
Evaluation and Testing Procedure . . . . .	21
Initial Group of Remedial Reading Students . . . . .	21
Follow-Up Study of Remedial Reading Students . . . . .	22
Instrumentation . . . . .	22
Testing Instruments . . . . .	22
Questionnaire and Interview Guide . . . . .	24
Procedures in Analyzing Data . . . . .	25
IV. FINDINGS OF THE STUDY . . . . .	26
Introduction . . . . .	26
Methods and Instruments Used to Identify the	
Remedial Reading Student . . . . .	27
School Procedures Initiating Remediation	
of Reading Disabilities . . . . .	30
Reading Achievement of Initial Students . . . . .	32
Reading Achievement in the Follow-Up Study . . . . .	37
Oral and Silent Reading Levels of Students	
in Follow-Up Study . . . . .	48

Chapter	Page
Reading Strengths and Weaknesses of Students in Follow-Up . . . . .	51
Reading Progress Reported by Teachers in Follow-Up Study . . . . .	54
Parental Evaluation of Reading Progress of Students in Follow-Up . . . . .	57
Parental Identification of Reading Difficulty . . . . .	59
 V. SUMMARY AND CONCLUSIONS . . . . .	 61
General Summary of the Investigation . . . . .	61
Summary of the Findings . . . . .	62
Time and Method of Identification of Reading Disability . . . . .	62
Attempted Methods of Remediation Prior to Remedial Reading Instruction . . . . .	63
Reading Gains of the Initial 20 Remedial Reading Students . . . . .	63
Reading Progress of the Remedial Reading Students in the Follow-Up Study . . . . .	63
Reading Ability as Perceived by Teachers and Parents . . . . .	65
Conclusions . . . . .	66
Recommendations . . . . .	67
 A SELECTED BIBLIOGRAPHY . . . . .	 69
 APPENDIXES . . . . .	 73
APPENDIX A - PREFACE LETTER REQUESTING PERMISSION OF PARENT . . . . .	74
APPENDIX B - QUESTIONNAIRE GUIDE . . . . .	76
APPENDIX C - EXAMPLE OF STUDENT ACADEMIC RECORD COMPILED FOR USE IN THIS STUDY . . . . .	79

LIST OF TABLES

Table	Page
I. Ratings of Individual Students on the <u>Metropolitan Readiness Test</u> . . . . .	28
II. Comparison of Ratings on the <u>Metropolitan Readiness Tests</u> for the Initial Remedial Reading Students as to Number and Percentage . . . . .	28
III. Grade in Which Disabled Reader was First Identified by Teacher . . . . .	29
IV. Number and Percentage of Disabled Readers Identified by Teachers in Kindergarten and Elementary Grades . . . . .	30
V. Retention of Individual Remedial Reading Students . . . . .	31
VI. Number and Percentage of Disabled Readers Retained in Kindergarten and First Grade . . . . .	32
VII. Students Placed in Prescriptive and Basal Readers Prior to Third Grade . . . . .	32
VIII. Summation of Students Placed in Prescriptive Readers Prior to Third Grade . . . . .	33
IX. Gates-MacGinitie Reading Scores of the Initial Remedial Reading Students Compared to Expected Reading Scores Before Remedial Instruction . . . . .	34
X. Comparison of Reading Scores of Initial Remedial Reading Students in Grade Equivalents During Remedial Instruction . . . . .	36
XI. Comparison of Reading Score to Expected Reading Score in Grade Equivalents of Students in Follow-Up Using <u>Gates-MacGinitie Reading Tests</u> . . . . .	38
XII. Estimated Reading Levels on the Durrell Oral and Silent Reading Analysis . . . . .	49
XIII. Comparison of Oral and Silent Reading Scores of the <u>Durrell Analysis of Reading Difficulty</u> in Grade Equivalents . . . . .	50

Table	Page
XIV. Comparison of Word Recognition Techniques in Grade Equivalents . . . . .	51
XV. Results of Word Recognition Techniques of the <u>Silent Reading Diagnostic Tests</u> . . . . .	52
XVI. Total Results on the Subtests of the <u>Silent Reading</u> <u>Diagnostic Tests</u> . . . . .	53
XVII. Results of Word Recognition Skills of the <u>Silent</u> <u>Reading Diagnostic Tests</u> . . . . .	55
XVIII. Reading Progress as Perceived by Teachers of Students in the Follow-Up Study . . . . .	56
XIX. Reading Progress as Perceived by Parents of Students in the Follow-Up Study . . . . .	58
XX. Grade in Which Disabled Reader was First Identified by Parent . . . . .	60



## LIST OF FIGURES

Figure	Page
1. Student Number One: Accumulative Reading Record Based on the <u>Iowa Tests of Basic Skills</u> . . . . .	40
2. Student Number Two: Accumulative Reading Record Based on the <u>Iowa Tests of Basic Skills</u> . . . . .	41
3. Student Number Three: Accumulative Reading Record Based on the <u>Iowa Tests of Basic Skills</u> . . . . .	43
4. Student Number Four: Accumulative Reading Record Based on the <u>Iowa Tests of Basic Skills</u> . . . . .	44
5. Student Number Five: Accumulative Reading Record Based on the <u>Iowa Tests of Basic Skills</u> . . . . .	46
6. Student Number Six: Accumulative Reading Record Based on the <u>Iowa Tests of Basic Skills</u> . . . . .	47

## CHAPTER I

### PRESENTATION OF THE PROBLEM

#### Introduction

The early identification of reading problems and the progress children make in reading are of extreme importance in the present day school system as recent legislation has required that children with learning disabilities be identified and evaluated.

Realizing the importance of early identification and remediation, many teachers, clinicians, and researchers have sought ways to identify the remedial reader early in his academic years. Many children who have difficulty in reading are identified a few years after their problems have begun, and because of this lapse of time are placed further behind in their reading ability. As Jansky and de Hirsch (1972, p. 1) state, "If intervention is to be timely and effective, it is imperative to identify potentially failing readers at the earliest possible age."

The child experiences inadequacy and sometimes failure in reading during the interium between identification and remediation. Theorists such as Erickson and Glasser have recognized critical periods of learning. Erickson (1968) identified the ages of 6 to 11 years as the period of Industry vs. Inferiority in which a child develops a sense of industry and learns to win recognition by producing things. The hazard at this period, as identified by Erickson, is the child achieving a sense of inadequacy or inferiority. Glasser (1969) believes that the first years of

school are critical for success or failure. He states, "The critical years are between five and ten. Failure, which should be prevented throughout schools, is most easily prevented at this time" (p. 27).

The methods used to identify children with potential reading difficulties are significant. Readiness tests, teacher observation, and survey tests are some of the current methods used for recognition of children with reading disabilities. The effectiveness of these methods is questioned as some children with problems in reading are not recognized.

An intervention measure used in many school systems is retention. Street and Leigh (1969) indicate that retention is used mainly in the elementary grades with the largest percentage being in the first grade. There has been controversy over the remedial benefits of retaining a child as a measure for remediating reading disabilities.

Another attempt at remediation or intervention has been to place children with reading disabilities in a prescriptive textbook within the structure of the classroom setting. The criticism of this procedure is that the classroom teacher may not be qualified in remedial methods and procedures, and therefore cannot approach the remediation with the knowledge of the student's strengths or weaknesses.

In recent years, there has been increasing interest and concern with the reading achievement and the developmental progress of students in the public school system. Intervention programs have been set up to aid the disabled reader. A report presented on The National Assessment of Educational Progress (1976), attributed improvement of reading among nine year olds to intervention programs implemented at the primary level.

## Need for the Study

Difficulties in reading seem to persist throughout the elementary school even though schools have remediation programs set up for children with reading problems. Methods and procedures that affect the students who have difficulties with reading is the concern of parents and educators.

This concern has led the researcher to examine the remediation procedures of a school system in northeastern Oklahoma in relation to the following questions: Is the process of identification adequate to identify the disabled reader early in his academic years? Are the methods of remediation appropriate for the disabled reader? What is the reading progress of the student while in remedial reading? Does the student maintain his level of progress after leaving the remedial reading program?

## Statement of the Problem

The purpose of this study is to examine the identification and reading achievement of 20 elementary students with reading disabilities. It is also the purpose of this study to examine, after a three-year period, the reading status and developmental reading progress of six of these students from the initial group of disabled readers.

Data were examined to answer the following questions:

1. By what methods and instruments were the remedial reading students in the initial study identified?
2. At what grade levels were the remedial students in the initial study identified?

3. What school procedures were identified as methods of attempted remediation of the individual student's reading disability?
4. What was the reading score of each student compared to the expected reading score during the reading instruction of the initial group of 20 students?
5. In the follow-up of the select group, what was the reading score of each student compared to the expected reading score?
6. How did each student's oral and silent reading levels compare in the follow-up study?
7. What were the strengths and weaknesses in reading of the students in the follow-up study?
8. What was the teacher's opinion of the reading progress of the student in the follow-up study?
9. What was the parent's opinion of the reading progress of the student in the follow-up study?
10. When did the parent recognize the reading disability of the student in the follow-up study?

#### Definition of Terms

The following definitions and terms have the same denotation throughout this study:

Disabled Readers--Disabled readers are those students who are reading below grade level and a year or more below reading expectancy.

Expectancy--Expectancy is the reading level expressed in grade equivalents that the student should have attained as determined by the 1967 Bond formula for computing Expectancy:

$$E = \frac{IQ}{100} \times \text{Years in School} + 1.$$

Remedial Reading Students--Remedial reading students are those disabled readers who have been instructed in special reading classes.

Prescriptive Textbooks--Prescriptive textbooks are reading textbooks designed to be used in the regular classroom for children with reading difficulties.

Expectancy Minus the Effect of Original Loss in Comprehension--Expectancy minus the effect of original loss in comprehension was obtained by subtracting the original loss in comprehension from expectancy score.

#### Limitations of the Study

The study is limited by the following conditions:

1. Only 20 remedial students taught in remedial reading classes during the school year of 1975-1976 constituted the initial study.
2. The follow-up included only six students selected from the initial 20 remedial reading students.
3. Information acquired from parents and teachers was limited to an opinion reported in questionnaires and interviews.

#### Assumptions

The following assumptions are considered basic to the study:

1. The Bond formula is a valid and reliable measure of reading expectancy.
2. Testing instruments used for this study are valid and reliable instruments.

#### Significance of the Study

The concern of this study is to identify the grade in which the

student was identified, methods of identification, the procedures used for attempted remediation, and the reading achievement of disabled readers. The information obtained should be useful in the identification of the disabled reader and in remediation procedures for the disabled reader.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Introduction

Although the literature concerning follow-up studies of disabled readers has been extensive in a clinical setting, the research has been limited in specific follow-up studies conducted within the framework of the normal classroom setting. The literature in this study has been confined to research concerned with the investigation of the questions examined in this study, and will be presented as: (1) studies pertaining to the identification of the disabled reader, (2) studies pertaining to retention as an intervention measure, and (3) studies pertaining to gains or relative gains made by groups instructed in a remedial context.

#### Identification of Reading Disabilities

Lessler and Bridges (1973) investigated the ability of readiness tests and group intelligence tests to predict school performance; and the correspondence between predictors at the beginning of first grade and performance at the end of second grade was also investigated.

The initial sample included 293 children, 136 boys and 157 girls; and the second grade sample included all subjects who were in the school at the end of the second grade, 196 children, 87 boys and 109 girls.

Using the Pearson product-moment correlations, the Metropolitan Readiness Tests (level of significance .001) was the best predictor



of first grade performance with a .76 correlation with the California Achievement Test and .58 teacher rating and .70 with the combined criteria.

At the end of the second grade, using the cutting score of 35/36 employed in the prediction of first grade performance, the Metropolitan Readiness Test identified 91 percent of the predicted learning problems and 61 percent of the no learning problems.

Glazzard (1977), comparing the predictive efficiency of teacher ratings with readiness tests and reading achievement tests, found all three statistically significant at the .01 level.

Eighty-seven kindergarten children who had been instructed in the Southwest Regional Laboratory were tested in May, 1975, after having completed first grade.

Using the analysis of covariance and the Veldman (1967) iteration sequences, the Teacher Estimate of Kindergarten Pupils' Abilities by Kirk (1966) and the Gates-MacGinitie Reading Tests: Readiness Skills (1968) were found to be uniquely significant at the .01 level in predicting first grade vocabulary achievement with the rank ordering of .85 for the readiness test and .84 for the teacher scale. The Gates-MacGinitie Reading Tests ranked third with a .61 at the .01 level of significance.

