# An Analysis of The Results of The State Reading Achievement Test In Selected Counties, 1947 

W. Wallace Steeples<br>Fort Hays Kansas State College

Follow this and additional works at: https://scholars.fhsu.edu/theses
Part of the Education Commons

## Recommended Citation

Steeples, W. Wallace, "An Analysis of The Results of The State Reading Achievement Test In Selected Counties, 1947" (1947). Master's Theses. 401.
https://scholars.fhsu.edu/theses/401

This Thesis is brought to you for free and open access by the Graduate School at FHSU Scholars Repository. It has been accepted for inclusion in Master's Theses by an authorized administrator of FHSU Scholars Repository.

AN ANALYSIS OF THE RESULTS OF THE STATE READING
ACHIEVEMENT TEST IN SELECTED COUNTIES, 1947
being

A thesis presented to the Graduate Faculty of the Fort Hays Kansas State College in partial fulfillment of the requirements for the Degree of Master of Science
W. Wallace Steeples, B. S.

Fort Hays Kansas State College


## ACKNOWLEDGMENTS

The writer wishes to express his appreciation to Dr . Robert T. MeGrath, who has directed the preparation of this thesis; to Dr. Floyd B. Streeter, who was helpful in obtaining publications used and in checking the manuscript; to Dr. Raymond L. Welty and to Dr. W. D. Moreland who also aided by checking the manuscript.

## TABLE OF CONTENTS

CHAPTER ..... PAGEI. INTRODUCTION
Development of Scientific Measurement ..... 1
The Problem ..... 2
Definition of Terms ..... 3
Review of Related Research ..... 3
Method of Procedure ..... 4
II. ANALYSIS OF PUPIL PERFORIANCE
Type of Test Used ..... 6
Explanation of Score Used ..... 6
County by County Analysis ..... 9
Combined Analysis of All Counties ..... 19
Comparison of Reading with Other Subjects ..... 23.
Pupil Failures ..... 25
Teacher Preparation ..... 26
Results of Continuous Testing ..... 28
III. GENERALIZATION AND CONCLUSION
General Observations ..... 29
Findings ..... 32
Conclusions ..... 32
Suggestions ..... 33
BIBLIOGRAPHY ..... 35
APPENDIX ..... 38

LIST OF FIGURES

FIGURE PAGE
I. Kansas Map Locating Counties Included in this Study . . . 2

## LIST OF TABLES

TABLE ..... PAGE
I. Reading Frequency of All Counties ..... 23
II. Teacher Preparation by College Hours ..... 25

## LIST OF GRAPHS

GRAPH ..... PAGE
I. Composite Norms of the Twelve Counties in the Study .....  . 20
II. Norms of Nation, State, and Counties in the Study ..... 21
III. Comparison of Reading Achievement with Other Subjects ..... 24
IV. Teacher Preparation and Pupil Achievenent in Reading ..... 27

## INTRODUCTION

Scientific measurement of education is a recent development. In present day practice it is quite inadequate. Since the days of Galton, eminent educators have written and presented treatises on education, seeking methods of evaluation; but many of these were merely personal judgment on educational measurement.

In 1879 Wundt established the first laboratory for scientific study of psychology. A few years later, in 1884, Sir Francis Galton founded his laboratory for anthropometric measurement. Long before this, however, Gielton had been interested in the study of heredity of mental traits and capacities, and in 1869 had published his "Hereditary Genius." The testing movement was definitely introduced into Amerioa as early as 1890 by an American psychologist, J. McKeen Cattell, who had conducted experiments in Wundt's laboratory and who had later been associated with Galton. ${ }^{1}$

It remained for a Dr. J. M. Rice, a physician (ca 1895), to give impetus to the scientific method of educational measurement. While his studies seem crude in light of present day knowledge, he set up a method and a desire among educators to improve his methods. From this impetus have developed present day testing and measuring methods.

Kansas schools, like many other politically controlled institutions, have been slow to adopt modern measuring methods. Until recent years, the old essay type question and answer had prevailed;

1. I. N. Madsen, Educational Measurement in the Elementary Grades (Yonkers-on-Hudson, New York, World Book Company, 1930), p. 1.
and upon the results of such tests, eighth grade pupils were promoted or failed quite religiously. However, the time honored "final examination," the one make-or-break, pass-or-fail examination, is no longer regarded as educationally sound and has completely disappeared in Kansas. It is in this transition--the present testing program in Kensas--that the subject of this study finds its roots.

The Problem
In general the problem of this thesis is an analysis of achievement performance made by children in Kansas elementary schools through the use of standardized tests prescribed by the State Department of Education. More specifically stated, the thesis is a critical examination of these test results in certain selected counties of the state. An effort is made to discover areas of weakness and, if possible, their causes and to suggest possible remedial measures.

The study has been confined to comparatively few counties, but it should serve as a fair sampling of the state since the counties were selected from various parts of the state. The counties from which the study was made and their locations are shown in Figure I.

FIGURE I.
KANSAS MAP LOCATING COUNTIES INCLUDED IN THIS STUDY

"Analysis" as used in this thesis is construed to be an examination of component parts in relation to the whole educational program as far as it can be determined in this study.
"State reading achievement test" is applied to the "reading" portion of the test given in Kansas schools on March 19, 1947, to the eighth grade pupils. While this thesis confines itself primarily to reading, other scores are shown on county profiles merely for the purpose of indicating possible effect of good or poor reading upon other areas of education.
"Grade equivalent" is the grade level at which any given score is the median score or the score attained by the average pupil at a given period of the school year. It does not mean that a pupil having a grade equivalent of 9.5 is a ninth grader in that subject, but rather that he has done as well in that particular test as the average ninth grader does.

## Keview of Related Research Studies

While there has been a multitude of studies in the field of reading relative to reading readiness, difficulties, and remedial work, the writer has been unable to discover any study pertaining to the imediate problem of this thesis. The following studies are, however, remotely related to some phases of the study:

In 1938, Eva Bond made a study of Reading and Ninth Grade Achievement, Doctor's Thesis, New York City, Teachers College, Columbia University, 1938, 61 [1] p.

Grace Calvin made An Analysis of Intermediate Grade Reading Tests, Master's Thesis, Boston University, 1940, 76 pp., in which she analyzes twenty reading tests for grades 4, 5, and 6. She finds that the grade range of the test considered is from grade 2 to grade 12, that the functions of the tests differ widely in number and kind, that it is impossible to determine whether the norms reported for tests are representative, that they cannot be compared on the basis of reliability, and that they differ greatly in respect to their power of discriminating between grades.

