

AN ANALYSIS OF THE READING ACHIEVEMENT IN THE
RUSSELL INDEPENDENT SCHOOL DISTRICT
FROM 1970-71 THROUGH 1977-78

ABSTRACT OF APPLIED PROJECT

An applied project submitted in partial fulfillment of
the requirements for the degree of Education
Specialist at Morehead State University

by

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ABSTRACT

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Statement and Purpose

The purpose of this study is to determine if there are trends in the achievement levels in reading of the students in grades three through eight in the Russell Independent School System for the school years 1970-71 through 1977-78.

Hypothesis

Reading achievement, as determined by the mean score achieved in each grade, has improved significantly in the Russell Independent School District over the time period studied.

Design of the Study

This study compared the mean reading achievement score of each grade, three through eight, in 1970-71 to the mean reading achievement score of each grade in 1977-78. The percent of students grade level and above for each grade for each year of the study was also examined. The Iowa Test of Basic Skills was the instrument used to collect this data.

Method of Statistical Analysis

Use of the t-ratio. If the results were statistically significant at the .01 level of significance, the null hypothesis was rejected. The formula $t = \frac{\bar{x}_1 - \bar{x}_2}{S_{\bar{x}_1 - \bar{x}_2}}$ was used in the tabulation.

Conclusions and Recommendations

Conclusions

The findings of this study were:

1. For the third grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be statistically significant at the .01 level of significance.
2. For the fourth grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be statistically significant at the .01 level of significance.
3. For the fifth grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be statistically significant at the .01 level of significance.
4. For the sixth grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be not statistically significant at the .01 level of significance.
5. For the seventh grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be not statistically significant at the .01 of significance.
6. For the eight grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be statistically significant at the .01 level of significance.

7. At each grade level, the percentage of students grade level and above has increased from 1970-71 to 1977-78.
8. For each year of the study, from 1970-71 to 1977-78, the percentage of students grade level and above decreased progressively from the third grade to the eighth grade.

Recommendations

As a result of the findings of this study, the following recommendations are made:

1. Continue the reading program now in use by the Russell Independent School District in grades three through eight.
2. Continue and add to this study each year so that all teachers will have accurate, complete and current test results for use in planning individual programs for each child assigned to them.
3. Integrate all sixth grade students in the district into the middle school program for the following reasons: a. co-mingling of all educational and socio-economic backgrounds, b. provide students in the sixth grade with exposure to both elementary and secondary teachers by dividing students into groups based on ability and assigning them accordingly, c. give greater latitude in grouping to meet the educational needs of all students, and d. permit gradual transition from the self-contained classroom to the departmentalized situation, thus reducing the trauma of the change.
4. Institute a remedial reading program with specialized teachers and equipment for grades six, seven and eight. These classes would meet twice a day.

5. Complete a study of reading achievement using the longitudinal approach for the same time period as this study covers to be used in conjunction with this study.

Accepted by:

Robert C. Neuman, Chairman
John R. Dunton
William J. Moore

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Chapter 1

INTRODUCTION

The Russell Independent School System considers reading the most essential ingredient in the elementary curriculum. There are several reasons why the school district feels this way. As society becomes more technologically advanced, more occupations require higher levels of education in which reading ability plays an essential role. Also, if children are poor readers, as they become older they are increasingly handicapped by their lack of reading ability. They are likely to repeat grades, and if they enter high school they are more likely to drop out before graduation. Therefore, many desirable occupations are closed to them. Many of these people turn to welfare as a way of life and society as a whole thus suffers.

There are also aesthetic benefits of reading. Poor readers find it difficult to socialize with educated people. As a leisure time activity, reading is unique. One can select any topic he chooses. He can read in a place and time chosen for his own convenience, and he can set his own pace. Reading is one of the most flexible activities available. If one is a proficient reader, he usually enjoys reading. A good reader is likely to read more, thus continuing his education throughout his lifetime.

If each person is to develop his reading ability to the fullest extent, a sound and comprehensive reading program is essential. In the Russell Independent School District, a great deal of time is spent in planning each child's basal reading program. This planning begins as soon as the director of curriculum receives the student list for each elementary school from the

Director of Pupil Personnel. Prior to the end of each school year, each elementary staff member completes a subjective data sheet relative to the material used and the degree of success evidenced for each student in her class in basal reading for that year. This data is returned to the Curriculum Director and constitutes the basis for planning individualized reading programs to meet the needs of students. The information contained on the data sheets is transferred to the student list for each elementary building for each grade level. The data transferred includes the level of the basal series for each child and the teacher's judgement as to the degree of success that each student achieved in that level.

On the basis of this data, the principal of each elementary school is given recommended lists of various groups of students with similar weaknesses who should be kept together so that a basal reading program can be planned in order that each child may work at a level where he can be both comfortable and successful. From this data, the principal is also given two other lists; one of which shows those students ranked above average by their teacher working in grade level material, and another of students working in grade level material who were ranked average by their teacher. With all of this information at his disposal, the principal can easily provide heterogeneous grouping within each classroom.

Once these decisions are made by the principal, the individual teacher's class roster is returned to the Director of Curriculum. She writes a note to each teacher suggesting the specific basal reading material to be used with each of her reading groups. If, during the year, the teacher finds that the material is either too easy or too difficult for the student, the program is flexible enough to provide for regrouping.

In order to evaluate the effectiveness of this reading program, the achievement test data of these students will be examined. The Russell

Independent School District administers to each student in every grade one through eight a standardized achievement test at the end of each school year. This is done to better assess the value of current curriculum programs. It is also done to identify students who are in need of extra help. The results are available to every administrator and teacher in the system in order that they might determine by grade, subject, school, individual teacher, and individual student where improvement on the program is needed.

These test results are recorded on the permanent record card of each student each year in order that teachers and administrators can determine if the student is progressing at an acceptable rate. The philosophy of the school system is that each child be allowed to progress at a rate that is comfortable for him and that allows him a measure of success. In order to evaluate the effectiveness of the reading program, the achievement test data of students will be examined.

Statement and Purpose

The purpose of this study is to determine if there are trends in the achievement levels in reading of the students in grades three through eight in the Russell Independent School System for the school years 1970-71 through 1977-78.

Significance of the Study

The study will be used to determine the effect of the reading program on the achievement levels of the students. Results will be examined to determine if the current program is effective or if another reading program should be instituted.

Definition of Terms

1. Achievement Test: a test that measures the extent to which a person has acquired specific knowledge or skills as the result of instruction.

2. Arithmetic Mean: a common measure of the average of a set of numbers obtained by summing the scores and dividing by the number of scores.

3. Basal Reader Programs: pre-planned, sequentially organized, detailed material and methods used to teach and to learn the skills of developmental reading.

4. Ex Post Facto Design: an examination of outcomes "after the fact" by comparing a group to itself over time or to other groups that have operated in the past.

5. Grade Equivalents: the grade of pupils for which a given score is the average.

6. Growth Curve: a graph depicting changes in test scores for a group over years of schooling.

7. Heterogeneous Groups: classes formed whenever no single factor governs the assignment of pupils to groups and classes. Heterogeneous instructional groups are viewed as containing the same ranges of instructional and individual differences as the total group at that position on the vertical sequence.

8. Null Hypothesis: the assertion that there is really no difference between the means of the two populations in question.

9. Percentiles: points in a score distribution below which certain proportions of the scores fall.

10. Range: a measure of dispersion of scores found by subtracting the smallest score in a set from the largest score.

11. Standard Deviation: a measure of the dispersion of scores around the average of the set. It is based on the difference between each score and the mean.

12. Standard Error of Measurement: an estimate of the magnitude of errors likely to be present in scores obtained from a test.

13. Stanine: a standard score scale ranging from a low of one to a high of nine, with a mean of five, and a standard deviation of two. A prescribed percent of a group are always within a given stanine.

14. t-ratio: a ratio of the difference between means to the standard error of a difference between means.

15. t-score: normalized standard scores with a mean of fifty and a standard deviation of ten.

Delimitations

The limitations for this study are as follows:

1. Only students who spent the entire school year in the Russell District will be included in the study.
2. Students in grades one and two will not be included in the study because the Iowa Test of Basic Skills was not available for these grades for the entire period of the study.
3. Students in grades nine, ten, eleven and twelve are not included in the study because these students were not tested during the time period studied.

Hypothesis

Reading achievement, as determined by the mean score achieved in each grade, has improved significantly in the Russell Independent School District over the time period studied.

Chapter II

RELATED LITERATURE

The national interest in improving education has generated several highly important projects attempting to improve curricula. Any time a new program is adopted, questions about evaluation arise. Parents, teachers, and administrators want to know if the program has merit. Ways to evaluate the programs are sought. Tests are given, and the program is rated on the results of those tests. Here, several studies of programs will be examined. In each case, students were tested to determine whether or not to continue the program or to find another to replace it.