With the criteria of first grade comprehension achievement, the multiple correlation coefficient of the three independent variables (significant at the .01 level) placed the teacher rating scale first with a ranking of .77, the reading readiness test with a ranking of .75 second, and the reading tests third with a .57 ranking.

Tyler (1966), in a study to determine the ability of kindergarten and first grade teachers to predict reading success, found the kindergarten teacher judgments to be significant at the .01 level with mental maturity, memory, discrimination of sounds, forms and colors, motor control, specific adjustment behaviors, interest in books and reading, and work habits. The judgments of first grade teachers were uniformly significant at the .01 level in all variables which included rank in group at year's end and recommended reading level for grade two. The initial sample included 945 children in kindergarten; the final sample included 419 children consisting of 213 girls and 206 boys. Fifteen kindergarten teachers and 52 first grade teachers participated in the study.

Smith (1968), in a study of kindergarten teachers' judgments of their pupils' readiness for reading instruction, using a population of 360 pupils and 11 kindergarten teachers, found the kindergarten teachers' ratings correlated .70 with readiness test classifications; kindergarten teachers' rating correlated .53 with the reading achievement test classifications; and the readiness test classifications correlated .63 with the reading achievement classifications. However, the kindergarten teachers' ratings correlated .63 with the first grade teachers' ratings in November and .60 with the first grade teachers' ratings in May. All of these contingency coefficients were significant beyond the .01 level. The Metropolitan Readiness Test and kindergarten teacher ratings were the predictive instruments used and the performance criteria was the Gates-MacGinitie Reading Tests and first grade teacher ratings in May and November.

Stevenson, Parker, Wilkinson, Hegion, and Fish (1976), in a longitudinal four-year study of the predictive value of teacher ratings, reported on 217 children who had been rated in the fall and spring of kindergarten and again in first, second, and third grades. Sixty-three teachers participated in the study and by the end of third grade 146 children remained in the sample. Assessment of reading was made by the Wide Range Achievement Test.

Stepwise regression analyses were done to select combinations of variables that were most favorable for predicting achievement scores; however, correlations between the sum of the four ratings and achievement scores were considered more efficient. The correlation of the teachers' prekindergarten ratings with achievement was .43. The correlation of teacher's ratings predicted from spring kindergarten and achievement in the first grade was .66, in the second grade was .65, and at the end of third grade was .55.

Ferinden, Jacobsen, and Linden (1970), using a total of 67 kindergarten children and differentiating between those pupils who had been identified by teachers as high risk for reading difficulties and those who were not high risk, reported the teachers were 80 percent effective in predicting potential reading problems at the kindergarten level. The Wide Range Achievement Tests was depicted as 93 percent accurate in correctly identifying those students who will experience difficulties in reading. According to the authors, the Metropolitan Readiness Test was an effective predictor of reading disability only if the total test scores fell below the 30th percentile.

Pikulski (1973), in assessing the ability of three reading readiness measures to predict sixth grade reading achievement for 159 children in a

Language Arts group and 175 in the Basal Reader group, found that reading and word meaning correlations were significant beyond the .01 level for all three measures and that all correlations between readiness and achievement scores were higher for the Language Arts group.

Darnell and Goodwin (1975), in a longitudinal study to describe kindergarten children's abilities, evaluating the effect of teacher expectations, and exploring the predictive validity of kindergarten performance, reported teacher appraisals of the subjects' abilities at the end of the kindergarten year were better indicators of the subjects' success in first, second, and third grade than school readiness scores with the correlation between fall teacher expectation and actual test score .66 and between spring teacher expectation and actual score .82.

Jansky and de Hirsch (1972), investigating the effectiveness of the Predictive Index to identify children with potential reading disabilities, reported 40 percent of a total of 258 pupils were identified as failing readers with 35 percent of the high middle socioeconomic group identified. The author also reported 39 percent of those older than 70 months and 49 percent of those younger than 69 months identified as failing readers. Correlations between teacher prediction and actual reading achievement ranged from .67 to .89 for six kindergarten examiners.

Kapelis (1975), using 11 first grade teachers and 110 first grade children, reported on the ability of two screening measures and first grade teachers to predict achievement at the end of the school year. Correlations of .62 and .68 were found with reading achievement for the two screening measures, and .48 was found for teacher prediction. All three correlations were in the moderate range (.05 level of significance).

One of the studies reported above indicated readiness tests as the best single predictor of first grade performance; however, another study reported the readiness test was an efficient predictor of reading disability only if the total test scores fall below the 30th percentile. Two studies reported predictive and screening measures effective instruments to identify children with reading difficulties. One study found three measures of readiness to be significant in predicting sixth grade achievement. Five of the studies reported teacher judgment to be an effective predictor of reading achievement in the first grade.

#### Non-Promotion as a Measure of Intervention

Ammons (1975) found there was no statistically significant difference in the academic performance in the area of reading students who were non-promoted as compared to students of similar ability who were promoted when tested at the .05 level of significance. No statistically significant difference in the self concept (.05 level) was found for the students who were non-promoted as compared to those who were promoted. Students were selected from lists of retained and non-retained students in grades two through five in eight elementary schools in two cities. The S.R.A. Assessment Survey Primary Level II was the instrument used to measure academic progress, and the Piers-Harris Children's Self Concept Scale was used to measure self concept.

Street and Leigh (1969), in a study to determine the retention rates in relation to age of a selected sample of children in the first grade, reported 260 repeaters from a sample of 2,492 pupils. Of the 260 children, 10 percent had failed first grade a second time. The authors found that the failure rate declined in the children who entered first grade

from 74 months through 79 months; the total sampling of 968 boys and 942 girls reported a failure rate of 11.8 percent for girls and 16.8 percent for boys significant at the .001 level, but the girls were found to be retained a second time more frequently than the boys at a .001 level of significance with the girls rate at 12.5 percent and the boys rate at 8.3 percent. In reporting the failure rate of 21 states, the authors found 9.9 percent to be the failure rate with the lowest rate 1.7 percent and the highest rate 14.3 percent.

Preston and Yarrington (1968), investigating the status of 50 retarded readers eight years after reading clinic diagnosis, included in their study the number of subjects who repeated one or more grades during this period of time. The authors reported 68 percent of the subjects had repeated from one to three grades in comparison to 16 percent retained in the normal school population. This difference was significant at the .001 level.

Henderson, Goffeney, Butler, and Clarkson (1971), in a study of the differential rates of school promotion, reported no significant differences between the promoted group and retained group of 46 boys who scored from just below the mean to minus one standard deviation on the reading test.

The literature has been limited in recent years on retention of children; however, one study reported the failure rate in the nation recently to be 9.9 percent. Two studies found no significant difference in achievement between the promoted group and the non-promoted group. One author found 10 percent of a random sample of students had been retained twice. It was also found that the failure rate declined in the children who entered first grade from 74 months through 79 months.

Gains and Relative Gains in Remedial  
Reading Instruction

Lang (1975), in a study to determine the gains of a Title I special individualized reading program, compared a population of 935 elementary pupils enrolled in grade one through six who participated in the Title I special individualized reading program, and 817 students who were enrolled in Title I, but did not have individualized instruction. The author found a gain (.01 level of significance) in monthly mean compared to the previous mean achievement as measured by an oral reading test in grade one through six for students who had received individual instruction. The author also reported a gain (.01 level of significance) in the monthly mean achievement as measured by a reading test in grades two through six for the students receiving supplementary instruction; however, it was reported that the non-remedial students in grade six received higher median scores on the reading test than the students in the individualized instruction program.

Castallo and Conti (1977), in a longitudinal study, found that children completing the second grade basal reader three to four months late were more often rated high to average in sixth grade than children completing the second grade basal reader five or more months late. This difference in groups was significant at the .01 level of significance. The population consisted of 28 girls and 20 boys who were assigned to groups. Seventeen subjects were in the group represented as having a lag of three to four months in completion of the basal reader, and 33 subjects were assigned to the group represented as having a lag of five or more months in completion of the basal reader.

Peniston (1975), using a total of 30 first graders as subjects, reported on a study comparing the effectiveness of the Fountain Valley Teacher Support System, a programmed diagnostic prescriptive program, with an open-classroom individualized reading program. Both programs were reported to have made gains from pre-testing to post-testing on the California Achievement Test; however, using the analysis of covariance, the programmed prescriptive program showed a reading skills mean of 26.55 and a comprehension mean of 40.86 significant at the .001 level.

Warner (1973), in an investigation of the reading achievement of clients at a university reading center, reported grade equivalent gains in reading ranging from .02 to 4.7 for 24 of the 25 subjects. The difference between the expected reading levels and actual reading levels increased for 17 subjects, decreased for six, and remained constant for one. In the evaluation of performance on word recognition skills, all subjects showed gains ranging from a grade equivalent of .3 to 3.8. No statistical analysis was made.

Weiss (1976) reported on the reading achievement of 360 junior high students receiving individualized reading instruction during a period of six months. The results showed the seventh graders had achieved a mean of 3.2 months ( $t = 4.39$ , significant at the .01 level); the eighth graders had achieved a mean reading gain of .11 months, and the ninth graders achieved a mean reading gain of 2.6 months with no significant difference between pre-test and post-test. The criterion variable used for evaluation of reading achievement was not reported.

Judson (1973) developed and evaluated an individualized audio-visual reading program for 21 third graders with reading difficulties. The



criterion for evaluation was the Metropolitan Achievement Test and the Lorge-Thorndyke Intelligence Test. The author reported an average gain in intelligence scores of 17.43 points, and gains in reading achievement expressed in grade equivalents which showed word knowledge, 1.3; word discrimination, 1.2; reading comprehension, 1.9; and language, 2.9. There was no statistical analysis reported.

Title I Remedial Reading Center (1970) reported on the reading achievement of fourth grade students after a year of remedial reading instruction in which 47 disabled readers in the experimental group were matched with 48 disabled readers in the control group. At the end of the first year, the experimental group had a significantly higher adjusted mean in word recognition (4.3, significant at the .001 level) and paragraph meaning (4.1, significant at the .001 level). The results of the Comprehensive Tests of Basic Skills administered to all fifth and sixth grade students at the end of the second year showed the experimental groups significantly higher than the control group with statistically the same adjusted mean for word meaning and paragraph meaning (level of significance .001) as the previous year.

Morsink and Otto (1977), using an author-developed diagnostic/prescriptive reading program, reported on its effect on 16 disabled readers. Students were assigned to three treatment groups: the experimental group and two control groups. Using the analysis of covariance on the post-test scores, the authors found the effect of the treatments were significantly different at the .02 level. The adjusted means of the experimental group was 3.05, the control-1 group was 2.69, and control-2 group was 2.47. Performance in reading words in context, expressed in words per minute, favored the experimental group.

Hedley (1970), evaluating a reading and diagnostic center, analyzed data from test results for 107 reading disabled children instructed at the center. An average gain of seven months was made by the experimental group compared to an average gain of two months made by the 54 children in the control group. The criteria used for evaluation of pupil progress was not given.

Kellaghan (1974), in a two-year study to determine the effects of remedial instruction, assigned 48 subjects at random to a full-time remedial class or a part-time remedial class, and the controls to a normal class. The author found, after one year, the difference significant between the part-time remedial and control group at the .05 level and the full-time remedial and control group at the .01 level. After the second year, no significant difference was evident between groups; however, the over-all difference in achievement was found to favor the full-time remedial group.

Silverstein (1976) reported on a programmed individualized remedial reading program including 172 children in the fourth through the sixth grades who were six months or more below grade level in reading. Using the historical regression design ( $t = 2.25$ ), with the pre-test mean, 4.01, and the post-test mean, 4.42, the author found the difference significant at the .025 level. Eighty percent of the children predicted to achieve showed significant gain in the remedial program.

Schwartz (1976), evaluating a program designed to increase the reading ability of 325 students in grades three through six from three elementary schools, found the evaluation objective was achieved by the fifth grade in all schools (.05 level of significance at two schools and .01 level of significance at one school). Two schools showed significant

gains for the fourth grade at the .05 level. Based on the achievement test, 45 percent of the students increased their reading level one year or more, and 23 percent showed no gain or loss.