Dolphus Only Greer, in A Comparison of Reading with Other School Subjects, Master's Thesis, Peabody College, 1939, 20 pp., compares the reading ability of three hundred. twenty-two students in grades 4,5 , and 6 with their ability in other content subjects. He finds a high correlation between reading and the content subjects.

John W. Hunter made An Analysis of the 1936 Iowa Every-Pupil
Test in Silent Reading Comprehension for Grades 6, 7, and 8, Master's Thesis, Iowa University, 1936, 141 pp.

## Method of Procedure

The primary source of data used in this study was secured from records of the county superintendents in the several counties. To each of these counties was sent a profile sheet upon which the
county superintendents were requested to give a profile of their county on all subjects covered by the state test. To each, also, was sent a frequency chart for reading only, which showed the number of pupils making certain scores in the reading test. To this were added pertinent questions which might give some clue in making an analysis of the results.

The data thus obtained was compared by counties and also with standardized test scores. Then reading scores were compared with scores in English, history, geography, science, literature, and arithmetic by counties and with standardized scores. From these comparisons certain similarities and differences were observed between counties and even within counties.

Data concerning teacher preparation, continuing testing pro= grams, et cetera were then applied to determine what bearing, if any, each of these factors had upon the achievement results of each county.

## CHAPTER II

## ANALYSIS OF PUPIL PERFORMANCE

This section of the study pictures the performance of school children in reading as revealed through the administration of a standardized test recomended for the purpose by the State Superintendent of Public Instruction in Kansas. A further purpose is, as far as possible, to reveal the effect of good or poor reading upon performance in other subjects and to give some indication of possible causes for these weaknesses wherever they may appear.

The test used by the state and in this study was Battery B, Form A of the Coordinated Scale of Attainment. ${ }^{1}$ It purportedly covers three major fields: namely, the language arts, including spelling, English, and reading; social studies, including history, geography, science, and literature; and arithnetic skills, including computation and problem reasoning.

The following explanation, given by the publishers of the test as to the meaning of the score, will be helpful in understanding the profile and frequency table on later pages and further interpret grade equivalents:

Results of standardized tests usually are reported as derived scores. Results of standardized tests need to be given as derived scores; that is, derived from the number right. The number right is frequently knownas the raw

[^0]soore. If the raw score were taken as the test score it would result in measuring unequal units of progress. Near the center of a distribution successive raw scores represent very small increments of gain, while farther toward the extremes of the distribution they represent much larger gains. Derived scores represent raw scores that are approximately equidistant apart along the whole distribution of raw scores. Use of a derived score, therefore, permits a meaningful comparison of scores from one level of attainment to another, and from test to test. Such a comparison is not possible with raw scores.

The derived score is used in the COORDINATED SCALES OF ATTAINMEIVT is the C-Score, so-called to distinguish it from other kinds of derived scores. The C-Score unit is $1 / 10$ of a quartile deviation, that is, $1 / 10$ of the difference between the raw score and the 50 th percentile and the raw score at the 75th percentile. This definiteness of meaning of the C-Score makes feasible the comparison of gains made at all points on the scales and also from one scale to another. ${ }^{2}$

The grade equivalent scale on any one profile extends only
one grade above and one grade below the grade for which the battery was designed, since grade equivalents for scores more than one grade removed from the curricula being tested tend to be less meaningful and lead to distorted interpretations.

The data is obtained from county superintendents and tabulated in two forms. The first form (See Appendix, page 39) contains a frequency table which shows the number of pupils in each county making a specific score in reading. The construction of the test permitted a derived score range of 36 to 71 in reading, spelling, history, science, and computation, and from 41 to 64 in English, geography, literature, and problem reasoning. On the reading frequency table,

[^1]these scores are broken down into groups or steps having a spread of five points, i.e., 35 to 39,40 to 44 , et cetera. Other explanations of the first form need not be given except as shown in Chapter I. The second graph (See Appendix, page 40), a coordinated soale of attainment for each county, is a profile of median scores. County superintendents were requested to record the median score of their pupils in each subject. Opposite the different scores there appears a grade equivalent which is a standardized scale determined by administering the test to eighthgrade pupils in all types of schools in the United States. These grade equivalents indicate the grade achievement designated for the score opposite; for example, the median score of eighth grade pupils in the United States in reading on this particular test is 47, while the median score for English is 48 , and for spelling 47. Scores above or below the median are indicated in tenths of a grade. Thus, a pupil making a score of 58 in spelling has an achievement grade of 9.8 in spelling, and one receiving a score of 41 has an achievement equivalent to grade 7. The reports obtained from county superintendents are not identified by county names, but are designated as County " $A$ ", County "B", et cetera. All data relative to County "A" are analyzed and discussed before any comparisons or conclusions are made. The same procedure is followed for each county. Finally, the counties are combined for comparison, county by county, and county by state and then a comparison is made with national norms.

County "A"
In County "A" (See Scale of Attainment, Appendix, page 40), the general level of attainment is grade 7.8 which, according to the chart, is .2 below the grade level that should have been reached. It should be observed, however, that this test was given on March 19, fully two months before the close of the school year. It appears, therefore, that County " $A$ " students were up to normal in their performance, having reached near the eighth grade level according to the standardized sale of attainment set up for the test. It is to be observed in the Table of Frequency in Reading (See Appendix, .page 39) that twenty-six pupils made scores ranging from 35 to 39. In the reading test, the median grade attainment for the ninetyseven pupils is 7. The average median grade on strictly reading subjects, literature and geography particularly, show correspondingly low attainment, while history and science are slightly better. Spelling, computation, and problem reasoning appear to suffer little, if any, because of reading weakness. County " $A$ " had, previous to 1947 , given standardized tests to grades four through eight inclusive for the past three years. Five of the ninety-seven pupils failed, and two were passed because of age or for some other reason. No pupil was passed on condition. It should be understood, however, that pupils were not passed or failed upon results of this test alone. Of the sixty-six teachers in the county, twenty-three were teaching on Bnergency or Temporary Certificates. These Temporary Certificates were based on eight hours or less than thirty hours of
college preparation, were a result of normal training courses taken in high school or were secured by state teachers' examinations. On May 15, 1947, the State Board of Education abolished the Energency Certificate and granted Temporary Certificates for one year. These expire in 1948 and cannot be renewed. All certificates after that date will be issued upon completion of at least sixty college hours. Fifteen teachers in County "A" held certificates based on thirty college hours (now Temporary); eighteen had obtained sixty college hours and held what is now considered legal certificate; five had at least minety college hours; and five held college degrees. There were no Master's Degree teachers in the county elementary schools.