To draw attention to its full range of functions, we may define evaluation as the collection and use of information to make decisions about an educational program. This program may be a set of instructional materials distributed nationally, the instructional activities of a single school or school district, or the educational experiences of a single pupil. Many types of decisions are to be made, and many varieties of information are useful.

One of the most comprehensive studies in this area was completed in the St. Catherine's Ontario School System. This study spanned a forty year period. Actually, there were three separate studies. The first covered the years 1933 to 1938, the next covered the years 1952 to 1954, and the last study covered the years 1975 to 1977. In 1977, the results of the three studies were combined. In all three cases, each student in the school system in grades five through eight was tested. The Thorndike-McCall Reading Scale was used. In analyzing the results of the study, the researchers found that

the eight grade students in 1977 did as well as or marginally better than their counterparts in previous years. Over the period of the study, sixth grade students showed a small but steady improvement. It was found that the greatest improvement in reading was in the upper levels of the classes. Overall, the mean score gain from 1938 to 1977 was fairly steady.¹

A study was completed of student achievement in Hurricane High School located in Hurricane, West Virginia. Hurricane is a small semi-rural town with a population of about 12,000. Students were given the California Progressive Achievement Test (Intermediate Series) in May of 1950.

Only ninth grade students were tested. The author gives scores for boys and girls separately. He lists high, low and mean grade equivalent scores in chart form. He also gives percentile scores for each student. He then compares the scores of the ninth grade girls to those of the ninth grade boys.

It was found that in vocabulary, girls scored five months better than did the boys. In comprehension, the girls scored one year and four months better than did the boys. The mean grade equivalent score achieved by the entire ninth grade class was 7.5. This was two years and two month below what is normally expected of ninth grade students. No growth figures were given; this being the first year the test had been given.

The author recommended that achievement tests be given each year. In this way, gain in student achievement for each child could be computed. He felt that teachers should review these tests each year, in order that they might examine any strengths or weaknesses in their teachings. It was felt

¹H. G. Hedges, Achievement in Basic Skills; A Longgitudinal Evaluation of Student Achievement in Language Arts and Mathematics, U.S., Educational Resources Information Center, ERIC Document ED 147 367, 1977.

that a system or record keeping be set up, In this way results would be readily available and any developing trends might be readily discernible.²

A study of the achievement levels of students in the Dade County Public Schools, Florida was done in 1975. It was conducted for one school year, 1974-75. Each student was given the Stanford Achievement Test.

Data were grouped separately for each school in the district. For each school building, two charts were made. In this way, schools could easily be compared to one another and any large differences would be readily discernible. One chart listed the number of students taking the test, the median reading score, the national norm, and the percentage of students in each stanine. The second chart gave the number of students in each percentile and also presented the standard deviation. Again, no growth figures were available as this was the first year of the testing program. All mean scores were compared to national norms.

Reading average scores were slightly below grade level at all grades in Dade County. The extent to which scores are below grade level was somewhat greater at the middle grades than the lower or upper grades. Two reasons were given for this. One was that newly instituted programs for kindergarten students had a positive effect on the achievement levels of students in the lower grades. Another reason given was the newly implemented reading programs recently begun in the upper grades.³

A study was done in Michigan for the school year 1972-73. Every school district in the state was included in this study. The average reading

²Kenneth Brown, Jr., "Achievement in Hurricane High School" (Master's Thesis, Marshall College, 1950). p. 52.

³Achievement in Dade County Public Schools 1974-75, U.S., Educational Resources Information Center, ERIC Document ED 118 613, 1975.

score was shown for each district in a table. Included in this table was a percentile rank given to the district according to how it compared to other districts in the state. Also, a decile distribution was given showing the percentage of each district's fourth and seventh grade learning composite achievement in each tenth of a statewide ranking of pupil scores.

This study was useful in that it allowed a district to examine the scores of another district comparable to it in size and social structure. A rural district could compare itself to other rural districts to see how it fared. If a district scored higher than one's own, its reading program might be examined to see if it might be incorporated into the existing program.⁴

A study was completed in 1944 of fourth grade students in Cabell County, West Virginia. The purpose of the study was to compare achievement levels of students in three different types of school organizations, the two-room school, the rural graded school, and the city graded school.

Each student was given the Progressive Achievement Test-Primary Battery. This tested reading vocabulary and reading comprehension. The vocabulary test included word form, word recognition, and meaning of opposites. The comprehension test included directly stated facts, following directions and interpretations. The author listed the median score in vocabulary and comprehension for each school in Cabell County. He then gave the median score for two-room schools, rural graded schools, and city graded schools.

In both cases, vocabulary and comprehension, the two-room schools were found to have the highest median score. The author concluded that

⁴Local District Results: The Fourth Report of the 1972-73 Michigan Educational Assessment Program, U.S., Educational Resources Information Center, ERIC Document ED 104 899, 1973.

smaller instructional groups show the best results in reading achievement. The reason the author gave for his findings was that children in the two-room school had the same teacher for their first three years in school, while those in rural graded schools and city graded schools had three different teachers for their first three years in school. He felt that students in the two-room schools felt more comfortable with a teacher they were familiar with and were able to learn at a faster rate than their counterparts in graded schools.⁵

A study was done of the achievement levels of students in the elementary schools of Clay County, West Virginia in 1952. The study was done so that teachers could compare the scores of their students to the scores of other elementary schools in Clay County. In this way, the author felt that if a teacher found her students' scores to be lower than others in the county, she might adjust her teaching methods.

The Metropolitan Achievement Test was given to the system's first grade students, and the Stanford Achievement Test was given to second through eighth grade students. For each grade, first through eighth, the highest score, lowest score and the mean score was given.

The first grade mean score was the only one that was above the national norm. The grade that was the farthest below the norm was the seventh grade. The seventh grade mean score was one year and two months below the norm. The author found that girls scored better than boys in all grade levels. Also, it was shown that the results of the primary grades were higher than either the intermediate or upper grades.

The author recommended that a cross-sectional study be undertaken of West Virginia students to see if the results of this study were typical of all

⁵William Myron Drummond, "Achievement of Pupils in Fundamental Subjects in Various Types of School Organizations in Cabell County, W. Va." (Master's Thesis, Marshall College), 1945, p. 45.

children in West Virginia. She also recommended that another study of this type be undertaken in ten years to see if there had been any change in the achievement levels of students in Clay County.⁶

Two rounds of reading assessment by the National Assessment of Educational Progress were conducted. The first was in the school year 1970-71 and the second was in the school year 1974-75. Conclusions were based on a panel of six reading specialists. Nine year olds improved in all areas of reading skills. Black nine year olds improved even more than the nine year old group as a whole. This was attributed to a successful intervention program designed to develop the reading skills of minority groups. For thirteen and seventeen year olds, reading ability changed little. Once again, for these two age groups, girls were shown to score higher than boys. The greatest difference was at the age of seventeen, where 3.6 points separated the mean score of girls from that of boys. In the thirteen and seventeen year old groups, there was slight improvement in literal comprehension but a slight decline in inferential comprehension.⁷

The National Assessment of Educational Progress continued assessing levels of achievement. In addition to the two years mentioned in the previous study, a third round was conducted in the school year 1979-80. Again, nine, thirteen, and seventeen year olds were studied. It was found that performance in the Northeast was the highest in the nation, and the Central portion of the country was also above the national average. The Southeast fell below the national average. The West depended upon the age level studied as to whether it was above or below the national average. As would be expected,

⁶Charlotte Dorsey, "The Comparison of Achievement Test Scores and Grade Placement in the Elementary Schools of Clay County" (Master's Thesis, Marshall College), 1952, p. 67.

⁷Reading in America: A Perspective on Two Assessments, U.S., Educational Resources Information Center, ERIC Document ED 128 785, 1976.

students in the affluent suburbs scored best on the reading test, with students in the inner city scoring the lowest. Students from rural school districts scored only slightly higher than students from the inner city. Again, it was found that girls scored higher than boys at every age level. It was stressed in this study that seventeen year olds, most of whom are completing their formal education, had difficulty reading long passages and had a limited vocabulary.⁸

In another study, national estimates of school achievement as measured by the subtests of the Wide Range Achievement Test for non-institutionalized students in the United States aged twelve to seventeen years of age are presented. 7514 youth were randomly selected to represent the 23 million students in that age group. Test results were presented by age, sex, and educational level in their raw score form. Percentile ranks and t-scores are also included. The data demonstrated a continued development of reading skills through the adolescent years and the formal education of the students studied increased. In this study, girls scored higher than boys in work recognition and pronunciation.⁹

In another study, students were given the Stanford Achievement Test-Elementary Form L, Number 63. Unlike the other studies mentioned, this study was done only for a very few students. This study was conducted to see if children allowed to select their own reading material scored higher than those children in the basal reading program. Eleven students were originally studied. They were given the test mentioned before. Of these eleven, only

⁸J. Stanley Ahmann, "National Achievement Profiles in Ten Learning Areas", Educational Studies, IX (Winter, 1979), 351-64.