Three of the remedial reading studies indicated significant gains in reading achievement as the result of individualized instruction. Using diagnostic/prescriptive instruction, two studies reported significant difference in the reading achievement of the experimental group. A comparative study showed significant gain in word recognition and paragraph meaning for the experimental group. One study found children who performed several months behind schedule on the basal reader in the second grade were performing below average in the fifth and sixth grades. Four studies showed relative gains in reading achievement after remedial reading instruction. Another study using individualized audio-visual instruction showed relative gains in reading achievement.

#### Summary

A review of the literature in this chapter has been presented in the scope of (1) studies pertaining to the identification of the disabled reader, (2) studies pertaining to an intervention measure, and (3) studies pertaining to gains or relative gains made by groups instructed in a remedial context.

The review indicates the majority of the potentially disabled readers can be identified by reading readiness tests and/or teacher observation. Concerning the use of retention as a measure of intervention, the literature reported little gain, and sometimes no gain, made by retention within the same grade for more than one year; however, the literature showed retention was being used as a measure of intervention

by school systems. The literature reviewed on remedial reading instruction showed (1) an increase in reading gains over short periods, six months to a year, and (2) little indication of retention of gains over a span of years.

More remedial research studies need to be conducted within the framework of the school system. Many studies reported six months to a year of progress in reading; however, to ascertain permanence of gain more studies need to be conducted over longer periods of time.

The conclusion from the review of the studies is that students with potential reading difficulties can usually be identified in primary grades and students will usually show gain from remedial instruction, while non-promotion of students with reading difficulties indicate little or no difference in reading performance than those promoted.

## CHAPTER III

### METHODS AND PROCEDURES

#### Introduction

This chapter presents the methods and procedures used in this investigation. The areas covered are: (1) the sample and population; (2) methods of evaluation; and (3) the treatment of the data acquired from school records, administration of tests, questionnaires, and interviews.

#### Sample and Population

The population of this study was disabled reading students enrolled in the public schools of a northwestern Oklahoma school district. The socio-economic level was predominantly middle class. The population consisted of 14 Caucasians, 3 Blacks, 2 Mexican-Americans, and 1 American Indian. According to the Wechsler Intelligence Scale for Children, Revised, these students were functioning in the low average to average range of intelligence. The intelligence quotients of these disabled reading students ranged from one and one-third standard deviation below the mean to two-thirds a standard deviation above the mean.

The school system contained one elementary school which had three classes for each grade. A reading teacher instructed the disabled readers in the upper four grades of the elementary school. The students

were selected for the instruction in the remedial classes by the evaluation of data obtained from the results of the Gates-MacGinitie Reading Tests and through teacher recommendations.

Twenty students in the third, fourth, fifth, and sixth grades were selected for the initial study. The criteria were:

1. Attendance in the remedial reading class for the academic school year.
2. Reading achievement of a year or more below reading expectancy and below grade level.

Six students in the seventh grade were selected from the initial group of 20 students for a follow-up study. The criteria for the selection of these students were:

1. Member of the initial third grade remedial reading class.
2. Availability of the student for evaluation after a three-year period.
3. Permission obtained from the parents for the administration of the tests used in the follow-up study.

#### Evaluation and Testing Procedure

##### Initial Group of Remedial Reading Students

Data were collected from student files on the methods of identification of the disabled reader, the grade in which the disabled reader was identified, the procedures used for remediation of the disabled reader, and the reading achievement in the first year of remedial instruction.

The testing instruments used in the evaluation of the initial group of students included the following tests:

1. Metropolitan Reading Test, Form A-1 (Hildreth, Griffiths, and McGauvran, 1959).
2. Gates-MacGinitie Reading Tests, Form B-1, Form B-2, Form C-1, and Form C-2 (Gates and MacGinitie, 1965).

#### Follow-Up Study of Remedial Reading Students

The evaluation of the reading program of the students in the follow-up study was made by the use of (1) standardized tests and (2) questionnaires sent to parents and teachers.

The testing instruments used for the identification of these students' developmental progress of reading included the following:

1. Gates-MacGinitie Reading Tests, Form C-1 (Gates and MacGinitie, 1965).
2. Durrell Analysis of Reading Difficulty (Durrell, 1965).
3. Silent Reading Test (Bond, Balow, and Hoyt, 1970).
4. Iowa Tests of Basic Skills, Form 5 (Hieronymus and Lindquist, 1971).

The questionnaire and the interview guide used for description of the disabled readers consisted of the following:

5. Investigator constructed Teacher Questionnaire.
6. Investigator constructed Interview Guide.

### Instrumentation

#### Testing Instruments

The Metropolitan Readiness Test is designed to measure readiness for first grade instruction. Emphasis is placed on the total battery

and interpretation of the total performance is aided by letter ratings which have instructional significance for the various levels of performance. Predictive validity is reported for a number of samples and the reliabilities for the total test are generally above .90 for pupils tested at the end of kindergarten or early in the first grade.

The Gates-MacGinitie Reading Tests is a survey test constructed to range from kindergarten through grade 12. Each level contains two forms. The Primary B and C, intended for use in the second and third grade, respectively, and consisting of a vocabulary and comprehension section, was used to determine the reading level of the disabled reading student. An average of the vocabulary and comprehension grade equivalents was used to determine the reading levels of the individual students in the remedial program. An average of the vocabulary and comprehension grade equivalents also determined the level of reading of the remedial student after a three-year period.

The Iowa Tests of Basic Skills is a group achievement test, containing two forms, and used for the evaluation of the generalized intellectual skills and abilities involved in vocabulary, reading comprehension, language, work-study skills, and arithmetic of children in grades three through nine. Norms and percentile norms within grade are provided.

In the school system, represented by this study, the Iowa Tests of Basic Skills was given to the entire student body in the third grade through the sixth grade in April of each year. Grade equivalents are available for vocabulary and reading comprehension. An accumulative record is kept for each student and was available for the study.



The Durrell Analysis of Reading Difficulty is an individually administered test consisting of a series of tests designed to discover weaknesses and difficulties in reading. The range covered in reading ability is from the non-reader to the sixth grade ability. Norms are provided for the following subtests used in this study:

1. Oral Reading Tests: This test consists of eight paragraphs with comprehensive questions.
2. Silent Reading Tests: Eight paragraphs are contained in this subtest. Provision is made for recording unaided and aided oral recall.
3. Word Recognition and Analysis: This subtest uses word cards and a tachistoscope with a word list. Separate norms are provided for recognition and analysis.
4. Visual Memory for Word Forms: The intermediate student is required to write word elements for oral presentation.

The Silent Reading Diagnostic Tests are group tests that measure silent reading abilities and are designed to be used with pupils of any age who read at second through sixth grade levels. The skills tested are those usually taught in the six years of elementary school. The five subtests designed to function at the upper grade level were used in the follow-up study. These subtests were Words in Isolation, Words in Context, Visual-Structural Analysis, Syllabication, and Word Synthesis.

#### Questionnaire and Interview Guide

For the purpose of this study, the questionnaire was sent to the teachers of the students in the follow-up and the interview in the

form of an oral questionnaire was used to assess the opinion of the parents.

Questionnaire. The questionnaire, which can be found in Appendix B, was developed by the investigator to obtain information relevant to the teacher's opinion of the reading progress of the disabled readers.

Interview Guide. The interview guide, found in Appendix B, was used by the investigator to obtain the parent's opinion on the reading progress of the disabled reader and the grade in school the parent identified the student's reading difficulties.

#### Procedures in Analyzing Data

Data concerning the identification and reading achievement of the initial group of students with reading difficulties were collected, interpreted, and analyzed from school records. An example of the information obtained is found in the Data Form in Appendix C.

In the follow-up, all instruments used for evaluation of the student's reading achievement were administered, scored, and analyzed by the investigator with the exception of the Iowa Tests of Basic Skills which was taken from individual accumulative records.

Data from the questionnaires and interviews were classified and analyzed to answer the questions concerning identification, reading ability, and reading progress as observed by the students' parents and teachers.

## CHAPTER IV

### FINDINGS OF THE STUDY

#### Introduction

The purpose of this chapter is to present the findings concerning procedures of identification, methods of remediation, and reading achievement of remedial reading students in a northeastern Oklahoma school district. First, the findings pertaining to the initial group of 20 remedial reading students are described. Second, the findings pertaining to a follow-up of six students selected from the initial group of remedial students are discussed.

These findings were analyzed specifically to answer the following questions presented in Chapter I:

1. By what methods and instruments were the remedial reading students in the initial study identified?
2. At what grade levels were the remedial students in the initial study identified?
3. What school procedures were identified as methods of attempted remediation of the individual student's reading disability?
4. What was the reading score of each student compared to the expected reading score during the reading instruction of the initial group of 20 students?
5. In the follow-up of the select group, what was the reading score of each student compared to the expected reading score?

6. How did each student's oral and silent reading levels compare in the follow-up study?
7. What were the strengths and weaknesses in reading of the students in the follow-up study?
8. What was the teacher's opinion of the reading progress of the students in the follow-up study?
9. What was the parent's opinion of the reading progress of the student in the follow-up study?
10. When did the parent recognize the reading disability of the student in the follow-up study?

#### Methods and Instruments Used to Identify the Remedial Reading Student

The investigation is concerned with the identification of the child with reading difficulties during the kindergarten and elementary grades.

The individual remedial reading student's ratings on the Metropolitan Readiness Tests is presented in Table I. Of the 20 students, the readiness test evaluated 12 as average and 3 as above average. The ratings of five students were not available for evaluation.

According to Table II, the ratings on the Metropolitan Readiness Tests show 15 percent of the initial group of remedial students to have been rated above average and 60 percent to have been rated as average. Twenty-five percent have no record of a rating for readiness on the Metropolitan Readiness Tests.

Another measure of readiness employed was the evaluation of the student by the kindergarten and elementary teachers. To ascertain the identification of the student with potential reading disabilities in

kindergarten and elementary grades, direct comments from the student's file were utilized. An example of the comments made by the kindergarten teacher will be found in Appendix C in the Data Form used for each individual student.

TABLE I  
RATINGS OF INDIVIDUAL STUDENTS ON THE METROPOLITAN  
READINESS TEST

Metropolitan Test Ratings	Students																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Above Average	X	X		X																
Average			X		X	X		X	X	X	X		X	X			X	X	X	
Rating Not Available							X					X			X				X	X

TABLE II  
COMPARISON OF RATINGS ON THE METROPOLITAN READINESS TESTS  
FOR THE INITIAL REMEDIAL READING STUDENTS AS TO  
NUMBER AND PERCENTAGE

	Number	Percentage
Students Rated as Above Average	3	15
Students Rated as Average	12	60
Students with No Record of Rating	5	25

The grade in school the disabled reader was first identified by a teacher is indicated by Table III. Of the 20 students, four were identified in kindergarten, five were identified in first grade, seven in second grade, and three in third grade. No identification was made in fourth or fifth grade. One student was identified in sixth grade.

TABLE III  
GRADE IN WHICH DISABLED READER WAS FIRST IDENTIFIED  
BY TEACHER

Grade	Students																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Kindergarten									X		X		X					X		
First			X							X				X		X		X		
Second		X	X	X	X		X								X					X
Third						X	X					X								
Fourth																				
Fifth																				
Sixth																				X

The percentages of children identified by teachers in kindergarten through the sixth grade are presented in Table IV. The percentage of disabled readers identified by teachers in kindergarten and elementary grades is presented as 20 percent for kindergarten teachers, 25 percent for first grade teachers, 35 percent for second grade teachers, 15

percent for third grade teachers, and 5 percent for sixth grade teachers. No percentage is listed for fourth and fifth grades as all students were identified by the third grade with the exception of one student identified in the sixth grade whose previous record was unavailable.

TABLE IV  
NUMBER AND PERCENTAGE OF DISABLED READERS IDENTIFIED BY  
TEACHERS IN KINDERGARTEN AND ELEMENTARY GRADES

	Number	Percentage
Students Identified in Kindergarten	4	20
Students Identified in First Grade	5	25
Students Identified in Second Grade	7	35
Students Identified in Third Grade	3	15
Students Identified in Fourth Grade	0	0
Students Identified in Fifth Grade	0	0
Students Identified in Sixth Grade	1	5

School Procedures Initiating Remediation  
of Reading Disabilities

The traditional school system often uses retention of students having difficulties in reading as a measure of remediation. In the following tables, the remediation policies of the school system, concerned in this study, has been discussed in relation to the disabled reader.