County "B"
Eighty-eight pupils took the state test in County "B". The median grade attainment of the group was 8.5 according to the attainment scale (See Appendix, page 42). A notably high median score was made in spelling, the pupils having ranked well above the tenth grade level. A high level of attainment was also reachedin problem reasoning. The reading level of the pupils in County "B" was grade 7.5, near normal, but the English average was low, ranking grade 7. In the frequency table (See Appendix, page 41) for reading, four pupils fall in the highest group (70-74) and twenty-four (the largest group) fall in the lowest group $(35-39)$.

A testing program had been continuous through grades one to eight during the past three years. Five pupils failed at the close
of the year, and three were passed because of age or other reasons. No pupil was passed on condition.

There were thirty-six teachers in the county. Of this number, twenty-two held Emergency or Temporary Certificates; six held certificates based on thirty college hours; five were based on sixty hours; and three had ninety college hours of preparation. There were no degree teachers.

## County "C"

The median grade attainment in County "C" (See Appendix, page 44) is grade 8.6. The median score in reading is 49 or the equivalent of grade 8.3, but the English and geography scores drop to grade equivalents of 7.5 and 7.7 respectively. Problem reasoning ranks high, being well above grade 10.

Of the one hundred seventy-nine pupils taking the test in County "C ${ }^{17}$, one ranks highest on the frequency table (See Appendix, page 43 ), thirty-eight (the largest number) rank in the $45-49$ group, and thirty-one fall into the lowest group of 35-39. County "C" has given standardized tests to grades four to eight inclusive for the past three years. No report was made as to the number of pupils failed or passed conditionally.

There were fiftymone teachers in the county. Of this number, twenty-three hold Emergency Certificates based on less than thirty college hours; seventeen had certificates based on thirty to fiftynine college hours; eleven held certificates for sixty but less than
ninety college hours. There were no teachers in the elementary schools having ninety college hours or above.

## County "D"

In County " $\mathrm{D}^{1}$, the test was given to one hundred twenty-three eighth grade pupils. The median grade attainment is 8.6 for all subjects (See Appendix, page 46). The reading median is grade 8.4. English and geography show weaknesses, ranking grades 7.3 and 7.5 respectively. Two pupils attained scores in the highest group, while fourteen fall into the lowest group on the frequency table (See Appendix, page 45). The largest number, twenty-six, fall into the 50-54 group.

Standardized tests have not been given below the eighth grade during the past three years. Wo pupils were failed, none were passed conditionally, and seven were passed because of age, or other reasons.

There were eighty-eight teachers employed in the elementary schools of the county. Thirty-three taught on Finergency or Temporary Certificates with less than thirty college hours; thirty-five held certificates based on thirty college hours; ten had certificates based on sixty college hours, and ten had ninety college hours or more. There were no degree teachers reported.

## County "E"

Sixty-six pupils in County "E" made a median grade equivilent in all subjects of 9.3 or 1.3 grades above the standard set for the test (See Appendix, page 48). Although English and geography rank
lower than all others, they are well above the national eighth grade median. Especially notable is the median score in problem reasoning reaching the top of the scale--well above grade 10. The reading median grade is 9.2 .

The highest scores in reading fall in the 60-64 group (See Appendix, page 47) with nine in this group. The highest frequency occurs twice at 55-59 and 50-54 with seventeen scores in each group. Five fall into the lowest group of $35-39$.

Standardized tests have been given in this county for the past three years to grades four to eight inclusive. Two pupils were failed, none were passed on condition, and two were passed because of age.

Three of the thirty-six elementary teachers in the county had no legal certificates, but had an average of twelve college hours each. Three had Emergency or Temporary Certificates based on eight to twenty-nine college hours. Two held certificates based on thirty college hours, twenty held certificates based on sixty college hours, and eight elementary teachers held degrees.

## County "F"

A median grade equivalent of 8.8 is shown for County "F" (See Appendix, page 50). Here is noted a median grade attainment of 8.9 for reading. The only median falling below the eighth grade standard is English, which falls at the grade level of 7.7. The median grade attainment for forty-six pupils taking the test is 9.1.

Three pupils fall into the low group of $35-39$ on the frequency table (See Appendix, page 49). The largest number, fifteen pupils, appear in the 50-54 group and in the group 65-69. Standardized tests had not been given in this county during the past three years except to the eighth grade pupils. One pupil was failed, one passed on condition, and six passed because of age.

One hundred eleven elementary teachers were reported for the county. Of that number, one had no certificate and no college hours were reported. Twenty-seven held Emergency or Temporary Certificates based on less than thirty college hours; forty-two certificates were based on sixty college hours; ten were based on ninety; and rive held college degrees.

## County "G"

In County "G", the median grade attained by the one hundred fifty-nine pupils taking the test was 8.9. The median grade achievement in reading was 8.3 . There are no outstanding peculiarities in the profile (See Appendix, page 52), and it takes a pattern very similar to those already discussed. The frequency table (See Appendix, page 51) shows two pupils in the highest score group, twentyfour in the lowest, and the largest number in the $45-40$ group. Pupils in County "G" had not been given standardized tests for the past three years. Two pupils failed at the close of the school year, and four were passed because of their age.

There were ninety elementary teachers in the county. Fortyseven were teaching on certificates of temporary standing, having less than thirty hours of college training. Twenty certificates were based on thirty college hours; twenty on sixty college hours; one on ninety hours; and two teachers held college degrees.

## County "H"

Only thirty-two pupils took the test in County "H". They attained a median grade of 9.1 on all subjects (See Appendix, page 54). The median grade in reading is 8.1. Here we find for the first time all median grades above that of reading. The frequency table (See Appendix, page 53) shows no pupils in the upper group, and only one in the second group (65-69). The greatest number (nine) fall in the $40-44$ group, and one in the lowest group.

The students in County "H" had been given the stondardized tests in grades four to eight inclusive for the past three years. No pupils were failed, and none were passed because of age nor conditionally.

Of the twenty-two teachers, two held no legal certificate, and either had no college hours of training or the number was not known. Nine taught on Energency or Temporary Certificates; three had thirty college hours; five certificates were based on sixty college hours; one was based on ninety hours, and two held college degrees.