⁹Dale C. Hitchcock and Glenn B. Pinder, Reading and Arithmetic Achievement Among Youths 12-17 Years as Measured by the Wide-Range Achievement Test, U.S., Educational Resources Information Center, ERIC Document ED 103 436, 1974.

eight remained in the program the second year. These eight students were again tested, using the Stanford Achievement Test-Elementary Form K. No measures of central tendency were used in this study. Only singular records were kept on each child, showing his achievement test scores for each year. Of the eight students, three made more than the required one year gain. Two made a gain of nine months. The researcher felt that the results were not conclusive enough to show the merit of the program. However, even though the results were not statistically significant enough to show any merit to the program, the author felt that the enjoyment and sense of self-worth felt by the children in the program was sufficient reason to continue the program.¹⁰

A study was completed by Jules Grosswald of the Philadelphia city-wide testing program. The study involved all students in the Philadelphia Schools grades kindergarten through twelve. Kindergarten students were given the Stanford Early School Achievement Test, and students in grades one through twelve were given the California Achievement Tests. School performance distributions show the combined percentages of pupils in each school scoring within various national percentile ranks. The performance distributions describe four groups of pupils in each school: (1) below the national 16th percentile level, (2) between the 16th and the 49th national percentile level, (3) between the 50th and 84th national percentile level, and (4) 85th national percentile or above. The lists provided for the city, each of the eight districts, and all schools show the full range of pupil performance in the various test areas compared to national pupil norms provided by the test publishers. For kindergarten students, only the total battery results in the Stanford Early School Achievement Test are given. For grades one through

¹⁰Dorothy Honaker Stewart, "Study of a Fifth Grade Individualized Reading Program, Richmond Elementary, Kanawha County, 1963-65". (Master's Thesis, Marshall College, 1966), p. 47.

twelve, score results of the California Achievement Tests are given for each of the test areas and the total battery. For reference, the performance distributions for the national norms, city, and district are also given. Data are organized by district for all elementary schools in district order. No attempt is made in this study to analyze or interpret the data.¹¹

A concern with the quality of schooling prompted a study by Leo A. Munday of the achievement test scores of the 1960's and the 1970's. Statistics from a national sample from two states, Minnesota and Iowa, show a decline in achievement test scores in the late sixties and these declines carried over into the early seventies. A study by the California Test Bureau of McGraw Hill showed a national decline in school achievement for grades two through ten on the California Achievement Test for the period from 1968 to 1973.

The Iowa Test of Basic Skills were nationally normed in 1956, 1964, and 1971 with approximately 200,000 children in grades three through eight. From 1956 to 1964, gains were shown at all grades for all skill areas except vocabulary at grade eight. The biggest gain was in reading at grade three, 4.3 months, followed by language skills at grade four, 4.2 months. The average gain across grades from 1956 to 1964 was 1.4 months in vocabulary, 2.6 in reading and 2.6 months in language skills. The data for 1964 to 1971 is less favorable. The national data show decline in two out of three skills. The average decline across grades three through eight was 1.2 months in reading. The decline was more marked at the upper than in the lower grades. The average decline in language skills was .6 months and there was a gain in vocabulary of .9 months.

In California, there was little change in reading scores in grades three

¹¹Jules Grosswald, 1974-75 Philadelphia City-Wide Testing Program. School Performance Distributions: Kindergarten Through Grade Twelve, U.S., Educational Resources Information Center, ERIC Document ED 115 694, 1975.

and six for the period of 1969 to 1976. Three southern states were mentioned in the study. There was little change in state A in the reading scores of fourth and eighth grade students for the period of 1971-72 to 1976-77. In state B, there was a gain in fifth grade reading scores, but a leveling off of reading scores at the eighth grade for the period of 1971 to 1977. In state C, there was a gain in the reading scores of sixth grade students from 1972 to 1975. In Iowa for the period of 1971 to 1977, third grade students showed declines in their reading scores. In Ohio, for the period of 1972 to 1976, students in the fourth and sixth grades showed gains in their reading scores, while there were slight declines in the reading scores of eighth and tenth grade students.

The author concluded in this study that the sharp declines of the late 1960's have been stopped. Since 1970, there have been continued achievement gains in the lower grades, while in the middle and upper grades there has been a leveling off of school achievement.¹²

One effort to determine if there were superior methods which teachers of beginning reading might use was sponsored by the U.S. Office of Education. It was known as The First Grade Reading Studies. Twenty-seven separate studies that had similar objectives and research design were funded. These investigations involved the use of basal readers, phonic and linguistic programs, orthographic systems in individualized reading and language experience. They sought to find out the effects of in-service training, reading readiness, organizational patterns, and teacher characteristics on pupil progress. The results at the end of the first grade were mixed, but there were indications that basal reading with strong word-attack programs produced

¹²Leo A. Munday, "Changing Test Scores, Especially Since 1970," Phi Delta Kappan, LX (March, 1979), 496-99.

the best results. The conclusion was that combinations of methods seem better than any one method and that pupil and teacher characteristics affect progress regardless of the program.

About half of the First Grade Studies were continued into the second grade. Again, the results were mixed, although modified alphabet, linguistic and phonics showed results indicating that these programs produced superiority in word recognition and spelling.¹³

Billie J. Miller compared a class using a basal reading series alone to another using the same series in addition to materials for individualized use and a third using only individualized material. Test scores favored the combination of basal reading and individualized material in word meaning, but there were not significant differences among the three groups on paragraph meaning.¹⁴

Irene Vite compared test results on two controversial approaches of reading, with individualized reading as the experimental group and ability grouping as the control group. There were statistically significant differences favoring the experimental group in silent reading, oral reading, vocabulary development, and positive attitudes toward reading. Children were matched in age, I.Q., reading age, and socio-economic background. Teachers were matched on the basis of educational training and experience. The experimental group showed gains of 1.41 years as compared to 1.14 years for the control group. The experimental group exceeded the control group in reading vocabulary by .87 years. The study concluded that children were able to

¹³Robert Dyktra, Summary of the Second Grade Phase of the Cooperative Research Program in Primary Reading Instruction," Reading Research Quarterly, 4:49-70, Fall, 1968.

¹⁴Billie J. Miller, "A Comparison of Three Types of Reading Programs-S.R.A., Individualized and Scott-Foresman," Reading Research Quarterly, 1:62, Winter, 1965.

choose reading material which promotes their reading growth.¹⁵

In a school in California, a principal decided that homogeneous grouping would result in greater reading gains. In November, Form AM of the Iowa Silent Reading Tests were administered to ninety-four fifth grade students. The children were divided into four classes on the basis of their scores on this test. Children in class A had grade equivalents that ranged from 5.7 to 9.0, class B from 4.6 to 5.6, class C from 3.6 to 4.6 and class D from 2.0 to 3.6. In June, Form A, Intermediate Battery of the Metropolitan Achievement Tests was administered. The average I.Q. of the control group (Heterogeneous classes) was 103.9 and the experimental group (Homogeneous classes) was 103.5. There was no statistical difference between these means. The mean gain for homogeneous classes was 5.078 and for heterogeneous classes was 5.5157: The variances of the growth scores were tested and found to be statistically equal. A t-value of .10 was found, therefore it was concluded that there was no difference in the two groups.¹⁶

In the Sabastopol Union School District the Joplin Plan was tested. All third, fourth and fifth grade students were given the California Reading Test, 57th Edition, in the spring of 1961. In the spring of 1962, another form of the same test was administered to determine gains. In the experimental school a committee made up of the classroom teacher, the administrator, and a special consultant used the scores and other data such as teacher judgement, cumulative record data and previous test results to determine into which reading class each child should be placed. Each child had a fifty minute reading class. In addition, each teacher set aside twenty to twenty-five

¹⁵Irene W. Vite, "Individualized Reading-The Scoreboard on Control Studies," Education, 81:285-290, January, 1961.