The data in Table V show two students retained in kindergarten who had been identified as having potential reading difficulties and 10 students are shown retained in first grade. Eight students are shown to have no record of retention.

TABLE V  
RETENTION OF INDIVIDUAL REMEDIAL READING STUDENTS

	Students																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Retained in Kindergarten				X					X											
Retained in First Grade					X					X	X	X		X		X	X	X	X	X
Not Retained	X	X	X			X	X	X					X		X					

According to Table VI, 10 percent of the disabled readers had been retained in kindergarten and 50 percent had been retained in first grade. Sixty percent were shown as having been retained in kindergarten or first grade.

The students in this study with recognized reading difficulties who were placed in prescriptive reading textbooks prior to the third grade are presented in Table VII. These prescriptive textbooks were used as a measure of intervention and were taught within the structure of the regular classroom.



TABLE VI  
NUMBER AND PERCENTAGE OF DISABLED READERS RETAINED  
IN KINDERGARTEN AND FIRST GRADE

	Number	Percentage
Students Retained in Kindergarten	2	10
Students Retained in First Grade	10	50
Total Number and Percentage of Students Retained	12	60

TABLE VII  
STUDENTS PLACED IN PRESCRIPTIVE AND BASAL READERS  
PRIOR TO THIRD GRADE

	Students																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Placed in Prescriptive Readers	X	X	X	X		X		X	X				X	X	X	X		X		X
Placed in Basal Readers						X	X			X	X	X					X			X

Data in Table VIII indicate the percentage of students placed in prescriptive readers prior to third grade to be 65 percent.

#### Reading Achievement of Initial Students

The reading scores of the initial remedial reading students were

determined by data obtained from test scores of the Gates-MacGinitie Reading Tests in the third grade and again in the seventh grade. The reading expectancy was obtained by using the Bond formula defined in Chapter III. The difference between reading score and expected reading score indicated the discrepancy in the disabled students' reading level.

TABLE VIII  
SUMMATION OF STUDENTS PLACED IN PRESCRIPTIVE READERS  
PRIOR TO THIRD GRADE

	Number	Percentage
Students Placed in Prescriptive Readers	13	65
Students Not Placed in Prescriptive Readers	7	35

The grade equivalent of each initial remedial reading student, acquired from the Gates-MacGinitie Reading Tests before remedial reading instruction, is presented in Table IX. The reading score, expected reading score, and the difference between the scores are presented according to the individual student and the chronological age.

For the students in the third grade, the reading scores ranged from 1.5 grade equivalent to 2.5 grade equivalent. The expected reading scores of the third grade remedial students ranged from 3.4 grade equivalent to 4.4 grade equivalent. The difference between the reading scores

and expected reading scores of this third grade ranged from 1.3 grade equivalent to 2.4 grade equivalent.

TABLE IX

GATES-MACGINITIE READING SCORES OF THE INITIAL REMEDIAL READING STUDENTS COMPARED TO EXPECTED READING SCORES BEFORE REMEDIAL INSTRUCTION

Student	Chronological Grade	Reading Score*	Expected Reading Score	Difference
1	3	1.8	4.0	2.2
2	3	1.8	4.0	2.2
3	3	1.9	3.6	1.7
4	3	2.1	4.1	2.0
5	3	2.5	4.4	1.9
6	3	1.5	3.9	2.4
7	3	2.1	3.4	1.3
8	3	1.9	4.0	2.1
9	4	1.4	5.2	3.8
10	4	3.6	5.6	2.0
11	4	3.5	4.3	0.8
12	4	1.6	5.5	3.9
13	5	2.8	5.9	3.1
14	5	3.2	6.3	3.1
15	5	2.7	6.1	3.4
16	5	1.7	7.4	5.7
17	6	2.2	6.7	4.5
18	6	3.1	8.6	5.5
19	6	2.2	7.1	4.9
20	6	2.3	7.3	5.0

\*Obtained from Average of the Vocabulary and Comprehension subtests of the Gates-MacGinitie Reading Tests.

The reading scores for the fourth grade remedial reading students ranged from 1.4 grade equivalent to 3.6 grade equivalent. The expected reading scores of those fourth grade students ranged from 4.3 grade equivalent to 5.6 grade equivalent. The difference between the two scores of these fourth grade students ranged from 0.8 grade equivalent to a 3.9 grade equivalent.

The fifth grade students' reading scores ranged from 1.7 grade equivalent to 3.2 grade equivalent. The expected reading scores of the fifth grade remedial reading students ranged from 5.9 grade equivalent to 7.4 grade equivalent. The difference between the reading scores and expected reading scores of these fifth grade students ranged from 3.1 grade equivalent to 5.7 grade equivalent.

The reading scores for the sixth grade remedial students ranged from 2.2 grade equivalent to 3.1 grade equivalent. The reading expectancy of the sixth grade remedial students ranged from 6.7 grade equivalent to 8.6 grade equivalent with the difference between the two scores ranging from 4.5 grade equivalent to 5.5 grade equivalent.

Data pertaining to the comparison of reading scores of the initial group of remedial reading students is presented individually and chronologically according to Table X. Gains made from the pre-test and post-test of the Gates-MacGinitie Reading Tests is indicated in grade equivalents.

The difference between the pre-test and post-test of the Gates-MacGinitie Reading Tests showed one student's gain to be 3.2 grade equivalent, six students' gain to be between 2.1 grade equivalent and 2.8 grade equivalent. Eight students' gain was shown to be between 1.0 grade equivalent and 1.9 grade equivalent, and four students' gain was

was shown to be between 0.7 and 0.9 grade equivalent. The post-test was not available for one student.

TABLE X  
COMPARISON OF READING SCORES OF INITIAL REMEDIAL READING  
STUDENTS IN GRADE EQUIVALENTS DURING  
REMEDIAL INSTRUCTION

Student	Chronological Grade	Gates-MacGinitie Pre-Test Average Score	Gates-MacGinitie Post-Test Average Score	Gains Between Tests
1	3	1.8	3.7	1.9
2	3	1.8	4.2	2.4
3	3	1.9	3.3	1.4
4	3	2.1	4.7	2.6
5	3	2.5	3.2	0.7
6	3	1.5	4.1	2.6
7	3	2.1	4.2	2.1
8	3	1.9	2.8	0.9
9	4	1.4	2.6	1.2
10	4	3.6	4.5	0.9
11	4	3.5	4.7	1.2
12	4	1.6	4.4	2.8
13	5	2.8	4.6	1.8
14	5	3.2	4.6	1.4
15	5	2.7	*	
16	5	1.7	3.4	1.7
17	6	2.2	3.2	1.0
18	6	3.1	5.7	2.6
19	6	2.2	5.4	3.2
20	6	2.3	3.1	0.8

\*Post-test not available.

According to Table X, the post-test scores indicated four students to be reading above grade level and 15 students to be reading below grade level. The post-test was not available for one student. The gains between pre-test and post-test scores of students in the third grade ranged from 0.7 grade equivalent to 2.6 grade equivalent. Students in the fourth grade showed gains that ranged from 0.9 to 2.8 between the pre-test and post-test scores. Fifth grade students showed gains that ranged from 1.4 to 1.8 between the pre-test and post-test scores. A range of 1.0 to 3.2 was shown as the gain between the pre-test and post-test scores of the sixth grade students.

#### Reading Achievement in the Follow-Up Study

The data in Table XI presents the comparison of the reading scores to the expected reading scores of students in the follow-up study. The criterion used for evaluation was the data, reported in grade equivalents, from the test scores of the Gates-MacGinitie Reading Tests.

Two students showed less difference between the seventh grade reading score and the seventh grade expected reading score than between the third grade reading score and the third grade expected reading score. This difference was 0.8 grade equivalent for student number two and 0.3 grade equivalent for student number four. Three students showed more difference between the seventh grade reading score and the seventh grade expected reading score than between the third grade reading score and the third grade expected reading score. This discrepancy for student number one was 0.6 grade equivalent. The grade equivalent of 1.0 was shown for student number three and student number five. Student number six showed the same discrepancy between reading score and expected reading score in

the third grade and seventh grade. According to Table XI, two students made gains of 0.3 to 0.8 grade equivalent and three students regressed 0.6 to 1.0 grade equivalent in their reading expectancy. The discrepancy for one student remained the same in the seventh grade as in the third grade.

TABLE XI  
COMPARISON OF READING SCORE TO EXPECTED READING SCORE  
IN GRADE EQUIVALENTS OF STUDENTS IN FOLLOW-UP  
USING GATES-MACGINITIE READING TESTS

Student	Third Grade			Seventh Grade		
	Reading Score	Expected Score	Discrepancy	Reading Score	Expected Score	Discrepancy
1	1.8	4.0	2.2	5.6	8.4	2.8
2	1.8	4.0	2.2	6.9	8.3	1.4
3	1.9	3.6	1.7	4.8	7.5	2.7
4	2.1	4.1	2.0	6.9	8.6	1.7
5	2.5	4.4	1.9	4.5	7.4	2.9
6	1.5	3.9	2.4	5.9	8.3	2.4

Data in Figures 1 through 6 are related to the individual student's accumulative record of the vocabulary and comprehension scores of the Iowa Tests of Basic Skills as compared to reading expectancy for the grades three through six. The grade level expectancy increases in grade level each year as determined by the Bond formula. The loss or gain after a

three-year period in the "expectancy minus effect of original loss in comprehension," defined in Chapter I, was obtained from Figures 1 through 6 by subtracting the sixth grade score of the "expectancy minus the effect of the original loss in comprehension" from the sixth grade comprehension score. This difference is reported for each student.

The initial tests were administered when the students were enrolled in the third grade. The final tests were administered when the students were in the sixth grade. These series of tests were administered to all students in the third, fourth, fifth, and sixth grades by the same administrator and were machine scored. The data from the test scores of the Iowa Tests of Basic Skills are reported for six remedial students who were selected from the initial group of 20 students.

The difference between comprehension and expectancy in the third grade, indicated in Figure 1, was 2.4 grade equivalent and in the sixth grade was 1.1 grade equivalent. Vocabulary and expectancy difference in the third grade was 1.8 grade equivalent, and in the sixth grade was 3.5 grade equivalent. The results showed a decrease in difference between comprehension and expectancy, and an increase in difference between vocabulary and expectancy. When the effect of the original loss was removed, the student showed a gain of 1.3 grade equivalent in comprehension. As shown by Figure 1, student number one was consistent in progress in reading comprehension, but irregular in progress in vocabulary.