## County "I"

The median grade achieved in County "I" is 8.5 (See Appendix, page 56). Reading shows a median grade attainment of 7.6 with English and geography attainment falling in grades 7 and 7.5 respectively. Of the forty-one pupils reported, four fall in the low group of 35-39 (See Appendix, page 55); ten, the largest number, fall in the 45-49 group; and none in the 70-74 or highest group, while only one falls in the 65-69 group.

Standardized tests were given in this county the past three years to grades three to eight inclusive. No pupils were failed, none passed conditionally, and three were graduated because they were overage. There were sixty-four teachers in the county. Thirtynine held Emergency Certificates based on less than thirty college hours; three were based on sixty college hours; and five had ninety college hours. There were no degree teachers reported for the elementary schools.

## County "J"

In County "J", one hundred twenty-seven students achieved a median grade of 8.9 on all subjects covered by the test (See Appendix, page 58). The median grade in reading is 8.6 , while English and geography drop to grade 8 and 8.2 respectively. In the frequency table (See Appendix, page 57) two pupils fall in the highest group; the largest number, twenty-nine; fall in the 55-59 group; and twelve fall in the lowest.

This county had not given standardized tests during the past three years. There were no failures, and no pupils were passed conditionally or because of age.

Of the eighty teachers in the elementary schools, sixty-seven held certificates of a temporary nature based on less than thirty hours, and thirteen held certificates based on sixty college hours.

## County " K "

A median grade of 8.5 is shown on the attainment scale for County "K" (See Appendix, page 60) for all subjects. The median reading grade attained was 8.3 . A low median grade in English, 7.3, and geography, 7.5, is shown. Of the one hundred thirty-seven pupils taking the test, one falls in the highest group on the frequency table in reading (See appendix, page 59). The largest group, thirtyfour, falls in the $45-49$ group, and twelve fall in the lowest group of 35-39. Six students were failed at the close of the year, and two were passed because of age. None were passed on condition. Standardized tests had been given in the county for the past three years in grades four to eight inclusive.

Seventy-one teachers were reported in the county. One had no certificate at all; thirty-seven held Emergency or Temporary Certificates; twenty-two were teaching on certificates based on thirty college hours; four certificates were based on sixty college hours; two were based on ninety college hours; and five held degrees. One held a Master's Degree.

## County ${ }^{11} \mathrm{~L}^{4}$

County "L" attained a median grade of 8.4 in all subjects (See Appendix, page 62). Forty-seven pupils took the test. The reading median grade is 8.4 , falling exactly on the median for all subjects. English and geography rank slightly lower, falling at 7.7 and 8.0 respectively. Only one pupil falls in the highest group on the frequency table (See Appendix, page 61). The largest number, seventeen pupils, fall into the $50-54$ group and two in the lowest, 35-39, group. County "L" had not given standardized tests to any except the eighth grade during the past three years. Two pupils were failed at the close of the year, and two passed because of age.

Twenty-one elementary teachers were reported in the county. Ten of that number held Emergency or Temporary Certificates based on eight to twenty-nine hours; six held certificates based on thirty college hours; three were based on sixty hours; and two held college degrees.

## All Counties

A combined profile of all counties (page 20) in this study reveals a pattern very typical of most counties, as one would expect. Very few deviate from this general pattern. Spelling on the one side is high, falling at a grade equivalent of 9.8. A severe drop appears in English which falls to a grade equivalent of 7.7. Reading falls at 8.3 , a little below the median for all subjects which is grade equivalent of 8.7. The history median achievement is grade 8.6: geography, next to the low English score, falls at grade 8.0. In science the grade achievement was 8.6; literature, grade 8.5; arithnetic computation, grade 9, and problem reasoning rises to grade 10.0. It will be noted that spelling and problem reasoning, at extreme ends of the profile, show high grade attainment while English and geography present two low points in the profile. Other subjects level off at points near the median grade attainment. This would indicate that these counties have done extremely well in teaching spelling and arithmetic reasoning, if the test is valid, and we must assume that it is. Indications are, also, that there is comparative weakness in the teaching of English and geography.

In general, the profile shows a satisfactory situation in the counties studied. The reading median grade attainment, while slightly lower than the general median, is quite satisfactory. A comparative profile chart showing the national, state (as reported so far), and the counties in this study (page 21) reveals the following:

## LANGUAGE ARTS

SOCIAL STUDIES
Spell. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.
 GRAPH I.


GRAPH II. NORMS OF NATION, STATE, AND COUNTIES IN THE STUDY
Black - National Medians
Blue - State Medians Reported to Date
Red - The 12 Counties of this Study

1. The twelve counties, with but two exceptions, attained exactly the same median grade levels as reported for the state, ${ }^{3}$ these two exceptions being English and history, both of which fall one point different in the twelve counties than in the state as a whole. ${ }^{4}$
2. Five of the Kansas subject medians are exactly or nearly the same as the national medians, namely, reading, history, science, literature, and arithmetic computation, and for interpretative purposes may be considered "at norm." Two medians are lower, Viz., English and geography. The English median is a year below norm, and geography slightly more than half a year below norm. The medians in spelling and arithmetic reasoning are significantly above national norms. The median in spelling is one year above norm, while the median in problem reasoning is approximately a year and a half above norm.

The total frequency for the twelve counties in this study, Table $I$, shows an unbalanced condition in that it shows thirteen in the top group (70-74), thirty-seven in the second group (60-69), and one hundred fifty-eight in the lowest group (35-39). (See Table I, page 23) The writer is not a disciple of the normal curve, but it
3. A letter from the publishers of the test, dated April 25, 1947, states, "The Kansas median for the whole battery is exactly the same as the battery median for the nation."
4. Based on a preliminary report of thirty-two counties to the publishers of the test and reported back to county superintendents under date of April 25, 1947.
appears that perhaps there should have been provisions for lower derived scores than appeared on the coordinated scale of attainment. However, it is doubtful that the lower scores, if any, or even the high scores shown were of any real value since they cover an area more than one grade removed from the curriculum being tested.