¹⁶Roy M. Carson and Jack M. Thompson, "The Joplin Plan and Traditional Reading Groups," The Elementary School Journal, 65:38-43, October, 1964.

minutes each afternoon for recreational reading. The reading program in the control school was the traditional type of program. The pupils in each classroom were divided into three reading groups. Both the experimental and the control groups showed gains of more than one year in total reading, reading vocabulary, and reading comprehension. There were no significant differences between the two groups in reading gains.¹⁷

The purpose of an experiment by Harry Sartain was to determine whether second grade groups would make greater progress in reading skills when taught for three months by the method of individualized self-selection or when taught by the method of ability grouping using basal readers and supplemental books. At the beginning of the second week of school, the children who were in the slower group in each class were given Form 2 of the Gates Primary Tests of Word Recognition and Paragraph Reading. The average and faster students were tested with Form 2 of the Gates Advanced Primary Tests. On March 10, different forms of the same tests were given. The gains achieved by the control and the experimental groups in the upper and middle groups were not statistically significant. For the lower group, the difference in the means was found to be significant and favored the basal reader program.¹⁸

Greeman and Kaplian conducted a study of individualized reading with third and fourth grade students. A reading period of about one hour daily was set aside. There was an individual conference period for each student. At their seats, children engaged in reading self-selected books, completing practice exercises, and keeping word lists. The more mature readers were

¹⁷Roy M. Carson and Jack M. Thompson, "The Joplin Plan and Traditional Reading Groups," The Elementary School Journal, 65:38-43, October, 1964.

¹⁸Harry W. Sartain, "The Roseville Experiment With Individualized Reading," The Reading Teacher, 13:277-281, April, 1970.

assigned as helpers. Small groups were brought together for group instruction on the basis common need. A sharing period was held where each child reported to each other on books they had read. From the standardized tests given at the beginning and the end of the year, it was observed that a better than average gain in reading ability was made. The gain in the individually taught groups was greater than that in similar groups taught by the group method. The very wide range of scores in the experimental group, especially at the upper end seemed to indicate that no child was held back. The range of scores in the control group was much narrower, despite the fact that the I.Q. ranges were equal to or higher than those in the experimental group. The researchers felt that the individualized reading program was a success.¹⁹

Anastasiow selected two elementary schools that had similar social class profiles and mean reading achievement. In school A, the plan was to cross-grade children in grades four through six, based on their current level of achievement. In school B, children were to remain in self-contained classrooms for reading instructions. SRA and STEP tests were given to assess each child's current level of achievement in both schools. At the end of the year, the children were again tested. There were no significant differences between the two schools on total scores on STEP listening or reading achievement. Both schools made gains roughly equivalent to two years achievement.²⁰

Starting in 1957, a number of schools in Atlanta decided to give the Joplin Plan a try. The experimental and control groups were matched by

¹⁹Ruth Greenman and Sharon Kapilian, "Individual Reading in the Third and Fourth Grades," Elementary English, 36:234-237, April, 1959.

²⁰Nicholas J. Anastasiow, "A Comparison of Two Approaches in Ungrading Reading Instruction," Elementary English, 45:495-499, April, 1968.

school, grade, sex, I.Q., and parental occupation. The achievement test used was the Stanford Achievement Test, 1953 Edition. The control group was heterogeneous, meeting fifty minutes a day. In the experimental group, the students in grades four, five and six were divided into ten groups, based on their achievement test scores. Classes met forty-five minutes daily. The experimental groups and ranged from 3.2 months to 6.9 months in grade scores. The overall mean difference was 5.5 months for the fourth grade, 5.1 months for the fifth grade, and 5.4 for the sixth grade.²¹

Wallace Ramsey of the University of Kentucky completed a study of fifth and sixth grade students who participated in the Joplin Plan for two school years. Reading was taught in a single daily forty minute period. In October of 1958 and 1959, the Stanford Achievement Test was administered to all children. The children were then divided into groups as nearly homogeneous as possible. The program of cross-grade grouping appeared to be effective in producing expected reading gains for each grade level when each group was considered as a whole. Children had few objections to it; many liked it very much. It was recognized that in the instances in which gains exceeded expectations, the excess of gains over expectancy could not be attributed totally to the grouping plan used.²²

A study by Donald Waldrip sought to test a new program. This program was the SRA Reading Laboratory for grade two. Earlier tests at grade five and three had been encouraging but not definitive. There were three phases of this study. In phases one and two, 954 second graders followed

²¹ Donald Ross Green and Hazel Walker Riley, "Interclass Grouping For Reading Instruction in the Middle Grades," The Journal of Experimental Education, 31:273-278, March, 1963.

²² Wallace Ramsey, "An Evaluation of the Joplin Plan of Grouping for Reading Instruction," The Journal of Educational Research, 55:567-572, August, 1962.

similar basal reading programs during the year, but 534 would also be using the SRA Reading Laboratory. Difference-in-mean tests of significance were applied to gains made in the area of ten diagnostic sub-tests in phase one, and in phase two to gains made by three ability groups in three gross achievement areas. Eighteen classes participated in phase three to test by analysis of variance the effectiveness of the SRA on a total program.

Pre and post-test offerings of this study were to measure achievement in the following areas: total vocabulary, word usage, word meaning, rate of meanings, total comprehension, recalling information, locating information, reading information, following directions, and reading for description.

In phases one and two, both groups were taught reading for one hour and fifteen minutes each school day from October 14, 1963 to May 8, 1964. Linear T scores were the standard measurement used in the comparative analysis. In phase one, achievement increments were based on differences in pre and post-tests for the ten diagnostic areas. Using scores in total comprehension, the investigator also computed t-scores to disclose difference-in-mean between the initial place of the students by the teacher in the SRA program and the initial placement by the total comprehension sub-score. For the purpose of analysis in phase two, the pupils were grouped on the basis of initial achievement scores in three gross diagnostic areas: total vocabulary, rate of reading, and total comprehension. Students whose initial t-scores fell below forty were assigned to the low group, those whose scores fell between forty and sixty were placed in the middle group, and students with t-scores greater than sixty were placed in the high group.

In phase three, eighteen second grade classes took part in the program for a period of eighty class days. The day before the SRA Laboratories were placed in the classrooms, principals gave the Metropolitan Reading Achievement Test, Primary Level II, Form A to each of the eighteen

classes. Nine of the classes worked with the SRA Lab exclusively for the first forty day period and with a regular reading program exclusively for the last forty day period. The other nine classes did the regular program first and the SRA Lab the second half. Between the two forty day periods, the students in the eighteen classes took Form B of the Metropolitan Test. At the close of the test, all students took form C of the test. — —

After the program was finished, it was found that in phases one and two of this study, the SRA Reading Laboratory had no effect on the mean reading achievement of 534 second grade pupils in any of the ten diagnostic areas. Also, when the same analysis was applied to achievement of the students grouped according to high, middle and low initial achievement results, the SRA Lab did not affect the mean gain in any group in the area of total vocabulary, rate of reading, or total comprehension. Since this study did not lend any credibility to the claim that the SRA Lab is a worthwhile supplementary tool at the second grade level, then what comparative effect would it have when utilized in the total program for a period of time? Phase three attempted to answer this question. The first discovery was that pupils achieve more early in the school year than they do later. The second finding of phase three was that not only was the SRA Lab found to be ineffective as a supplementary tool at the second grade level, but it was also found to be ineffective on a total program. The studies in this test have been unable to disclose a single facet of reading skill development for which the SRA Lab is better suited than is a regular development program. In fact, as a total program, the SRA Lab appears to be inferior to other methods.²³

In conclusion, in reading the various studies completed on reading

²³ Donald R. Waldrip, "An Experiment with the SRA Reading Laboratory at Grade Two," The Journal of Educational Research, 59:419-423, May 1966.

achievement completed over a period of many years, one can see little concrete evidence that any one method of teaching reading is superior. One study concludes that individualized reading produces superior gains, while another proves that basal readers produce the best results. Each school must decide which approach is best for them, taking into account the needs and personality of the students involved.

Another aspect to be considered in looking at some of these research projects is the length of time covered in the study. In order to get a really clear picture of whether a particular method of teaching reading is the best, studies need to be carried out for more than one or two years. Records should be kept each year, and results tabulated yearly to see if students are progressing with the particular program in question. Reading is too important a skill for a decision to be based on one or two years of study.

Chapter III

PROCEDURES

Sample Selection

The study will include every student in the Russell Independent School District who was enrolled for the entire school year from the years 1970-71 to 1977-78.

Instrumentation and Data Collection

The test used in this study is the Iowa Test of Basic Skills. It includes long and reliable measures of vocabulary and reading comprehension. Scores on this test for individual students will be obtained from student files in the Curriculum Office.