According to Figure 2, the grade level equivalent of student number two at the sixth grade evaluation was shown to be the same grade equivalent in comprehension and vocabulary. Progress in vocabulary was



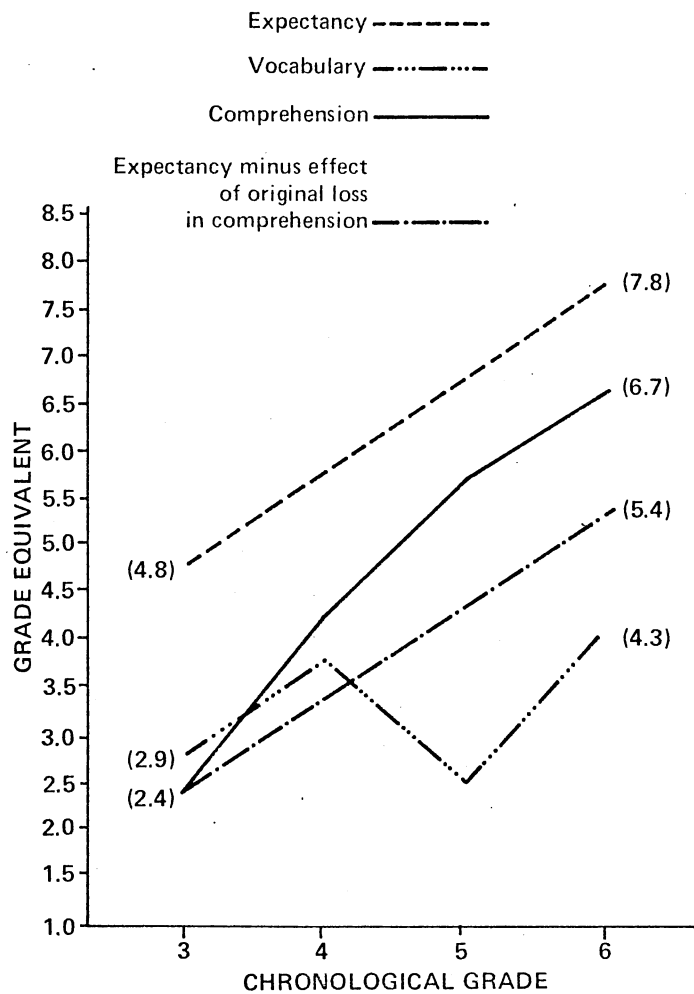


Figure 1. Student Number One: Accumulative Reading Record Based on the Iowa Tests of Basic Skills

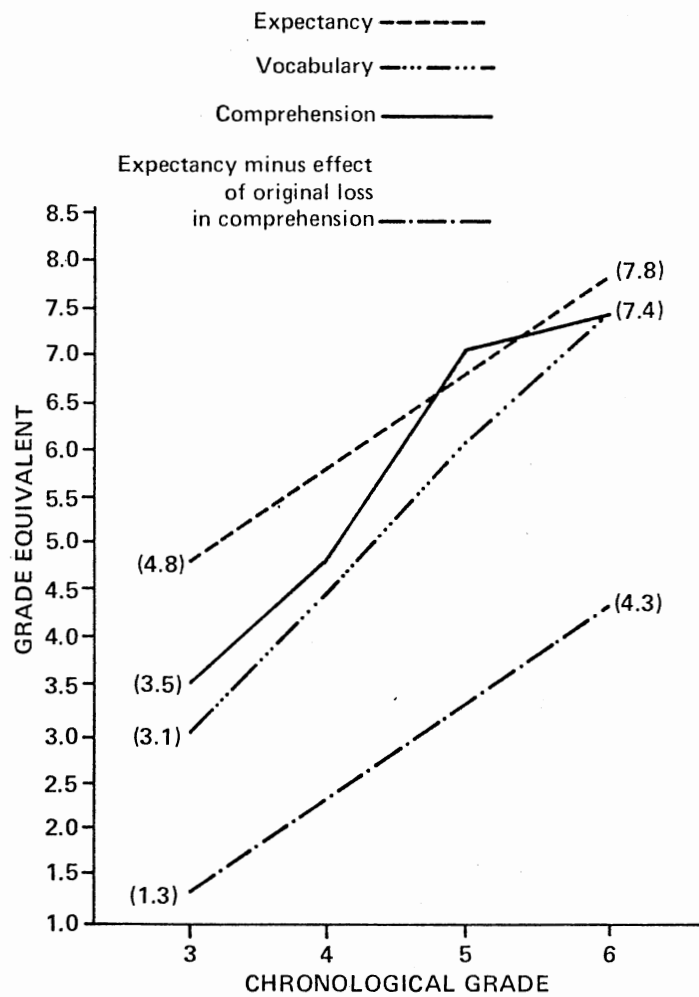


Figure 2. Student Number Two: Accumulative Reading Record Based on the Iowa Tests of Basic Skills

regular, and comprehension scores showed a 2.2 gain in grade level equivalent during the fifth grade.

As indicated in Figure 2, the difference between comprehension and expectancy in the third grade was 1.3 grade equivalent and in the sixth grade was 0.4 grade equivalent. Vocabulary and expectancy difference in the third grade was 1.7 grade equivalent and in the sixth grade was 0.4 grade equivalent. The results showed a decrease in the discrepancy between the reading performance level and expectancy. When the effect of the original loss was removed, the student showed a gain of 3.1 grade equivalent in comprehension.

The difference between comprehension and expectancy in the third grade, as indicated by Figure 3, was 2.1 grade equivalent and in the sixth grade was 1.9 grade equivalent. Vocabulary and expectancy difference in the third grade was 2.3 grade equivalent and in the sixth grade was 2.2 grade equivalent. The results show a decrease in the discrepancy between the reading performance level and expectancy. When the effect of the original loss was removed the student showed a gain of 0.3 grade equivalent in comprehension. Consistent progress in vocabulary and comprehension for student number three was shown in Figure 3.

Consistent progress was shown in Figure 4 for student number four until the sixth grade. A 0.1 gain in grade equivalent in vocabulary and a 1.5 loss in grade equivalent in comprehension was shown between the fifth and sixth grades.

According to Figure 4, the difference between comprehension and expectancy in the third grade was 2.6 grade equivalent and in the sixth grade was 3.6 grade equivalent. Vocabulary and expectancy difference in the third grade was 1.5 grade equivalent and in the sixth grade was 2.3

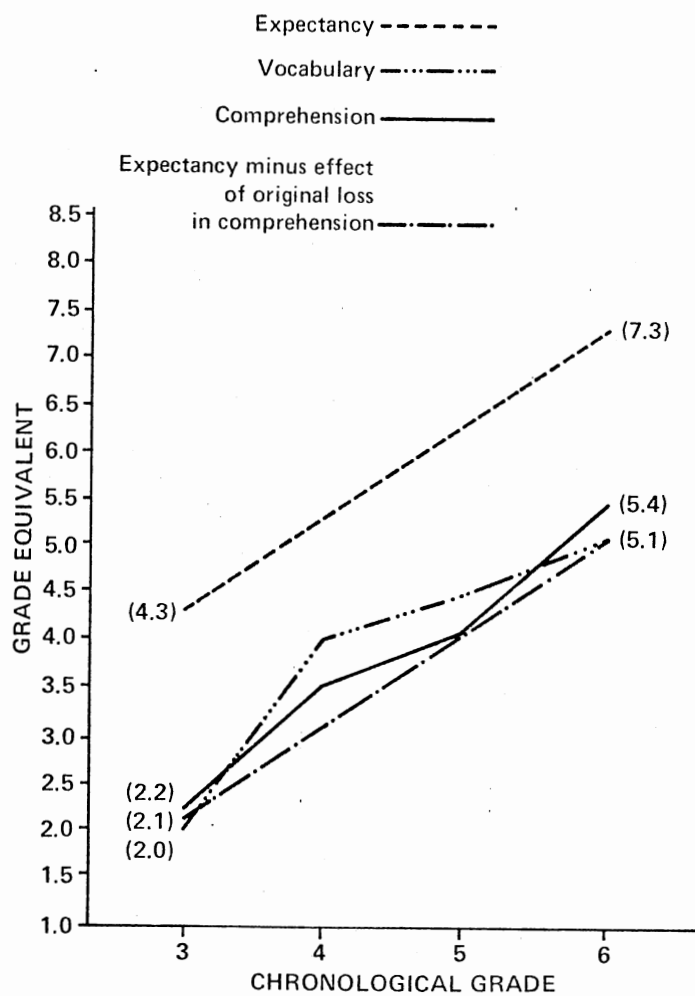


Figure 3. Student Number Three: Accumulative Reading Record Based on the Iowa Tests of Basic Skills

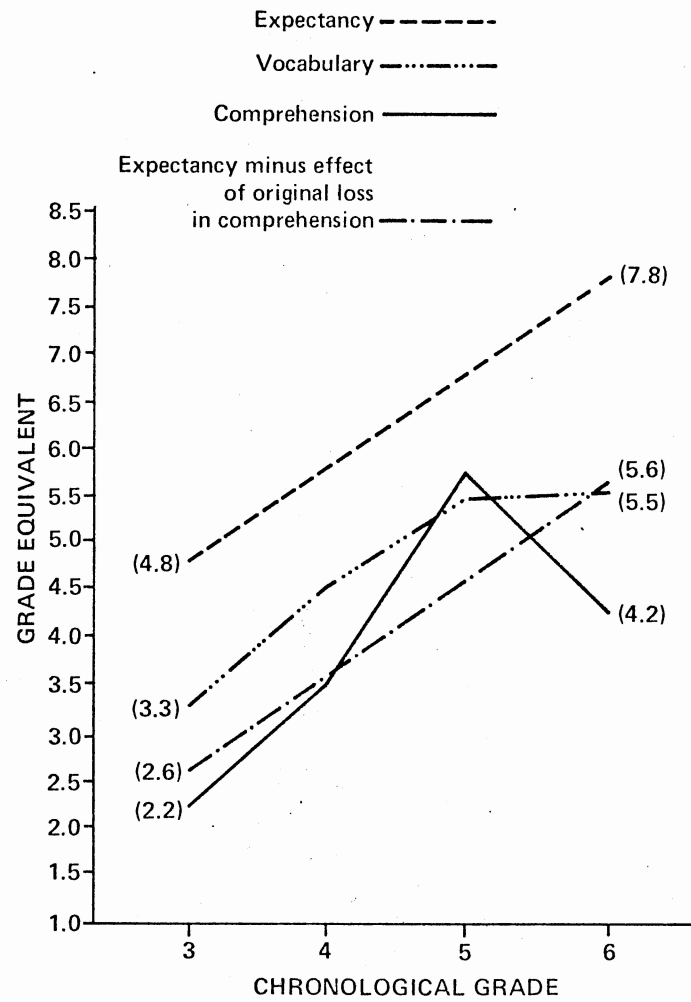


Figure 4. Student Number Four: Accumulative Reading Record Based on the Iowa Tests of Basic Skills

grade equivalent. Figure 4 presents an increase in difference between comprehension and expectancy and between vocabulary and expectancy. When the effect of the original loss was removed, the student showed a loss of 0.1 grade equivalent in comprehension. Because of the sharp decline in sixth grade comprehension, the results do not seem to show a realistic discrepancy between comprehension and expectancy.

The reading progress of student number five was shown to be irregular in Figure 5. The graph shows a loss in grade equivalent scores in the fifth grade and a gain in the sixth grade.

As indicated in Figure 5, the difference between comprehension and expectancy in the third grade was 3.0 grade equivalent and in the sixth grade was 4.7 grade equivalent. Vocabulary and expectancy difference in the third grade was 1.8 grade equivalent and in the sixth grade was 2.6 grade equivalent. The results are presented as an increase in difference between expectancy and the reading performance level. When the effect of the original loss is removed, the student showed a loss of 2.5 grade equivalent in comprehension.

As shown in Figure 6, student number six made consistent gains in vocabulary. In comprehension, the results showed a loss of 0.4 in grade equivalent between the fifth and sixth grades.

According to Figure 6, the difference between comprehension and expectancy in the third grade was 2.5 grade equivalent and in the sixth grade was 3.7 grade equivalent. Vocabulary and expectancy difference in the third grade was 1.8 grade equivalent and in the sixth grade was 3.1 grade equivalent. The results showed an increase in the discrepancy between the reading performance level and expectancy. When the effect

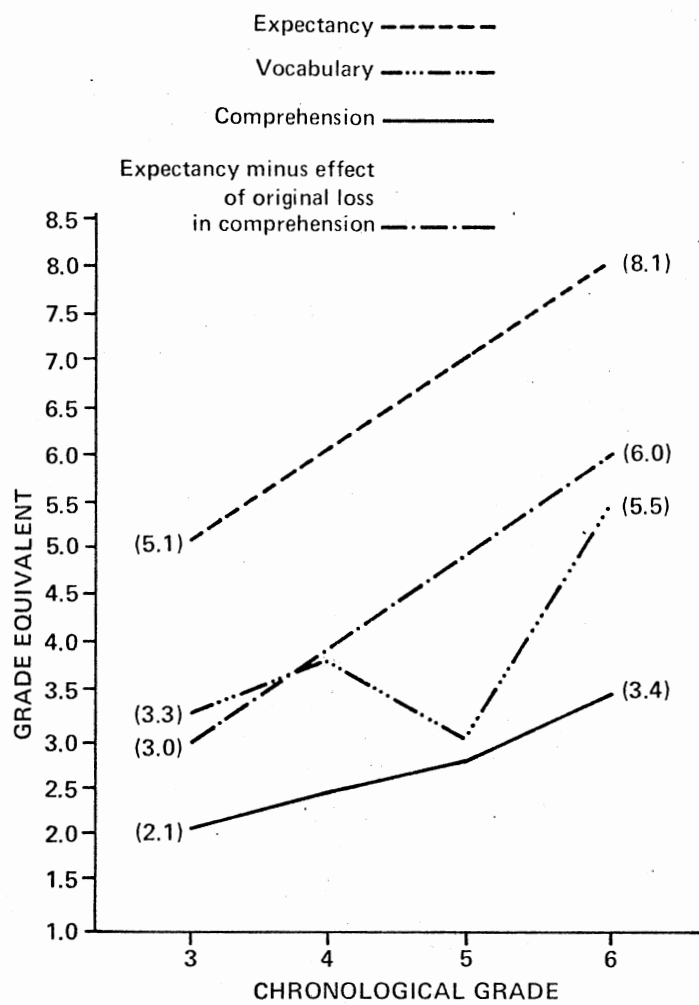


Figure 5. Student Number Five: Accumulative Reading Record Based on the Iowa Tests of Basic Skills