## TABLE I.

READING FREQUENCY OF ALL COUNTIES

| $70-74$ | $65-69$ | $60-64$ | $55-59$ | $50-54$ | $45-49$ | $40-44$ | $35-39$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13 | 37 | 103 | 187 | 223 | 240 | 181 | 158 |

Comparison of Reading with Other Subjects

The median grade reading achievement of the 1,142 pupils tested is 8.3 as shown on the combined profile chart (page 21) and the general median grade achievement in all other subjects exclusive of reading is 8.8 or .5 of a grade higher than reading. From the bar graph (page 24), it will be observed that only one county (County " $F$ ") attained a higher median grade in reading than in all other subjects combined. Counties "B" and "I" show noticeable grade differences between reading and the other subjects, in which both counties almost reached the median attained by all counties. This might indicate that reading weakness has not affected other subjects too seriously. County " A ", the lowest in reading and also the lowest in other subjects, points toward reading weakness, as a handicap to the study of other subjects. All other counties show achievement

| County | Grade <br> Achievement |  | . 07 | . 8. | .08. | 59. |  | 9.5 | 10.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | Reading | - 1 |  |  |  |  |  |  |  |
|  | Other Subjects | 2, | 2 | 3x |  |  |  |  |  |
| B | Reading | - |  |  |  |  |  |  |  |
|  | Other Subjects | , | - | Tames | F20 |  |  |  |  |
| C | Roading | T, | , |  |  |  |  |  |  |
|  | Other Subjects | -3. | + | $\square$ | - | 1 |  |  |  |
| D | Reading | [ [a, | -3] | 2 |  |  |  |  |  |
|  | Other Subjects | rasy |  |  |  | 1 |  |  |  |
| E | Readine | \% |  |  |  |  |  |  |  |
|  | Other Subjects | [.c.es) | \% |  | 4 |  | , 3 I |  |  |
| F | Reading | T |  |  |  |  |  |  |  |
|  | Other Subjects | \%ry | 5 | 2-4]ay | 5 | 31 |  |  |  |
| G | Reading | 2 | - |  | 1-31 |  |  |  |  |
|  | Cther Subjects | - | \% |  | - | 2011 |  |  |  |
| H | Reading |  | - | $\underline{+}$ |  |  |  |  |  |
|  | Other Subjects |  | , | - | + | - | I |  |  |
| I | Reading |  | W, | 1 |  |  |  |  |  |
|  | Other Subjects |  | +2e. |  | 7 |  |  |  |  |
| J | Reading |  | - |  |  |  |  |  |  |
|  | Other Subjects | - | $\stackrel{ }{ }$ | + | 38259 | - |  |  |  |
| K | Reading |  |  | - |  |  |  |  |  |
|  | Other Subjects |  | -4, | - |  |  |  |  |  |
| L | Reading | - | " |  |  |  |  |  |  |
|  | Other Subjects | -2x | (3) | - | +3陁 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| All Counties | Reading |  | 2ma | + | \% |  |  |  |  |
|  | Other Subjects | 1-4 | 1-3. |  |  | 5 |  |  |  |
| Grade Achievement |  | 7.07. |  | . 58. | .08. | . 59 | 0 | 9.5 | 10.0 |

GRAPH III.
COMPARISON OF READING ACHIEVEMENT WITH OTHER SUBJECTS
in other subjects in some proportion to achievement in reading. In general, it may be said that those counties which ranked high in reading also ranked high in other subjects, but it is difficult to say that those which ranked low in reading also ranked low in other subjects since only one out of three did rank low in other subjects also. It does seem safe to assume that achievement in reading is followed by a corresponding achievement in other subjects.

## Pupil Failures

The record of pupil failures has little value in this study except as it shows the relatively few pupils who are repeating the eighth grade work. Only twenty-three pupils, or two per cent, failed at the end of the year out of the 1,142 taking the test. Thirty-one were passed because they were approaching a chronological age at which they should be out of grade school; one pupil was passed on condition.

TABLE II.
TEACHER PREPARATION BY COLLEGE HOURS

| Kind of Certificate - Based on College Hours |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No <br> Certificate | Emergency <br> $(8$ Hours $)$ | 30 | 60 | 90 | Degree | Master²s <br> Degree |
| 7 | 340 | 157 | 154 | 37 | 28 | 1 |

## Teacher Preparation

Table II (page 25) shows the distribution of teachers according to college preparation for their profession. From this table it will be noted that seven teachers in the twelve counties were without any legal certificate and in most cases had no college credit. There were three hundred forty teaching on Emergency or Temporary Certificates. 5 One hundred fifty-seven teachers had obtained certificates based on thirty college hours of training, and one hundred fifty-four were based on sixty college hours. Thirty-seven teachers were reported to have ninety college hours of training, twenty-eight had secured college degrees, and one held a Master's Degree.

Since the data secured from the county superintendents did not designate which pupils were under the supervision of each of these groups of teachers, it is impossible to determine the offect of teacher preparation upon pupil attainment with any degree of accuracy.

An attempt is made in the graph (page 27) to show pupil achievement according to teacher preparation. Here the writer has divided the teachers into two groups; those having certificates based on thirty college hours or less and those based on sixty college hours or more. Using the per cent of teachers in each county in the
5. Among this group are included normal training, permenent nomal training, and certificates obtained by state teachers' examinations as well as those issued on eight hours as emergency certificates.


GRAPH IV. TEACHER PREPARATION AND PUPIL ACHIEVEMENT IN READING
lower group the line graph shows grade achievement of pupils and per cent of poorly qualified (by college hours) teachers. For example, County "E" reported eight teachers with thirty college hours or less. This represents twenty-two per cent of all teachers in the elementary schools, the lowest per cent of all counties studied. The per cent of poorly qualified teachers is graduated from lowest to highest so that if teacher preparation had a direct bearing upon achievement, the line should show a gradual decline in grade achievement as the per cent of poor preparation of teachers rises. No such general decline is observed; therefore, it must be assumed that in this study no direct effect is shown between teacher preparation and pupil achievement. It must be noted, however, that no allowance has been made for teacher experience and other factors pertinent to teaching success.

## Results of Continuous Testing

Seven of the twelve counties in this study had given standardized tests to grades four to eight inclusive; five had not given them. The median grade attaiment of those accustomed to the tests is grade 8.6 while the median grade of the five not accustomed to standardized tests is grade 8.7. This difference is not sufficient grounds for concluding that continuous testing produces any definite effect upon results, especially since the testing probably occurred only once each year.

## CHAPTER III

## GENERALIZATION AND CONCLUSION

In this chapter, the writer wishes to generalize findings, point out relevant thoughts regarding these findings, and draw conclusions from them. In Chapter I, it was pointed out that the state test being used is relatively new as a state test in Kansass. It was also pointed out that the change in types of state test was, indeed, tardy.