Data Analysis

An ex post facto design will be used. This is an examination of outcomes after the fact by comparing a group to itself over time or to other groups that have operated in the past. The cross sectional approach will be used. In this approach, specific grades are compared to grades of past years. The mean score for each grade each year will be computed by summing the total reading score of each student and dividing by the number of students. The mean reading score for each grade, three through eight, for each school year from 1970-71 through 1977-78 will be placed on broken line graphs, a separate graph being made for each grade. In this way, it can be readily seen if the reading achievement level has dropped or improved for each grade over this eight year period. We shall then examine the mean of each grade in 1970-71 and compare it to the mean for the corresponding grade in 1977-78, to

see if there is a significant difference between the means. In order to apply a statistical test to a difference between means, it is necessary to compute the standard error of the difference between means, $\sigma_{\bar{x}_1 - \bar{x}_2}$. Since this parameter seldom, if ever, is observable, it is generally necessary to estimate it. For this estimate of $\sigma_{\bar{x}_1 - \bar{x}_2}$, we shall use the formula $s_{\bar{x}_1 - \bar{x}_2} = \sqrt{s_{\bar{x}_1}^2 + s_{\bar{x}_2}^2}$ where $s_{\bar{x}_1 - \bar{x}_2}$ = estimated standard error of a difference between

means

$$s_{\bar{x}_1}^2 = \frac{s_1^2}{N_1} \quad \text{and} \quad s_{\bar{x}_2}^2 = \frac{s_2^2}{N_2}$$

s_1 and s_2 = standard deviations of the two samples

N_1 and N_2 = size of the two samples.

In testing for significance of a difference between means, the null hypothesis is employed. In this study, the null hypothesis will be rejected at the one percent level of significance.

In testing for a difference between means for statistical significance, we shall use the t-ratio. This is a ratio of the difference between means to the standard error of a difference between means. The formula for the t-ratio is: $t = \frac{\bar{x}_1 - \bar{x}_2}{s_{\bar{x}_1 - \bar{x}_2}}$

For this study the t value of 2.58 will be used. If the t-ratio obtained by applying the formula is greater than 2.58 the null hypothesis will be rejected and it can be assumed that the difference between the means did not occur by chance in ninety-nine out of one hundred cases. We will then be able to see if there has been significant gains or losses in each grade.

To back up this part of the study, a chart will be made showing the percentage of students grade level and above for each grade for each year of the study. This will help to verify any gains or losses in reading achievement. It will also let one see the progress of students as a whole as they move from third to eight grade.

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Chapter IV

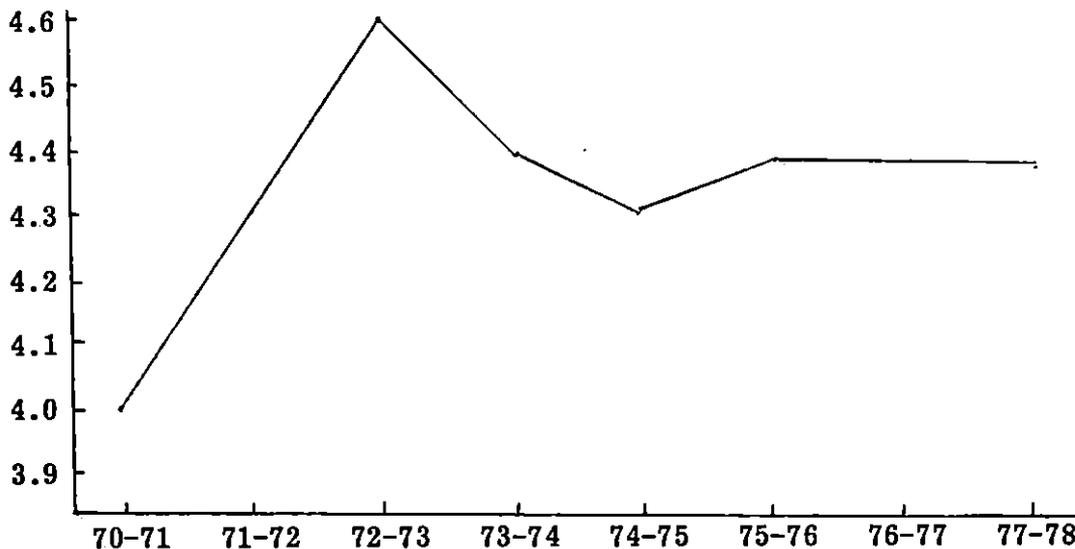
FINDINGS AND INTERPRETATIONS

This study includes data on approximately 16,800 students in the Russell Independent School District. These students were in third through eighth grade and the study encompasses the years 1970-71 through 1977-78.

Each grade was studied separately. A graph shows the mean reading score for each year of the study. The t-ratio was calculated for each grade for the difference in the 1970-71 mean and the 1977-78 mean to determine if the difference in the means is statistically significant.

Graph 1

Mean Reading Score for the Third Grade
From 1970-71 to 1977-78



In Graph 1, the mean reading scores of the third grade are presented for the years 1970-71 through 1977-78. The mean reading scores are as follows: 4.0 in 1970-71, 4.3 in 1971-72, 4.6 in 1972-73, 4.4 in 1973-74, 4.3 in

1974-75, 4.4 in 1975-76, 4.4 in 1976-77, and 4.4 in 1977-78. The third grade showed an increase of .4 from 1970-71 to 1977-78.

The standard deviation for the third grade in 1970-71 was found to be 1.01 and the standard deviation for the third grade for 1977-78 was found to be .965. Squaring these standard deviations and dividing each by the number of students, then summing the results and extracting the square root of the result, the standard error of the difference between the means was found to be .08944.

Next, the t-ratio was computed. Finding the difference between the mean in 1970-71 and the mean in 1977-78 and dividing by the standard error of the difference between the means, .08944, the t-ratio for the third grade was found to be 4.4723. Since this t-ratio is much greater than 2.58, the null hypothesis can be rejected at the .01 level of significance. This means that in only one case out of one hundred would the difference be due to a sampling error. It can be concluded that the difference between the 1970-71 third grade mean and the 1977-78 third grade mean is statistically significant.

Graph 2

Mean Reading Score for the Fourth Grade
from 1970-71 to 1977-78



In Graph 2, the mean reading scores of the fourth grade are presented for the years 1970-71 through 1977-78. The mean reading scores are as follows: 5.0 in 1970-71, 5.0 in 1971-72, 5.3 in 1972-73, 5.2 in 1973-74, 5.3 in 1974-75, 5.3 in 1975-76, 5.3 in 1976-77, and 5.3 in 1977-78. The fourth grade showed an increase of .3 from 1970-71 to 1977-78.

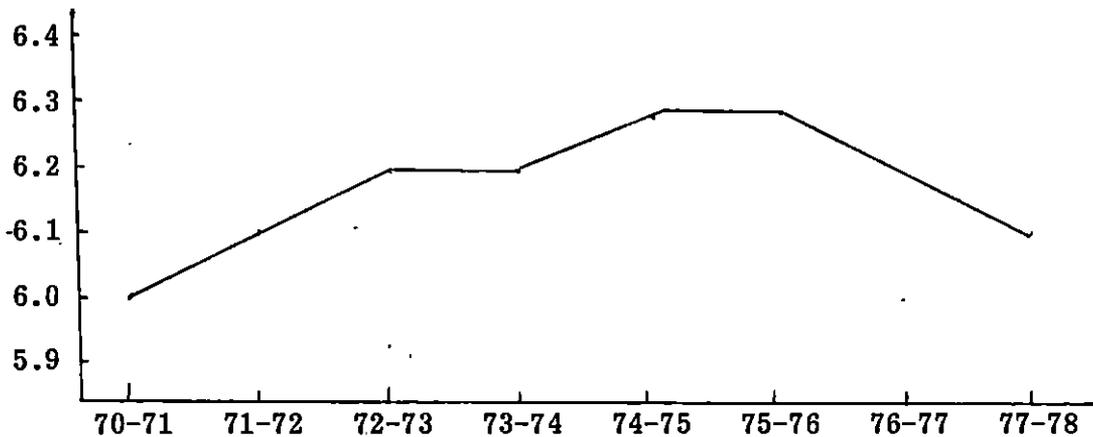
The standard deviation for the fourth grade in 1970-71 was found to be 1.21, and standard deviation for the fourth grade for 1977-78 was found to be 1.13. Squaring these standard deviations and dividing each by the number of students, then summing the results and extracting the square root of the result, the standard error of the difference between the means was found to be .10488.

Next the t-ratio was computed. Finding the difference between the mean in 1970-71 and the mean in 1977-78 and dividing by the standard error of the difference between the means, .10488, the t-ratio for the fourth grade was found to be 2.8604. Since this t-ratio is .0004 greater than 2.58 the null hypothesis can be rejected at the .01 level of significance. This means that in only one case out of one hundred would the difference be due to a sampling error. It can be concluded that the difference between the 1970-71 fourth grade mean and the 1977-78 fourth grade mean is statistically significant.