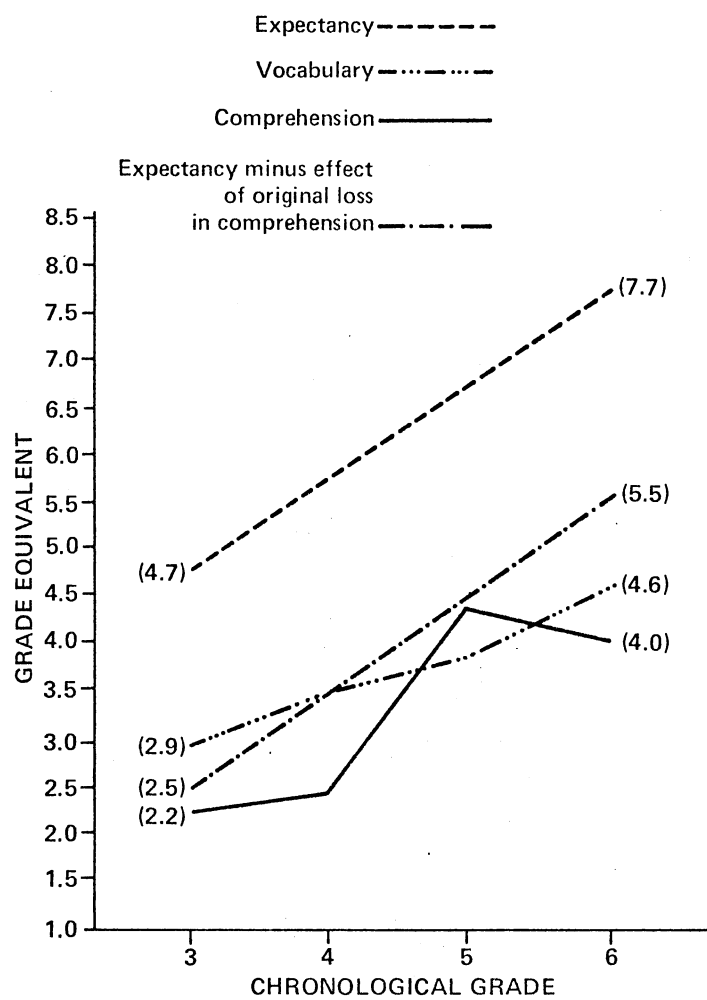


Figure 6. Student Number Six: Accumulative Reading Record Based on the Iowa Tests of Basic Skills



of the original loss was removed, the student showed a loss of 1.5 grade equivalent in comprehension.

Oral and Silent Reading Levels of Students  
in Follow-Up Study

The Durrell Analysis of Reading Difficulty was used to obtain the oral and silent reading levels of the remedial reading students in the follow-up.

The oral and silent reading levels of these students are presented in Table XII. The oral reading level was determined by consideration of time, errors, and the comprehension check. The comprehension was indicated by the number of questions. Listening comprehension was considered adequate if no more than one question was incorrect or unanswered.

Student number one answered all comprehension questions adequately on the oral reading level with 5.5 grade equivalent. The oral reading level of student number two was 6.5 grade equivalent and comprehension was adequate with six questions answered out of seven. Student number three was evaluated at 5.7 grade equivalent on the oral reading level with one question missed in comprehension. For student number four, the comprehension was adequate with six of the questions answered correctly, and the oral reading level was 6.2 grade equivalent. Student number five answered all comprehension questions with the oral reading level at 3.2 grade equivalent. Student number six had complete comprehension on the oral reading level with a 5.2 grade equivalent.

The silent reading levels of the remedial students in the follow-up are included in Table XII. The silent reading level is shown by consideration of the time and the comprehension check expressed in memories.

A plus before the memories indicates the comprehension was more than adequate for the reading level obtained.

TABLE XII  
ESTIMATED READING LEVELS ON THE DURRELL ORAL AND  
SILENT READING ANALYSIS

Oral Reading Level				
Student	Time (Seconds)	Errors	Comprehension	Grade Equivalent
1	55	3	7/7	5.5
2	64	6	6/7	6.5
3	50	7	6/7	5.7
4	48	1	6/7	6.2
5	64	2	7/7	3.2
6	59	1	7/7	5.2
Silent Reading Level				
Student	Time (Seconds)	Memories		Grade Equivalent
1	51	+16*		4.5
2	59	+15*		5.2
3	28	12		4.7
4	30	+13*		5.5
5	37	+17*		3.5
6	53	+17*		3.2

\*Indicates more than adequate comprehension.

The silent reading level of student number one was 4.5 grade equivalent with adequate comprehension. The evaluation of student number two was 5.2 grade equivalent on the silent reading level with above average comprehension. Student number three had more than sufficient comprehension with 4.7 grade equivalent for the silent reading level. The silent reading level was 5.5 grade equivalent for student number four with above required comprehension. Student number five had above average comprehension for the silent reading level of 3.5 grade equivalent. The silent reading level was 3.2 grade equivalent for student number six with above average comprehension.

The oral and silent reading levels of the remedial reading students are compared in Table XIII. Results indicated the oral reading level was higher than the silent reading level except for student number five who scored higher in silent reading. Five students showed a higher grade level for oral reading with the difference in range from 0.7 to 2.0.

TABLE XIII

COMPARISON OF ORAL AND SILENT READING SCORES OF THE DURRELL  
ANALYSIS OF READING DIFFICULTY IN GRADE EQUIVALENTS

Student	Oral Reading Score	Silent Reading Score	Difference
1	5.5	4.5	1.0
2	6.5	5.2	1.3
3	5.7	4.7	1.0
4	6.2	5.5	0.7
5	3.3	3.5	0.2
6	5.2	3.2	2.0

Reading Strengths and Weaknesses of  
Students in Follow-Up

The word recognition techniques used by the remedial students in the Durrell Analysis of Reading Difficulty and the Silent Reading Diagnostic Tests are compared in Table XIV.

TABLE XIV  
COMPARISON OF WORD RECOGNITION TECHNIQUES  
IN GRADE EQUIVALENTS

Student	Durrell Analysis of Reading		Silent Reading Tests	
	Flash	Analysis	Word Recognition Skills	Recognition Techniques
1	6.7	6.5	3.8	6.0
2	6.7	6.5	6.0	6.9
3	6.9	6.2	5.3	4.4
4	6.8	6.8	5.4	6.5
5	6.2	6.5	4.4	5.2
6	6.9	6.5	6.0	6.2

According to Table XIV, the word recognition scores of the students on the Durrell Analysis of Reading Difficulty represented by the subtest, Flash, showed a range in grade equivalents of 6.2 to 6.9 with a difference of 0.7. The subtest, Analysis, showed the range in grade equivalents of 6.2 to 6.8 with a difference of 0.6 for the remedial students.

The word recognition skills of the students, assessed by the Silent Reading Diagnostic Tests, exhibited a range in grade equivalents of 3.8 to 6.0 with a difference of 2.2. The results of the subtests included in the word recognition techniques depicted a range of 4.4 to 6.9 with a difference of 2.5 for the remedial students.

The results of word recognition techniques, as exhibited by visual structural analysis, syllabication, and word synthesis, are presented in Table XV according to the Silent Reading Diagnostic Tests.

TABLE XV  
RESULTS OF WORD RECOGNITION TECHNIQUES OF THE  
SILENT READING DIAGNOSTIC TESTS

Student	Visual Structural Analysis		Syllabication		Word Synthesis	
	Score	Grade Equivalent	Score	Grade Equivalent	Score	Grade Equivalent
1	21	6.1	20	4.5	19	5.0
2	24	6.8	26	7.0	26	6.6
3	7	2.5	21	5.0	21	5.3
4	24	6.8	22	5.5	23	6.3
5	11	4.3	24	6.3	21	5.8
6	20	6.5	18	3.8	25	6.5

The ability of the students represented in grade equivalents for visual structural analysis was 2.5 to 6.8. The subtests scores in grade

equivalents, depicted for syllabication, ranged from 3.8 to 7.0. Word synthesis showed a grade equivalent range of 5.0 to 6.6.

The total results of the Silent Reading Diagnostic Tests for the remedial students in the follow-up study are presented in Table XVI.

TABLE XVI  
TOTAL RESULTS ON THE SUBTESTS OF THE SILENT  
READING DIAGNOSTIC TESTS

Student	Word Recognition Skill		Error Pattern		Recognition Technique	
	Score	Grade Equivalent	Score	Grade Equivalent	Score	Grade Equivalent
1	56	3.8	28	2.5	60	6.0
2	77	6.0	7	6.0	76	6.9
3	73	5.3	11	5.3	49	4.4
4	74	5.4	9	5.6	69	6.5
5	64	4.4	20	3.7	56	5.2
6	77	6.0	7	6.0	63	6.2

Word recognition skills are presented in Table XVI as the total score of words recognized in isolation, error patterns, and words recognized in context. In word recognition skills, students' scores ranged in grade equivalents from 3.8 to 6.0. In error pattern, students' scores ranged in grade equivalents from 2.5 to 6.0.

Recognition techniques presented in Table XVI represent the visual structural analysis obtained from the subtests consisting of visual structural analysis, syllabication, and word synthesis. The total score of these recognition techniques exhibited by the students ranged in grade equivalents from 4.4 to 6.9.

The word recognition skills of the individual student as represented by the Silent Reading Diagnostic Tests are further explained in Table XVII. Grade equivalents are given for words in isolation and words in context. The error pattern is presented for the words in context. According to Table XVII, the error pattern was represented in the grade equivalent as the student's ability to identify the phonemes of the word and the phoneme's relative position in the word. In error pattern, one student had an omission with a grade equivalent of 4.0. The range shown in initial errors in grade equivalents was 2.0 to 7.0. The range shown in grade equivalents in middle errors was 2.7 to 5.9. The range shown in ending errors in grade equivalents was 1.0 to 6.8. The error pattern in orientation showed a grade equivalent range of 4.0 to 7.2.

#### Reading Progress Reported by Teachers in Follow-Up Study

Teachers were sent questionnaires in order to answer questions concerning the reading progress of the students. The questions considered most relevant to the reading progress of the students were:

1. What progress is the student making in reading?
2. Do you feel the student is reading according to his ability?
3. Do you feel the student's reading progress has hindered his progress in the content area?

TABLE XVII

RESULTS OF WORD RECOGNITION SKILLS OF THE SILENT  
READING DIAGNOSTIC TESTS

Student	<u>Words in Isolation</u>		<u>Words in Context</u>		<u>Error Pattern of Words in Context</u>				
	Score	Grade Equivalent	Score	Grade Equivalent	Omitted	Initial	Middle	Ending	Orientation
1	40	3.8	16	3.7	8.0	2.0	3.7	1.0	4.0
2	50	5.8	27	6.3	8.0	7.0	5.9	5.4	5.9
3	48	5.2	25	5.5	8.0	6.8	4.2	3.0	7.2
4	49	5.5	25	5.5	4.0	4.8	4.7	5.7	7.2
5	45	4.5	19	4.3	8.0	3.2	2.7	4.0	5.8
6	51	6.2	26	6.2	8.0	4.3	5.7	6.8	6.4



As shown in Table XVIII, the reading progress, as perceived by teachers of students in the follow-up study, indicated one student as making average progress and five students as making poor progress. Teachers reported one student performing according to ability in reading and five not performing according to ability. According to the data in Table XVIII, the teachers reported two students as not hindered in the content area because of reading disability and four students hindered in this area.

TABLE XVIII  
 READING PROGRESS AS PERCEIVED BY TEACHERS OF  
 STUDENTS IN THE FOLLOW-UP STUDY

Student	Reading Progress		Reading as to Ability		Content Reading Hindered	
	Average	Poor	Yes	No	Yes	No
1		X		X	X	
2		X		X		X
3		X		X	X	
4	X		X			X
5		X		X	X	
6		X		X	X	
Total	1	5	1	5	4	2

The results of the teacher questionnaire indicate that five students were considered as making poor progress in reading. It was also reported that five of the six students were not functioning academically to capacity. Four students' reading ability was assessed as hindering progress in the content area.