That the transition from the former type of state test to the present method of testing is an advancement there would be little argument. To assume that this transition is, or can ever be, a panacea for the ills of education in Kansas would be folly. Ralph B. Spence emphasizes the danger of placing too much confidence in standardized testing when he says:

During the earlier years of test development, many schools inclined to use tests in on uncritical way whioh is so often characteristic of the reception of a new discovery. Tests were hailed as the panacea for all educational ills, and there was loose talk about scientific education and the immediate replacement of subjective measures by objective tests. Hundreds of thousands of tests were given for which schools received no adequate return. . .

Reading is often regarded as a subject to be emphasized only in the elementary grades; and educators have assumed that if formal instruction in reading has been offered there, the individual will

1. Ralph B. Spence, "A Comprehensive Testing Program for Elementary Schools," Teachers College Record, 34:279, January, 1933.
acquire adequate reading skills which will continue to function throughout life, but as Gates points out:

While the training in the primary grades is of supreme importance, instruction in reading does not cease with the primary grades, and difficulties in teaching are not confined to the. lower levels. ${ }^{2}$

Albert J. Harris further emphasizes the importance of continued emphasis upon reading skills in the upper grades when he says, "In the upper grades such studies as history and geography are seriously affected by poor reading. "3

Leslie Marion Blake, in a study of deficiencies among public school children, says in his summary, "There appeared to be a satisfactory reading situation in the elementary schools."4 This analysis seems, when comparing state norms with national norms, to indicate that the reading achievement is satisfactory in Kansas. However, such a comparison is like "testing your square by my square to see if your square is square." What do we mean by satisfactory? Do we mean equivalent to some standard of measure, or do we mean satisfactory to a study program which permits pupils to progress at a rate commensurate to their capacity? Beyond that, do we mean our reading
2. Arthur I. Gates, The Improvement of Reading: Revised Edition (New York: The Nacmillan Company, $1 \overline{936}$ ), p. 1 .
3. Albert J. Harris, How to Increase Reading Ability (New York: Longmans, Green and Company, 1947), p. 6.
4. Leslie Marion Blake, Reading Deficiencies among Publio School Children, Master's Thesis, Kansas State College of Agriculture and Applied Science, 1937, p. 62.
progress is satisfactory for life? The writer fears the latter is answered in the affirmative by our secondary school curriculum and that of college, for where do you find a curriculum offering courses for the improvement of reading beyond the eighth grade?

Whatever else may be said, two factors in the right combinations, good teaching and sufficient reading practices of well selected material, will do marvelous things toward improving reading among children in all grades. Above all, these things must be emphasized in teaching in the lower grades which furnish the foundation of all future education, good or bad. Reading is a skill and a tool to learning and, like other skills, must be practiced. It must be practiced where a degree of success can be achieved; therefore, well selected material is important. It is encouraging to note that new emphasis is being placed upon reading as a tool to learning and that many experiments are being used in an effort to improve the teaching of reading.

Two facts, which seem to stand out, present themselves in this study, viz. (1) Seventy per cent of the elementary teachers in the counties in this study were poorly prepared from the standpoint of college education in preparation for their profession (Table II, page 25). These teachers had only thirty college hours or less. (2) The counties having a larger per cent of these poorly prepared teachers, in general, seemed to have achieved grade levels equal to those having a smaller per cent of poorly prepared teachers as shown in Graph IV, page 27.

## Findings

1. There is a quite satisfactory situation in the achievement of Kansas children in general school subjects. See Profile of Attainment, Graph I, page 20.
2. English and geography show definite signs of weakness in comparison with other subjects. This is shown by Attainment Profile, Graph I, page 20.
3. Achievement in reading is followed by a corresponding achievement in other subjects. See comparison of reading with general achievement, Graph III, page 24.
4. Kansas pupils, generally, excel very noticeably in spelling and problem reasoning as compared with national norms. (See Attainment Profile, page 20)
5. There is little basis for assuming that teacher preparation, in college hours, has a direct bearing upon pupil achievement. (Graph IV, page 27)
6. Administering stendardized tests, of the nature used by the state, once each year has no noticeable effect upon pupil achievement. (See Results of Continuous Testing, page 28)
Conclusions
7. Educational achievement in Kansas elementary schools, so far as measurable by one standardized test, compares favorably with that across the nation (Profile Chart, page 21); but there is danger in accepting such a comparison in that wo do not measure capacity of
pupils. Without consideration of pupil capacity there is the possibility of self-satisfaction and mediocrity.
8. Since there is ample evidence that reading achievement is definitely correlated with achievement in other subjects, it appears that reading should receive an important portion of curriculum and teacher time and that greater emphasis should be placed upon remedial reading where there is evidence of need. It seems evident that much improvement can be made in reading.
9. English and geography either have been given too minor a place in the curriculum or there is definitely poorer teaching being done in these subjects. Both factors may enter the picture together with other factors. In the case of geography, however, it might be pointed out that this subject is usually taught in the seventh grade and not repeated, as such, in the eighth grade in Kansas. This may not be the practice in other states and might explain, to some extent, the low grade achievement.
10. Education qualifications of teachers in Kansas are far too low. Concerted effort should be made to raise standards of teacher education.

## Suggestions

It is not within the province of this thesis to determine the exact status of teacher preparation beyond that of determining a scope of college hours obtained. Therefore, since many other factors enter into tescher success, such as experience, personality,
etc., it has been impossible to make satisfactory analysis of pupil achievement in comparison to teacher preparation. The writer suggests a problem which attempts to analyze teacher preparation, taking a number of possible teaching success factors into account, and pupil achievement as a basis for a thesis.

It is altogether possible that this thesis might serve as a guide to supervisors of teacher training institutions, to the State Department of Education, and to county superintendents of schools for the purpose of pointing out needs in curriculum time on certain subjects, and further emphasis in teacher preparation for teaching those subjects, by showing pupil achievement, weakness as well as strength.

## BIBIIOGRAPHY

## Books

Bond, Guy L., and Eva Bond. Teaching the Child to Read. New York, The Macmillan Company, 1947. 346pp.

Outlines a comprehensive teaching method, gives preparatory background for testing achievement and diagnosis of unusual cases. Points out stages of reading and leaming readiness, directs attention to proper reading habits and vocabulary development.

Gates, Arthur I. The Improvement of Reading. New York, The Macmillan Company, 1927. 422 pp. with Appendix.

Presents a system of measuring achievement, diagnosing difficulties, and demonstrates a method of teaching reading which the author calls the intrinsic method. Emphasis is placed upon diagnostic significance of test results followed by appropriate remedial measures.