In graph 3, the mean reading scores of the fifth grade are presented for the years 1970-71 through 1977-78. The mean reading scores are as follows: 6.0 in 1970-71, 6.1 in 1971-72, 6.2 in 1972-73, 6.2 in 1973-74, 6.3 in 1974-75, 6.3 in 1975-76, 6.2 in 1976-77, and 6.1 in 1977-78. Although the mean score rises slightly from 1970-71 to 1975-76 and falls slightly from 1975-76 to 1977-78, the fifth grade showed an increase of .1 from 1970-71 to 1977-78.

Graph 3

Mean Reading Score for the Fifth Grade
from 1970-71 to 1977-78



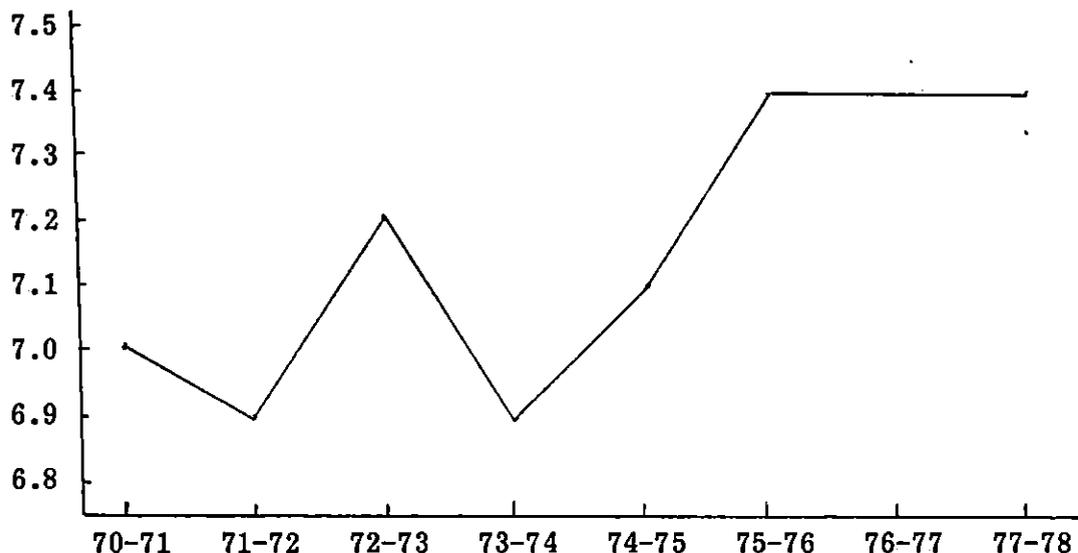
The standard deviation for the fifth grade in 1970-71 was found to be 1.33, and the standard deviation for the fifth grade for 1977-78 was found to be 1.29. Squaring these standard deviations and dividing each by the number of students, then summing the results and extracting the square root of the result, the standard error of the difference between the means was found to be .11832.

Next, the t-ratio was computed. Finding the difference between the mean in 1970-71 and the mean in 1977-78 and dividing by the standard error of the difference between the means, .11832, the t-ratio for the fifth grade was found to be 8.452. Since this t-ratio is much greater than 2.58, the null hypothesis can be rejected at the .01 level of significance. It can be concluded that the difference between the 1970-71 fifth grade reading mean and the 1977-78 fifth grade reading mean is statistically significant.

In graph 4, the mean reading scores of the sixth grade are presented for the years 1970-71 through 1977-78. The mean reading scores are as

Graph 4

Mean Reading Score for the Sixth Grade
from 1970-71 to 1977-78



follows: 7.0 in 1970-71, 6.9 in 1971-72, 7.2 in 1972-73, 6.9 in 1973-74, 7.1 in 1974-75, 7.4 in 1975-76, 7.4 in 1976-77, and 7.4 in 1977-78. The sixth grade showed an increase of .4 from 1970-71 to 1977-78.

The standard deviation for the sixth grade in 1970-71 was found to be 1.38, and the standard deviation for the sixth grade for 1977-78 was found to be 1.94. Squaring these standard deviations and dividing each by the number of students, then summing the results and extracting the square root of the result, the standard error of the difference between the means was found to be .15492.

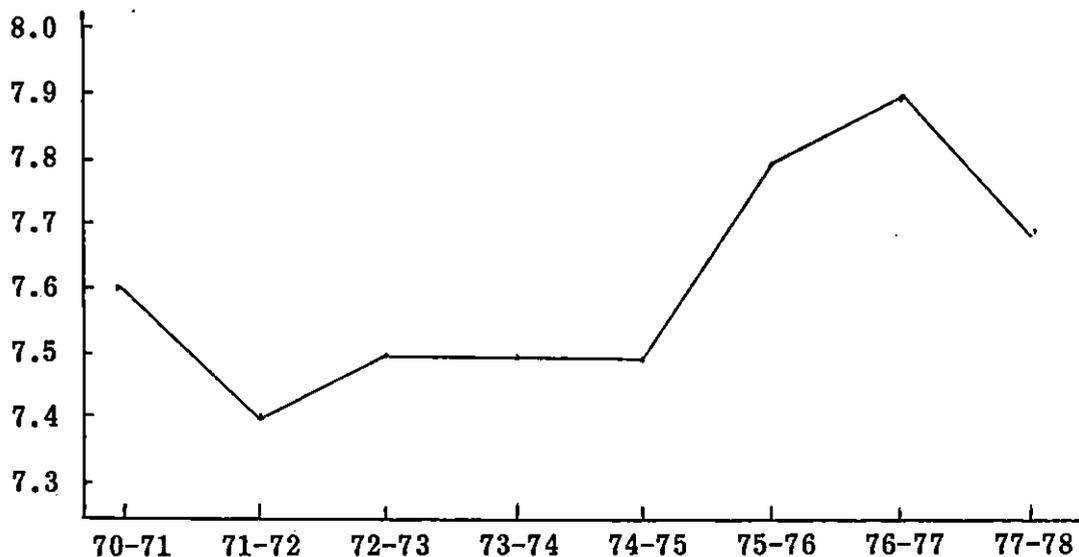
Next, the t-ratio was computed. Finding the difference between the mean in 1970-71 and mean in 1977-78 and dividing by the standard error of the

difference between the means, .15492, the t-ratio for the sixth grade was found to be 2.582. Since this t-ratio is not greater than 2.86, the null hypothesis cannot be rejected at the .01 level of confidence. It can be concluded that the difference between the 1970-71 sixth grade reading mean and the 1977-78 sixth grade reading is not statistically significant.

In Graph 5, the mean reading scores of the seventh grade are presented for the years 1970-71 through 1977-78. The mean reading scores are as follows: 7.6 in 1970-71, 7.4 in 1971-72, 7.5 in 1972-73, 7.5 in 1973-74, 7.5 in 1974-75, 7.8 in 1975-76, 7.9 in 1976-77, and 7.7 in 1977-78. The seventh grade showed an increase of .1 from 1970-71 to 1977-78.