#### Parental Evaluation of Reading Progress of Students in Follow-Up

Interviews were conducted with parents of remedial reading students selected for the follow-up study. The questions considered most relevant to the reading progress of the students were:

1. What progress is your child making in reading this year?
2. Do you feel the child is reading according to his ability?
3. Do you think the child's reading ability has hindered his progress in other school subjects?

As shown in Table XIX, parent of student number one reported progress in all academic areas but stated the student was not reading as to ability. It was indicated that the student's ability to function in science and social studies was not affected by the reading disability. The student was able to accomplish his homework without assistance.

Student number two was said to be doing average work in all academic areas except reading. The parent felt that the student's reading ability did not hinder his progress in science and social studies, and that the student was reading according to ability.

Parent reported that student number three was doing average work in school with somewhat more difficulty in reading. It was felt that the

student was functioning below academic ability, and that his reading difficulties hindered his progress in the content area.

TABLE XIX  
 READING PROGRESS AS PERCEIVED BY PARENTS OF  
 STUDENTS IN THE FOLLOW-UP STUDY

Student	Reading Progress		Reading as to Ability		Content Reading Hindered	
	Average	Poor	Yes	No	Yes	No
1	X			X		X
2		X	X			X
3	X			X	X	
4	X		X		X	
5	X			X	X	
6		X		X		X
Total	4	2	2	4	3	3

Student number four was indicated to be doing average school work. The parent stated that reading disability had affected the student's progress in the content area; however, the student was reading according to ability.

Student number five was reported to be making average progress in school, but not to be reading according to ability. The parent felt difficulties in reading had limited the student's ability to function in the

content area, as evidenced by the inability of the student to achieve homework independently in these areas.

Student number six was reported as functioning below average during the school year and as not reading according to ability. However, the parent stated that the student had no difficulty in the reading required for science and social studies.

The results of the parent interview, as shown in Table XIX, indicated that four of the students were making average progress in reading with the other two making below average progress. Two students were reported as reading according to their ability with four reported as functioning below their ability. Three students' reading ability was assessed as hindering academic progress in the content area; however, three students were assessed as having no difficulty in the content area as a result of reading.

#### Parental Identification of Reading Difficulty

In the interview with parents of the students in the follow-up study, the parents were asked when they first recognized that their child had difficulties in reading.

Parent of student number one stated that the student was recognized as having reading problems in the first grade. Student number two was recognized by the parent as having difficulties in reading in the first grade. Difficulties in reading had been recognized by the parent of student number three in the second grade. The parent of student number four had recognized the child as having difficulties in reading during the second grade. Student number five was reported as having potential

difficulties in reading in kindergarten. The parent reported recognizing student number six's reading difficulty in the third grade.

The chronological grade in which the parents identified the student as having difficulties or potential difficulties in reading was reported in Table XX.

TABLE XX

GRADE IN WHICH DISABLED READER WAS FIRST IDENTIFIED BY PARENT

Grade	Student					
	1	2	3	4	5	6
Kindergarten					X	
First	X	X				
Second			X	X		
Third						X

According to Table XX, one student was shown to have been identified in kindergarten as having potential reading difficulties. Parents of two children identified reading difficulties in the first grade. Two students were perceived as having difficulties in the second grade, and one student was identified as having reading problems in the third grade.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

#### General Summary of the Investigation

The concern of this study has been the investigation of the identification procedures, methods of remediation, and the reading progress of disabled readers who have had remedial reading instruction.

Specifically, the purposes of this study were to examine the following questions:

1. By what methods and instruments were the remedial reading students in the initial study identified?
2. At what grade levels were the remedial reading students in the initial study identified?
3. What school procedures were identified as methods of attempted remediation of the individual student's reading disability?
4. What was the reading score of each student compared to the expected reading score during the reading instruction of the initial group of 20 students?
5. In the follow-up of the select group, what was the reading score of each student compared to the expected reading score?
6. How did each student's oral and silent reading levels compare in the follow-up study?
7. What were the strengths and weaknesses in reading of the students in the follow-up study?

8. What was the teacher's opinion of the reading progress of the student in the follow-up study?

9. What was the parent's opinion of the reading progress of the student in the follow-up study?

10. When did the parent recognize the reading disability of the student in the follow-up study?

The analysis of data concerned 20 disabled readers who had received instruction in remedial reading. A follow-up was made of the reading progress of six remedial students selected from the initial group of 20 students.

A review of accumulated records formed the basis for the data obtained concerning the initial group of 20 remedial reading students. Additional assessment was made from reading survey tests.

Treatment of the data of the six remedial reading students in the follow-up involved comparison of reading achievement level to reading expectancy, comparison of oral to silent reading levels, and identification of strengths and weaknesses of reading skills. Further assessment of data was obtained from teacher questionnaires and parent interviews.

### Summary of the Findings

#### Time and Method of Identification of Reading Disability

The Metropolitan Readiness Tests did not identify any of the disabled readers in this study as all students showed average and above average ratings.

Four of the 20 students were identified by kindergarten teachers as potentially disabled readers. The other students were identified in the

primary grades with five identified in first grade, seven in second grade, and three in third grade with the exception of one student who was identified in sixth grade.

Attempted Methods of Remediation Prior  
to Remedial Reading Instruction

Retention. Of the 20 students, 12 were retained at some period during their academic years. Two students were retained in kindergarten and 10 students were retained in first grade.

Prescriptive Textbooks. Thirteen of the 20 students had previously been placed in prescriptive reading textbooks prior to remedial instruction. At the time of entrance to the remedial reading class, all of the 20 disabled reading students were below reading expectancy.

Reading Gains of the Initial 20  
Remedial Reading Students

Using an average of the vocabulary and comprehension grade equivalents of the Gates-MacGinitie Reading Tests from September pre-test to April post-test, gains were shown in reading achievement for 19 remedial students in the initial group during remedial reading instruction. The gains ranged from 0.6 to 3.2 years in grade equivalents. One student was not available for the post-test.

Reading Progress of the Remedial Reading  
Students in the Follow-Up Study

Reading Achievement. When the initial discrepancy between the reading achievement level and the expected reading level was compared with



the discrepancy after the three-year period, only two students were found to have decreased the discrepancy; whereas, four students were found to have increased the discrepancy.

In an examination of the accumulative record of the vocabulary and comprehension progress of these students, it was found that only two students made consistent progress each year and four students made irregular progress.

Oral and Silent Reading Levels. Four students exhibited a higher grade level equivalent in oral reading than silent reading. One student showed a higher grade equivalent for silent reading, and another showed the same grade equivalent for both oral and silent reading levels.

Word Recognition Techniques. Results of the Silent Reading Diagnostic Tests showed a 0.1 year difference in range between words in isolation and words in context for these students. The words in isolation ranged in grade equivalents for these students from 3.8 to 6.2 and the words in context ranged from 3.7 to 6.3.

According to the difference in range between the highest and lowest grade equivalent, the students exhibited errors of greatest difference in the ending of words followed sequentially by initial, middle, and orientation errors.

The students evidenced slightly more difficulty with the recognition techniques of the Silent Reading Diagnostic Tests than the word recognition skills with a difference between the two being 0.4 year. The range in grade equivalents of the students showed a difference of 2.1 years in word recognition skills and a difference of 2.5 years in recognition techniques.

The word recognition techniques of the students as evidenced by the Durrell Analysis of Reading Difficulty indicated more difficulty with the flash of a word than the analysis of a word. The difference in grade equivalent in the range of the flash was 0.7 year and the difference in the range of analysis was 0.6 year.

Reading Ability as Perceived by Teachers  
and Parents

Reading Achievement as Perceived by Teachers. One student was reported by the teachers as making average progress in reading, and five students were reported as making below average progress in reading. It was also reported that one student was functioning in reading according to ability and five were not functioning according to ability. Four students were reported as being below average in the content area with two students reported as average.

Reading Achievement as Perceived by Parents. Of the six students, four students were perceived by parents to be functioning in the average range of ability academically, and two students were perceived as having difficulty. Four students were indicated as not achieving in reading according to ability and two were indicated as achieving in reading according to ability. Reading disability was indicated by the parents of three students as being an obstacle in the content area; however, three students were indicated as having no difficulty in the content area as a result of reading disability.

Grade in School When Parent Identified Reading Difficulty. One student was identified by the parent as having potential reading

difficulties in kindergarten. Parents of two students identified reading difficulties in the first grade. Two students were first identified as having reading difficulties in the second grade, and one student was identified as having reading problems in the third grade.

### Conclusions

According to the analysis of the data, the following conclusions were made as a result of this study:

1. The Metropolitan Readiness Test did not identify children with potential difficulties in reading.
2. Teacher observation was not always an effective predictor of children with potential difficulties in reading.
3. Retention as a measure of remediation was not effective for those children with difficulties in reading.
4. The use of prescriptive textbooks within the structure of the classroom did not bring disabled readers up to their expectancy.
5. The majority of the students showed positive growth of a year or more after one year of remedial instruction.
6. Several years after remedial instruction, disabled readers had a tendency to show an increase in the discrepancy between their reading scores and their expected reading scores.
7. Disabled readers' oral reading comprehension was usually higher than silent reading comprehension.
8. Disabled readers showed little difference between words recognized in isolation or in context.

9. In word recognition techniques, disabled readers showed the greatest difficulty in syllabication followed by word synthesis and visual structural analysis.

10. The Durrell Analysis of Reading Difficulty rated disabled readers higher than the Silent Reading Diagnostic Tests on word recognition skills and techniques.

11. Teachers were more accurate than parents in assessment of the student's reading ability.

12. The majority of the time, parents were not an effective predictor of the student's potential reading disability in the primary grades.

#### Recommendations

The following recommendations are presented as an aid in the identification and remediation of students with reading difficulties:

1. A battery of tests should be administered in kindergarten and the first grade to identify reading difficulties and potential reading difficulties with continuation of teacher observation and identification of students with potential reading disability.

2. Diagnostic tests should be administered in first and second grades to discern the strengths and weaknesses of the student with continuing evaluation.

3. Intervention should be initiated in the year in which the reading disability or potential reading disability is identified.

4. Students should receive remedial reading instruction instead of being retained.

5. Prescriptive reading textbooks used within the structure of the classroom should not be used as a substitute for remedial instruction.

6. Emphasis should be placed on the teaching of silent reading to the remedial reading student.

Further research is needed in the following areas:

1. The procedures used in kindergarten and first grade to identify students with potential reading difficulties.

2. The methods used for intervention and remediation of students with reading disability.

3. The characteristics of reading unique to the disabled reader.

4. The long range effect of remedial instruction on the reading progress of students.

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APPENDIXES

APPENDIX A

PREFACE LETTER REQUESTING PERMISSION OF PARENT

Dear

We are interested in the reading progress of the seventh grade students who have previously been enrolled in remedial reading in the elementary grades.

We would like your permission to give reading tests to your child. These tests would be used to determine the student's reading level and strengths and weaknesses in reading. We feel this testing would be beneficial to the student, and we would be glad to discuss the test results with you.

Would you please sign this letter and return it by January 7th to the Junior High School office? Your cooperation would be greatly appreciated.