Gray, William S. Improving Instruction in Reading, an Experimental Study. Chicago, The University of Chicago, 1933. 220pp.

Points out the need for improved instruction in harmony with scientific research in the field of teaching, that improvement in teaching must be continuous if it is to be adapted to changing social needs.

Harris, Albert J. How to Increase Reading Ability. 2nd Ed. ; New York, Longmans, Green and Company, 1947. 554pp. with Appendix.

Presents a program for increasing reading ability through adaptation to individual needs, determining causes of individual difficulties, teaching word recognition, comprehension, and developing reading interests.

Kirk, Samuel A. Teaching Reading to Slow Learning Pupils. Boston, Houghton Mifflin Company, 1940. 216pp. with Appendix.

Describes typical remedial cases, gives causes, and outlines remedial measures to be used in overcoming retarding handicaps to a limited degree.

Madsen, I. N. Educational Measurement in the Elementary Grades. Yonkers-on-Hudson, New York, World Book Company, 1930. 294pp.

McCallister, James M. Remedial and Corrective Instruction in Reading. New York, D. Appleton-Century Company, Inc., 1936. 283 pp .

Points out the need for a definite reading program in the upper grades and high school, presents a program for guiding reading activities in the study of content subjects and provision for administering a reading program.

Ross, C. C. Measurement in Today's Schools. New York, Prentice-Hall, Inc., 1942. 395 pp .

Encourages the use of testing and special coaching for remedial work in reading as well as content subjects. Describes methods of testing in common use in present day education.

## Periodicals

Douglass, H. R. "Some Dangers of the Testing Movement." (Journal of National-Education Association. Vol. 23, pp.17-18. September, 1934).

Points out the danger of placing too much confidence in results of standardized tests, especially the so-called intelligence tests.

Spence, Ralph B. "A Comprehensive Testing Program for Elementary Schools." (Teachers College Record. Vol. 34, pp. 279-284. January, 1933).

Points out the danger of using tests in an uncritical way, that tests should be used to evaluate pupil achievement and diagnose teacher difficulties. Sets up a plan for a testing program for all eight elementary grades.

Theses

Blake, Leslie M. Reading Deficiencies among Public School Children, Master's Thesis, Kansas State College of Agriculture and Applied Science, 1937. 72pp.

Calvin, Grace. An Analysis of Intermediate Grade Reading Tests, Master's Thesis, Boston University, 1940. 76pp.

Greer, Dolphus Only. A Comparison of Reading with Other Subjects, Master's Thesis, George Peabody College for Teachers, 1939. 20pp.

Found a marked relationship between reading achievement and other subjects, that the coefficient of correlation increased as pupils advanced, that the highest relationship existed between reading and diction and the lowest relationship existed between reading and arithmetic computation.

Hunt, Ira E. Reading Disability of Lawrence, Kansas Junior High School Pupils and Suggested Remedial Instruction, Master's Thesis, Kansas State Teachers College, Pittsburg, 1937. 96pp.

Found that reading difficulties are amenable to group instruction, that there is a high correlation between reading and other subjects.

## Nixt Ex,







 3incore


 WNot x



## Dear County Superintendent:

As a requirement for a Master's Degree at Fort Hays Kansas State College, I am attempting to complete a study of the results of the State Tests in selected countie of Kansas this spring. Having been a county superintendent, I know you are busy with annual reports and a multitude of other duties, but I need this material badly and as early as possible since I hope to complete this study this summer.

Counties will be listed, but the results will not be identified. They will be listed as County $A, B, C$, etc. Thus no reflectionsswill be placed upon anyone nor upon any group of teachers.

A few questions are asked that should not take too long to answer. I am enclosing a profile sheet upon which I would like a county profile. I am also requesting a frequency table on reading, since this study concerns itself primarily with reading.

Upon completion of the study, I hope to prepare a summary which will be sent at no cost to you, if requested.

## Gratefully tyours,

W. W. Steeples

TABLE OF FREQUENCY IN READING

| Score | Frequency | Score | Frequency |
| :---: | :---: | :---: | :---: |
| $70-74$ | $\frac{0}{1}$ | $50-54$ | $\frac{12}{}$ |
| $65-69$ | $\frac{1}{2}$ | $45-49$ | -31 |
| $60-64$ | $\frac{2}{11}$ | $40-44$ | $\frac{24}{}$ |
| $55-59$ |  | $35-39$ | 26 |

1. Have tests been given to all grades during the past 3 years? Yes No $x$ If not, circle grades to which given. $123 \leq \underline{4} \underline{6} \underline{7}$
2. Please give as accurately as possible answers to the following:

1947

1. Number of pupils failed (8th grade)
2. Number of pupils passed on condition
3. Number of pupils passed because of age, etc.

4. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Number of Teachers and Kind of Certificate Held Number

Kind of Certificate Held
1.

| 1. | 0 |
| :---: | :---: |
| 2. | 23 |
| 3. | 15 |
| 5. | 18 |
| 6. | 5 |
| 7. | 5 |
|  | 0 |

None (Average number of college hours, if any $\qquad$ ) Emergency ( 8 hours, but less than 30) Certificate based on 30 college hours Certificate based on 60 college hours Certificate based on 90 college hours Certificate based on Degree

Certificate based on Master's Degree
Total
$\qquad$ SOCIAL STUDIES
Spel1. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.


TABLE OF FREQUENCY IN READING

| Score | Frequency | Score | Frequency |
| :---: | :---: | :---: | :---: |
| $70-74$ | $\frac{4}{2}$ | $50-54$ | 9 |
| $65-69$ | $\frac{4}{2}$ | $45-49$ | $\frac{11}{}$ |
| $60-64$ | $\frac{6}{7}$ | $40-44$ | $\frac{23}{}$ |
| $55-59$ | $35-39$ | $\frac{24}{}$ |  |
|  |  |  | 88 |

1. Have tests been given to all grades during the past 3 years? Yes x No If not, circle grades to which given. $1 \begin{array}{llllllll} & 2 & 3 & 4 & 5 & 6 & 7 & 8\end{array}$
2. Please give as accurately as possible answers to the following:
3. Number of pupils failed (8th grade)
4. NUmber of pupils passed on condition
5. Number of pupils passed because of age, etc:
6. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Number of Teachers and Kind of Certificate Held

Number Kind of Certificate Held

| 1. | 0 |
| :---: | :---: |
| 2. | 22 |
|  | 2 |
| 4. | 6 |
|  | 5 |
| 6. | 3 |
| 7. | 0 |
| 8. | 36 |