Graph 5

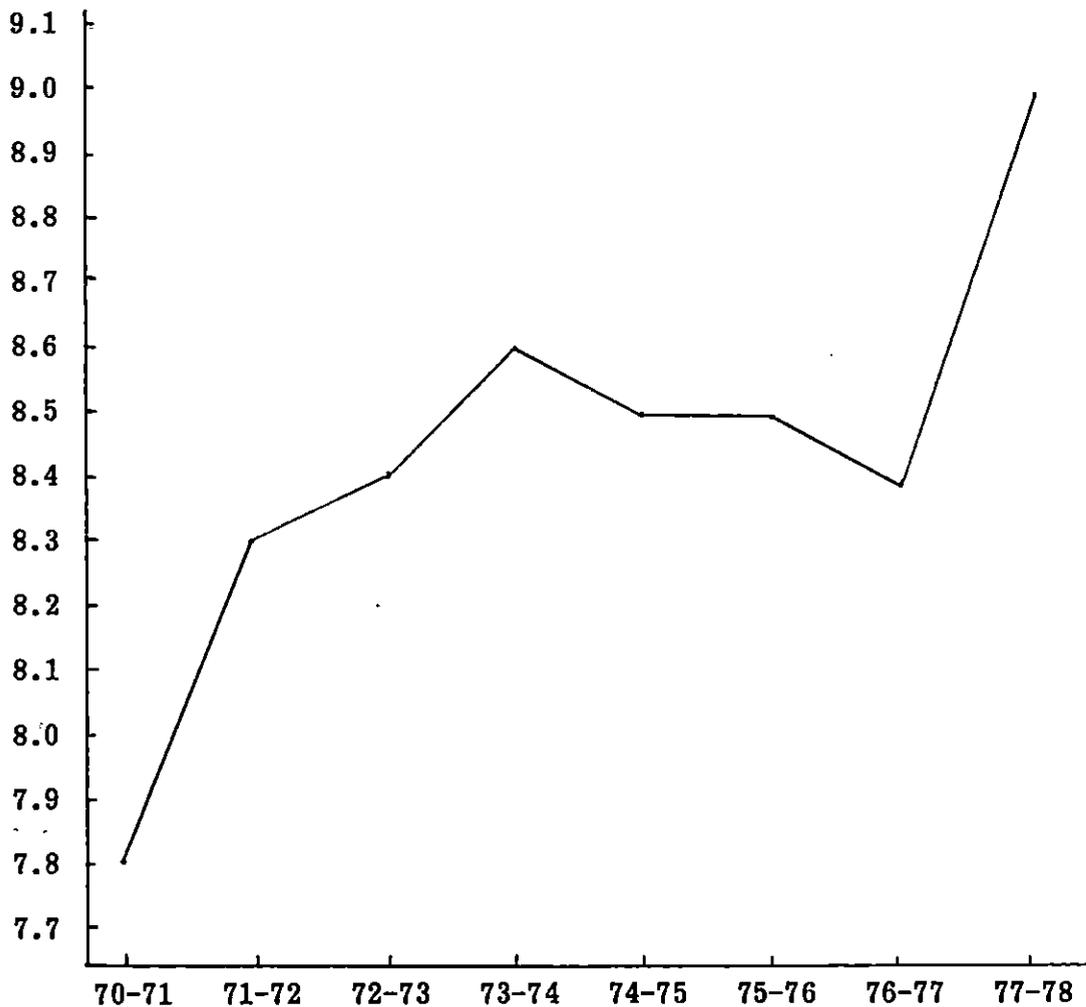
Mean Reading Score for the Seventh Grade
from 1970-71 to 1977-78



The standard deviation for the seventh grade in 1970-71 was found to be 1.51, and the standard deviation for the seventh grade for 1977-78 was found to be 1.50. Squaring these standard deviations and dividing each by the number of students, then summing the results and extracting the square root of the result, the standard error of the difference between the means was found to be .130384.

Next, the t-ratio was computed. Finding the difference between the mean in 1970-71 and the mean in 1977-78 and dividing by the standard error of the difference between the means, .130384, the t-ratio for the seventh grade was found to be .767. Since this t-ratio is less than 2.86, the null hypothesis cannot be rejected at the .01 level of significance. This means that the observed difference of .1 was so small that it may well have occurred as a result of sampling errors. It must be concluded that there is no significant difference between the 1970-71 seventh grade reading mean and that of the 1977-78 seventh grade reading mean.

Graph 6

Mean Reading Score for the Eight Grade
from 1970-71 to 1977-78

In Graph 6, the mean reading scores of the eighth grade are presented for the years 1970-71 through 1977-78. The mean reading scores are as follows: 7.8 in 1970-71, 8.3 in 1971-72, 8.5 in 1972-73, 8.4 in 1973-74, 8.6 in 1974-75, 8.5 in 1975-76, 8.4 in 1976-77, and 9.0 in 1977-78. The eighth grade showed an increase of 1.2 from 1970-71 to 1977-78.

The standard deviation for the eighth grade in 1970-71 was found to be 1.69, and the standard deviation for the eighth grade for 1977-78 was found to be 1.49. Squaring these standard deviations and dividing each by the number of students, then summing the results and extracting the square root of the result, the standard error of the difference between the means was found to be .141421.

Next, the t-ratio was computed. Finding the difference between the mean in 1970-71 and the mean in 1977-78 and dividing by the standard error of the difference between the means, .141421, the t-ratio for the eighth grade was found to be 8.485. Since this t-ratio is much greater than 2.58, the null hypothesis may be rejected at the .01 level of significance. It may be concluded that the difference between the 1970-71 reading mean and the 1977-78 reading mean for the eighth grade is statistically significant.

Table 1 shows the percentage of students grade level and above for each grade for each year of the study. This information will serve to verify the results mentioned before and will also give an overview of the reading achievement level of the system.

Table 1

PERCENT OF STUDENTS GRADE LEVEL AND ABOVE

THIRD GRADE	61%	82%	80%	71%	87%	80%	73%	77%
FOURTH GRADE	64%	59%	59%	74%	75%	70%	70%	68%
FIFTH GRADE	59%	59%	52%	62%	72%	68%	67%	59%
SIXTH GRADE	65%	52%	51%	56%	72%	72%	67%	69%
SEVENTH GRADE	40%	49%	68%	45%	52%	58%	61%	51%
EIGHTH GRADE	39%	47%	47%	42%	49%	51%	59%	52%
	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78

For the third grade, sixty-one percent of the students were grade level and above in 1970-71. In 1977-78, seventy-seven percent of the students were grade level and above. This is an increase of fifteen (15) percentage points. For the fourth grade, sixty-four (64) percent of the students were grade level and above in 1970-71. In 1977-78 sixty eight (68) percent of the students were grade level and above. This is an increase of four (4) percentage points. For the fifth grade, fifty-nine (59) percent of the students were grade level and above in 1970-71. Fifty (59) percent of the students were grade level and above in 1977-78. The fifth grade showed no increase in the percent of students grade level and above. For the sixth grade, sixty-five (65) percent of the students were grade level and above in 1970-71. Sixty nine (69) percent of the students were grade level and above in 1977-78. This is an increase of four (4) percentage points. For the seventh grade, forty (40) percent of the students were grade level and above in 1970-71. In 1977-78, fifty-one (51) percent of the students were grade level or above. This is an increase of eleven (11) percentage points. For the eighth grade, thirty-nine (39) percent of the students were grade level and above in 1970-71. Fifty-two (52) percent of the students were grade level and above in 1977-78. This is an increase of thirteen (13) percentage points.

Analyzing Table 1 by year, one can see the decrease in students grade level and above from third grade to eighth grade. In 1970-71, sixty-one (61) percent of the third grade students were grade level and above in reading. Thirty-nine (39) percent of the eighth grade students were grade level and above. This is a decrease of twenty-two (22) percentage points. In 1971-72, eighty-two (82) percent of the third grade students were grade level and above. Forty-seven (47) percent of the eighth grade students were grade level and above. This is a decrease of thirty-five (35) percentage points. In 1972-73, eighty (80) percent of the third grade students were grade level and

above. Forty-seven (47) percent of the eighth grade students were grade level and above. This is a decrease of thirty-three (33) percentage points. In 1973-74, seventy-one (71) percent of the third grade students were grade level and above. Forty-two (42) percent of the eighth grade students were grade level and above. This is a decrease of twenty-nine (29) percentage points. In 1974-75, eighty-seven (87) percent of the third grade students were grade level and above. Forty-nine (49) percent of the eighth grade students were grade level and above. This is a decrease of thirty-eight (38) percentage points. In 1975-76, eighty (80) percent of the third grade students were grade level and above. Fifty-one (51) percent of the eighth grade students were grade level and above. This is a decrease of twenty-nine (29) percentage points. In 1976-77, seventy-three (73) percent of the third grade students were grade level and above. Fifty-nine (59) percent of the eighth grade students were grade level and above. This is a decrease of fourteen (14) percentage points. Finally, in 1977-78, seventy-seven (77) percent of the third grade students were grade level and above. Fifty-two (52) percent of the eighth grade students were grade level and above. This is a decrease of twenty-five (25) percentage points. The difference in the percent of third grade students grade level and above and the percent of eighth grade students grade level and above has decreased somewhat from 1971-72 to 1977-78.

Chapter V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to determine if there are any trends in the achievement levels in reading of the students in grades three through eight in the Russell Independent School District for the school years 1970-71 through 1977-78. The results would determine if the current reading program was effective or if another reading program should be instituted.

Every student in grades three through eight for the school years 1970-71 through 1977-78 was used in the study. The arithmetic mean of the average reading score was calculated for each grade each year. The t-ratio was calculated for each grade to determine if the difference between the means was statistically significant.

It should be kept in mind that this study took the cross-sectional approach. This compares classes of the same grade to those that have operated in the past. Remember, when looking at the graphs, that the average capability of different classes changes. Higher scores from one year to the next may not reflect program improvement; it may reflect a "smarter" group of children passing through the district. It also could reflect a differing degree of difficulty of different forms of the test.

The t-ratio was used to determine whether there was any significant difference in the mean reading score in 1970-71 and mean reading score in 1977-78. The null hypothesis was rejected at the .01 level of significance in all but two cases.