Sincerely,

Virginia Blackburn

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Signature of Parent

APPENDIX B

QUESTIONNAIRE GUIDE

## Teacher Questionnaire

Name of Pupil \_\_\_\_\_ Present Grade Level \_\_\_\_\_

Name of Teacher \_\_\_\_\_ Position Occupied \_\_\_\_\_

1. What progress is the pupil making in reading?  
good \_\_\_\_\_ average \_\_\_\_\_ poor \_\_\_\_\_
2. Do you feel the pupil is reading according to his ability?  
yes \_\_\_\_\_ no \_\_\_\_\_
3. At what grade level is the pupil reading?  
third \_\_\_\_\_ fourth \_\_\_\_\_  
fifth \_\_\_\_\_ sixth \_\_\_\_\_
4. In your opinion, how does the pupil feel about school?  
likes \_\_\_\_\_ dislikes \_\_\_\_\_ indifferent \_\_\_\_\_
5. Is the pupil able to read and study independently?  
sometimes \_\_\_\_\_ all the time \_\_\_\_\_
6. Are the school areas involving reading more difficult for the pupil than those involving math?  
a great deal \_\_\_\_\_ somewhat \_\_\_\_\_ same difficulty \_\_\_\_\_
7. Do you feel the pupil's reading ability has hindered his progress in the content area?  
yes \_\_\_\_\_ no \_\_\_\_\_
8. Please rank as 1, 2, 3, and 4 the factors that you consider contributed to the child's reading ability.  
availability of remediation \_\_\_\_\_ attitude \_\_\_\_\_  
physical or neurological \_\_\_\_\_ others \_\_\_\_\_
9. In what respect do you feel the school in general has aided this pupil?  
attempted \_\_\_\_\_ aided \_\_\_\_\_ failed \_\_\_\_\_

## Interview Guide

Name of Pupil \_\_\_\_\_ Present Grade Level \_\_\_\_\_

Name of Parent \_\_\_\_\_ Occupation \_\_\_\_\_

1. What progress is your child making in reading this year?  
good \_\_\_\_\_ average \_\_\_\_\_ poor \_\_\_\_\_
2. Do you feel your child is working to his/her capacity?  
yes \_\_\_\_\_ no \_\_\_\_\_
3. Is your child able to do his/her homework such as science and social studies by himself/herself?  
yes \_\_\_\_\_ no \_\_\_\_\_
4. Are the school subjects involving reading more difficult for your child than those involving math?  
yes \_\_\_\_\_ no \_\_\_\_\_
5. Do you feel the child's reading ability has hindered his/her progress in other school subjects?  
a great deal \_\_\_\_\_ somewhat \_\_\_\_\_ same difficulty \_\_\_\_\_
6. Do you feel that remedial reading has benefited the child?  
yes \_\_\_\_\_ no \_\_\_\_\_
7. When did you recognize that your child had a reading problem?  
pre-school \_\_\_\_\_ kindergarten \_\_\_\_\_ first grade \_\_\_\_\_  
second grade \_\_\_\_\_ third grade \_\_\_\_\_ fourth grade \_\_\_\_\_
8. Please rank as 1, 2, 3, and 4 the factors that you consider contributing to your child's problems in reading.  
availability of remediation \_\_\_\_\_ attitude of child \_\_\_\_\_  
physical or neurological \_\_\_\_\_ changing schools \_\_\_\_\_
9. Has your child been retained in school?  
yes \_\_\_\_\_ no \_\_\_\_\_ grade \_\_\_\_\_
10. In what respect do you feel the school in general has aided your child with his/her school problems?  
attempted \_\_\_\_\_ aided \_\_\_\_\_ failed \_\_\_\_\_

APPENDIX C

EXAMPLE OF STUDENT ACADEMIC RECORD

COMPILED FOR USE IN THIS STUDY



## Data Form

Student Identification 52Grade Placement FifthDate of Birth July 12, 1965

## Kindergarten Record:

## Test Data

Metropolitan Readiness Test

1. Word Meaning	12
2. Listening	13
3. Matching	8
4. Alphabet	8
5. Numbers	13
6. Copying	7
Total	61
Percentile	63
Rating	C

Comments--Student File

The classroom teacher: Does not listen while others talk. Does not listen to directions. Cannot match beginning consonants. Cannot recognize all the letters of the alphabet. Does not have a good concept of words as to the size, shape, and spatial relationships.

## First Grade Record

## Test Data

Reading Textbook TestsOpening Books, A Magic Box and Things You See

I Word Recognition	28	Excellent
II Word Analysis	22	Good
III Comprehension	13	Doubtful
Total	63	Good

Worlds of Wonder

I Word Recognition	55	Excellent
II Word Analysis	27	Doubtful
III Comprehension	18	Good
Total	100	Doubtful

Comments--Student File

There are no comments in the file, and the teacher is not available for interview.

## Second Grade Record

Reading Textbook TestsLands of Pleasure

I	Word Recognition	37	Good
II	Word Analysis	32	Doubtful
III	Comprehension	29	Good
	Total	98	Doubtful

Open Highways--Remedial Reader

## More Power

I	Phoneme	17
II	Word Study	20
III	Comprehension	29
IV	Pre-Dictionary	10
	Total	76
	Percentile	32
	Rating--Average	

Comments--Student File

Second Grade Teacher: The child has trouble with sounds. Recommended More Power, remedial reader. After being placed in the remedial reader, the teacher said he was a good worker and functioned better in the small class.

Data from Parents: The child had an operation on his eyes during the summer after the second grade. One of his eyes did not focus well.

## Third Grade Record

## Test Data

Intelligence TestsKuhlmann Finch Tests

Intelligence Quotient	105
Percentile Score	62
Mental Age	8.7
Chronological Age	8.3

Reading Achievement Tests

## Pre-Test

Gates-MacGinitie Reading Tests, Form B-1

## Vocabulary

Number Correct	27
Standard Score	44
Percentile Score	27
Grade Score	2.4

Comprehension  
 Number Correct 8  
 Standard Score 30  
 Percentile Score 8  
 Grade Score 1.4

Post-Test

Gates-MacGinitie Reading Tests, Form B-2

Vocabulary  
 Number Correct 26  
 Standard Score 43  
 Percentile Score 24  
 Grade Score 2.3

Comprehension  
 Number Correct 22  
 Standard Score 48  
 Percentile Score 42  
 Grade Score 2.7

Reading Textbook Tests

Open Highways--Remedial Readers

Moving Ahead

I Phoneme 20  
 II Word Study 21  
 III Comprehension 31  
 IV Pre-Dictionary 8  
 Total 80  
 Percentile 45  
 Rating Average

Splendid Journey

I Phoneme 14  
 II Word Study 21  
 III Comprehension 23  
 IV Pre-Dictionary 10  
 Total 68  
 Percentile 33  
 Rating Average

Speeding Away

I Phoneme 13  
 II Word Study 12  
 III Comprehension 29  
 IV Pre-Dictionary 8  
 Total 62  
 Percentile 9  
 Rating Very Low

Other Tests

Iowa Tests of Basic Skills

Subtest	Grade Equivalent	Percentile
Vocabulary	1.4	2
Reading	2.2	9
Language Skills	2.4	8
Work Study Skills	2.9	21
Math	2.4	6
Composite	2.3	3

Comments Student File

Classroom Teacher: The child was not a strong student, but his weakness seemed to be mostly in reading.

Remedial Reading Teacher: The child was placed in a small group in a remedial reader. He also received individual help with phonics and sight words.

## Fourth Grade Record

## Test Data

Intelligence TestsWechsler Intelligence Scale for Children

Verbal	Scaled Score	Performance	Scaled Score
Information	7	Picture Completion	9
Comprehension	12	Picture Arrangement	12
Arithmetic	7	Block Design	12
Similarities	10	Object Assembly	8
Vocabulary	12	Coding	9
Digit Span	8	Mazes	10
Sum	47 PR	Sum	50 PR
Verbal IQ	96		
Performance IQ	100		
Full Scale IQ	98		

Reading Achievement Tests

## Pre-Test

Gates-MacGinitie Reading Tests, Form C-1

## Vocabulary

Number Correct	17
Standard Score	33
Percentile Score	4
Grade Score	1.8

## Comprehension

Number Correct	12
Standard Score	33
Percentile Score	4
Grade Score	1.7

## Post-Test

Gates-MacGinitie Reading Tests, Form C-2

## Vocabulary

Number Correct	26
Standard Score	42
Percentile Score	21
Grade Score	2.9

Comprehension	
Number Correct	27
Standard Score	47
Percentile Score	38
Grade Score	3.4

Reading Textbooks

Comment: He did not finish textbook this year.

Other Tests

Peabody Individual Achievement Test--Pre-Test

Subtest	Grade Equivalent	Percentile
Mathematics	3.7	3
Reading Recognition	2.7	7
Reading Comprehension	3.5	21
Spelling	3.5	18
General Information	4.0	32
Total Test	3.4	16

Peabody Individual Achievement Test--Post-Test

Subtest	Grade Equivalent	Percentile
Mathematics	6.0	54
Reading Recognition	4.4	25
Reading Comprehension	4.2	23
Spelling	4.6	47
General Information	4.5	23
Total Test	4.6	25

Iowa Tests of Basic Skills

Subtest	Grade Equivalent	Percentile
Vocabulary	2.7	8
Reading	3.5	21
Language Skills	3.6	21
Work Study Skills	3.0	4
Math	2.6	1
Composite	3.1	5

Comments--Student File

Learning Disabilities Teacher: Left eye is not working with right eye. His WISC profile showed a weakness in long term memory and concentration. He was taken into learning disabilities class with concentration on math.

Remedial Reading Teacher: The child continued in remedial work. His test scores on vocabulary were consistently lower than the comprehension scores. He would forget some over the vacation.

Classroom Teacher: Because he was having trouble with math and spelling he was referred for testing. He finished all of his school work, but he was not a strong student.

## Fifth Grade Record

### Test Data

#### Intelligence Tests

##### Kuhlmann Finch Tests

Intelligence Quotient	100
Percentile	50
Mental Age	10.3
Chronological Age	10.3

#### Reading Achievement Tests

##### Pre-Test

##### Gates-MacGinitie Reading Tests, Form C-1

###### Vocabulary

Number Correct	31
Standard Score	46
Percentile Score	34
Grade Score	3.4

###### Comprehension

Number Correct	16
Standard Score	38
Percentile Score	12
Grade Score	2.3

##### Post-Test

##### Gates-MacGinitie Reading Tests, Form C-2

###### Vocabulary

Number Correct	43
Standard Score	58
Percentile Score	79
Grade Score	5.3

###### Comprehension

Number Correct	31
Standard Score	50
Percentile Score	50
Grade Score	3.9

#### Reading Textbook Tests

##### Open Highways--Remedial Reader-Book 4

I Word and Phrase Meaning	7
II Sentence and Paragraph Meaning	9
III Main Ideas	2
IV Relationships	15
V Scrutiny	5

VI	Phonetic Analysis	2
VII	Structural Analysis	0
VIII	Dictionary	11
	Total	51
	Percentile	7
	Rating	Low

### Other Tests

#### Iowa Tests of Basic Skills

Subtest	Grade Equivalent	Percentile
Vocabulary	3.6	11
Reading	4.4	20
Language Skills	4.2	18
Work Study Skills	5.1	36
Mathematics	4.2	11
Composite	4.3	15

### Comments--Student File

Disabilities Teacher: The child's eye-hand coordination has improved greatly this year. His concentration span continues to increase, but still needs strengthening. His ability to remember what he sees and hears has improved, but is not yet within the normal range. He has come up to beginning fourth grade levels in math. He needs continual help in math, reading, and spelling.

Remedial Reading Teacher: It was more difficult to motivate the student in the fifth grade. The student had improved a grade level during the year in vocabulary and comprehension, but it was felt he would work better in the regular classroom next year. It was recommended that the student be placed in the sixth grade class the following year with supplemental reading instruction.

VITA

Virginia Bernice Blackburn

Candidate for the Degree of

Doctor of Education

Thesis: A STUDY OF REMEDIAL READING STUDENTS: IDENTIFICATION, READING ACHIEVEMENT AND THE FOLLOW-UP OF A SELECT GROUP

Major Field: Curriculum and Instruction

Biographical:

Personal Data: Born in Beggs, Oklahoma, April 23, 1921, the daughter of John Barry and Eva Alice Farnham; married to Delma M. Blackburn.

Education: Graduated from Ada High School, Ada, Oklahoma, in May, 1939; received Bachelor of Science degree in Home Economics from East Central Oklahoma State University in 1943; received Master of Science degree in Elementary Education from Oklahoma State University in 1969; completed requirements for the Doctor of Education degree at Oklahoma State University in July, 1980.

Professional Experience: Registrar, Ada Junior High School, Ada, Oklahoma, 1943-44; commercial teacher, Fitzhugh High School, Fitzhugh, Oklahoma, 1946-47; second grade teacher, Barnsdall Elementary School, Barnsdall, Oklahoma, 1954-55; kindergarten, first grade, and second grade teacher, Dewey Elementary School, Dewey, Oklahoma, 1966-73; remedial reading teacher, Dewey Elementary School, Dewey, Oklahoma, 1973-1979; graduate teaching assistant, Oklahoma State University, Curriculum and Instruction, 1979-80.