Conclusions

The findings of this study were:

1. For the third grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be statistically significant. The mean increased from 1970-71 to 1972-73, dropped from 1972-73 to 1974-75, rose from 1974-75 to 1975-76, then leveled out from 1975-76 to 1977-78. The reading program seems to be working well for third grade students.
2. For the fourth grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be statistically significant. The mean increased from 1970-71 to 1972-73, dropped in 1973-74, then rose in 1974-75 and leveled out from 1974-75 to 1977-78. The reading program appears to be working well for fourth grade students.
3. For the fifth grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be statistically significant. There was an increase in the mean from 1970-71 to 1975-76, then a slight drop in the mean from 1975-76 to 1977-78. The reading program seems to be working for fifth grade students.
4. Even though the difference in the 1970-71 sixth grade reading mean and the 1977-78 sixth grade reading mean is four (4) months, this difference was found to be not statistically significant at the .01 level of confidence. One reason for this is that during the time period of this study, part of the sixth grade students were in a departmentalized program, while another part were in a self-contained classroom structure. Approximately seven out of a total ten classrooms were departmentalized. This is the first time in their school career

that these students changed classes and had different teachers for each different subject. This is a big adjustment for these students, and perhaps this adversely affected their reading achievement. Also, in this departmentalized program, slower reading groups had a reading class only once a day, whereas in the first five years of schooling, these slower groups met twice a day.

5. For the seventh grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be not statistically significant at the .01 level of significance. The reading program does not appear to be working well for seventh grade students. One reason for this is that these students have moved from the school building where they have spent their first six school years to another school building which is completely new to them. This is a big adjustment for these students. Also, at this age, most of these students are beginning to experience many changes in themselves. Their bodies are changing, they are experiencing a marked concern about their acceptance by their peers, and their social relationships are changing, especially those involving the opposite sex. Perhaps another reason for this drop in reading achievement is the teachers. All of the teachers at the middle school are trained in secondary education. Up to this point, these students have had teachers trained in elementary education. The adjustment of the difference in teaching styles could affect reading scores, because students are now taking English as a class, as opposed to Reading, under the direction of a secondary trained teacher. In these classes Reading is not taught as it has been for the previous six years. Another factor that could affect reading achievement is extra-curricular activities. The seventh grade is the first opportunity that many of these students have to

participate in clubs, band, athletics and other activities. The time and energy spent on these activities could detract from school achievement.

6. For the eighth grade, the difference in the mean reading score in 1970-71 and the mean reading score in 1977-78 was found to be statistically significant. There was a fairly steady rise in the mean from 1970-71 to 1977-78. One reason that students performed so much better in the eighth grade than they did in the seventh grade is that they are beginning to adjust to all of the changes mentioned previously that began happening to them in the seventh grade. Also, Russell Middle School has a remedial reading class for eighth grade students having reading difficulty. The thirty students having the lowest reading achievement scores in their class are placed in an extra reading class in which they receive a great deal of individual instruction. This is perhaps another reason that the reading mean changes so dramatically from the seventh grade to the eighth grade.
7. At each grade level, the percentage of students grade level and above has increased from 1970-71 to 1977-78. This data backs up the findings of the study that found that the differences between the 1970-71 reading means and the 1977-78 reading means were statistically significant in every grade but the sixth and the seventh grades.
8. For each year of the study, from 1970-71 to 1977-78, the percentage of students grade level and above decreased progressively from the third grade to the eighth grade. This is to be expected for any group of students. As students move from the first grade through the twelfth, the range of the achievement levels of the students gets wider.

Recommendations

As a result of the findings of this study, the following recommendations are offered:

1. The reading program now in use by the Russell Independent School District should be continued in grades three through eight.
2. The Curriculum Director should continue and add to this study each year so that all teachers will have accurate, complete and current test results for use in planning individual programs for each child assigned to them. Also, in this way, any new trends can be noted and any needed changes in the program can be made.
3. The school district should integrate all sixth grade students in the district into the middle school program for the following reasons: a. co-mingling of all educational and socio-economic backgrounds, b. provide students in the sixth grade with exposure to both elementary and secondary teachers by dividing students into groups based on ability and assigning them accordingly, c. give greater latitude in grouping to meet the educational needs of all students, and d. this arrangement will permit gradual transition from the self-contained classroom to the departmentalized situation, thus reducing the trauma of the change.
4. The middle school should institute a remedial reading program with specialized teachers and equipment for grades six, seven and eight. These classes would meet twice a day. The thirty students having the lowest reading achievement test scores would be placed in these classes.
5. The Curriculum Director should complete a study of reading achievement using the longitudinal approach for the same time period as this study covers to be used in conjunction with this study.

BIBLIOGRAPHY

PERIODICALS

- Ahmann, J. Stanley. "National Achievement Profiles in Ten Learning Areas." Educational Studies, IX (Winter, 1979). 351-64.
- Anastasiow, Nicholas J. "A Comparison of Two Approaches in Ungrading Reading Instructions." Elementary English, XLV (April, 1968), 495-99.
- Balow, Irving H. "Does Homogeneous Grouping Give Homogeneous Groups?" The Elementary School Journal, LXIII (October, 1962), 28-32
- Carson, Roy M., and Jack M. Thompson, "The Joplin Plan and Traditional Reading Groups." The Elementary School Journal, LXV (October, 1964), 38-43.
- Dyktra, Robert. "Summary of the Second Grade Phase of the Cooperative Research Program in Primary Reading Instruction." Reading Research Quarterly, IV (Fall, 1968), 49-70.
- Green, Donald Ross, and Hazel Walker Riley. "Interclass Grouping for Reading Instruction in the Middle Grades." The Journal of Experimental Education, XXXI, (March, 1963). 273-78.
- Greenman, Ruth, and Sharon Kapilian. "Individual Reading in the Third and Fourth Grades." Elementary English, XXXVI (April, 1959), 234-37.
- Miller, Billie J. "A Comparison of Three Types of Reading Programs-S.R.S., Individualized and Scott-Foresman." Reading Research Quarterly, I (Winter, 1965). 62.
- Munday, Leo A. "Changing Test Scores, Especially Since 1970." Phi Delta Kappan, LX (March, 1979), 496-99.
- Ramsey, Wallace. "An Evaluation of the Joplin Plan of Grouping for Reading Instruction." The Journal of Educational Research, LV (August, 1962), 567-72.
- Sartain, Harry W. "The Roseville Experiment with Individualized Reading." The Reading Teacher, XIII (April, 1970). 277-81.
- Vite, Irene W. "Individualized Reading-the Scoreboard on Control Studies." Education, LXXXI (January, 1961). 285-90.

Waldrip, Donald R. "An Experiment with the SRA Reading Laboratory at Grade Two." The Journal of Educational Research, LIX (May, 1966). 419-23.

ERIC

Achievement In Dade County Public Schools 1974-75. U.S., Educational Resources Information Center, ERIC Document 118 613, 1975.

Grosswald, Jules. 1975-75 Philadelphia City-Wide Testing Program: February 1975 Achievement Testing Program. School Performance Distributions: Kindergarten Through Grade Twelve. U.S., Educational Resources Information Center, ERIC Document 115 694, 1975.

Hedges, H. G. Achievement in Basic Skills: A Longitudinal Evaluation of Student Achievement in Language Arts and Mathematics. U.S., Educational Resources Information Center, ERIC Document 147 367, 1977.

Hitchcock, Dale C. and Glenn B. Pinder. Reading and Arithmetic Achievement Among Youths 12-17 Years as Measured by the Wide Range Achievement Test. U.S., Educational Resources Information Center, ERIC Document 103 436, 1974.

Local District Results: The Fourth Report of the 1972-73 Michigan Educational Assessment program. U.S., Educational Resources Information Center, ERIC Document 104 899, 1973.

Reading in America: A Perspective on Two Assessments. U.S., Education Resources Information Center, ERIC Document 128 785, 1976.

Unpublished Sources

Brown, Kenneth, Jr. "Achievement in Hurricane High School." Master's Thesis, Marshall College, 1950.

Dorsey, Charlotte. "The Comparison of Achievement Test Scores and Grade Placement in the Elementary Schools of Clay County." Master's Thesis, Marshall College, 1952.

Drummond, William Myron. "Achievement of Pupils in Fundamental Subjects in Various Types of School Organizations in Cabell County, West-Virginia." Master's Thesis, Marshall College, 1945.

Stewart, Dorothy Honaker. "Study of a Fifth Grade Individualized Reading Program, Richmond Elementary, Kanawha County, 1963-65." Master's Thesis, Marshall College, 1966.