None (Average number of college hours, if any $\qquad$ )

Emergency ( 8 hours, but less than 30)
Certificate based on 30 college hours
Certificate based on 60 college hours
Certificate based on 90 college hours
Certificate based on Degree
Certificate based on Master's Degree
Total
$\frac{\text { LANGUAGE ARTS }}{\text { Spell. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas. }}$


TABLE OF FREQUENCY IN READING

| Score | Frequency | Score | Frequency |
| :---: | :---: | :---: | :---: |
| $70-74$ | 1 | $50-54$ | 33 |
| $65-69$ | $-\frac{1}{2}$ | $45-49$ | 38 |
| $60-64$ | -19 | $40-44$ | -28 |
| $55-59$ | -24 | $35-39$ | $\frac{31}{}$ |
|  |  |  | 179 |

1. Have tests been given to all grades during the past 3 years? Yes No $x$ If not, circle grades to which given. 123 4 $\underline{5} \underline{6} \underline{7}$
2. Please give as accurately as possible answers to the following:
3. Number of pupils failed (8th grade)
4. IUumber of pupils passed on condition
5. Number of pupils passed because of age, etc.
——— (No report)
———.
6. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Number of Teachers and Kind of Certificate Held
Number
Kind of Certificate Held

| 1. | 0 | None (Average number of college hours |
| :---: | :---: | :---: |
| 2. | 23 | Emergency (8 hours, but less than 30) |
| 3. | 17 | Certificate based on 30 college hours |
| 4. | 11 | Certificate based on 60 college hours |
| 5. | 0 | Certificate based on 90 college hours |
| 6. | 0 | Certificate based on Degree |
| 7. | 0 | Certificate based on Master's Degree |
| 8. | 51 | Total |

$\qquad$
$\qquad$
Spel1. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.


## TABLE OF FREQUENCY IN READING

| Score | Frequenc | Score | Frequency |
| :---: | :---: | :---: | :---: |
| 70-74 | 2 | 50-54 | 26 |
| 65-69 | 3 | 45-49 | 23 |
| 60-64 | 12 | 40-44 | 18 |
| 55-59 | 25 | 35-39 | 14 |
|  |  |  | 123 |

1. Have tests been given to all grades during the past 3 years? Yes Nox If not, circle grades to which given. 1 |  | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
2. Please give as accurately as possible answers to the following:

1947

1. Number of pupils failed (8th grade)
2. Number of pupils passed on condition
3. Number of pupils passed because of age, etc.

4. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Number of Teachers and Kind of Certificate Held

| Number Kind of |  |  |
| :---: | :---: | :---: |
| 1. | 0 | None (Average number of college hours, if any___) |
| 2. | 33 | Emergency (8 hours, but less than 30) |
| 3. | 35 | Certificate based, on $30:$ college hours |
| 4. | 10 | Certificate based on 60 college hours |
| 5. | 10 | Certificate based on 90 college hours |
| 6. | 0 | Certificate based on Degree |
| 7. | 0 | Certificate based on Master's Degree |
| 8. | 88 | Total |

$\qquad$
$\qquad$
Spell. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.


TABLE OF FREQUENCY IN READING

| Score | Frequency | Score | Frequency |
| :---: | :---: | :---: | :---: |
| $70-74$ | 0 | $50-54$ | 17 |
| $65-69$ | 0 | $45-49$ | $\frac{7}{17}$ |
| $60-64$ | $\frac{0}{17}$ | $40-44$ | 11 |
| $55-59$ | $35-39$ | $\frac{5}{17}$ |  |

1. Have tests been given to all grades during the past 3 years? Yes No $x$ If not, circle grades to which given. $\begin{array}{lllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & \underline{8}\end{array}$
2. Please give as accurately as possible answers to the following: 1947
3. Number of pupils failed (8th grade)
4. Number of pupils passed on condition
5. Number of pupils passed because of age, otc.

6. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Number of Teachers and Kind of Certificate Held

|  | mbe | Kind of Certificate Held |
| :---: | :---: | :---: |
| 1. | 3 | None (Average number of college hours, if any 12) |
| 2. | 3 | Emergency (8 hours, but less than 30) |
| 3. | 2 | Cortificate based on 30 college hours |
| 4. | 20 | Certificate based on 60 college hours |
| 5. |  | Certificate based on 90 college hours |
| 6. | 8 | Certificate based on Degree |
| 7. |  | Certificate based on Master's Degree |
| 8. | 36 | Total |

$\frac{\text { LANGUAGE ARTS }}{\text { Spell. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas. }}$


TABLE OF FREQUENCY IN READING

| Score | Frequency | Score | Frequency |
| :---: | :---: | :---: | :---: |
| $70-74$ |  | $50-54$ | $\frac{15}{}$ |
| $65-69$ | -2 | $45-49$ | $\frac{4}{2}$ |
| $60-64$ | $\frac{7}{2}$ | $40-44$ | $\frac{2}{3}$ |
| $55-59$ | -13 | $35-39$ | $\frac{3}{4}$ |

1. Have tests been given to all grades during the past 3 years? Yes $\qquad$ No $x$ If not, circle grades to which given. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
2. Please give as accurately as possible answers to the following: 1947
3. Number of pupils failed (8th grade)
4. Number of pupils passea on condition
5. Number of pupils passed because of age, etc.

6. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Number of Teachers and Kind of Certificate Held

| Number Kind of Certificate He |  |  |
| :---: | :---: | :---: |
| 1. | 1 | None (Average number of college hours, if any___) |
| 2. | 27 | Emergency (8 hours, but less than 30) |
| 3. | 26 | Certificate based on 30 college hours |
| 4. | 42 | Certificate based on 60 college hours |
| 5. | 10 | Certificate based on 90 college hours |
| 6. | 5 | Certificate based on Degree |
| 7. |  | Certificate based on Master's Degree |
| 8. | 111 | Total |

$\qquad$
LANGUAGE ARTS
Spell. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.


## TABLE OF FREQUENCY IN READING

| Score | Frequenc | Score | Frequency |
| :---: | :---: | :---: | :---: |
| 70-74 | 2 | 50-54 | 30 |
| 65-69 | 6 | 45-49 | 45 |
| 60-64 | 14 | 40-44 | 18 |
| 55-5s | 20 | 35-39 | 24 |
|  |  |  | 159 |

1. Have tests been given to all grades during the past 3 years? Yes No X If not, circle grades to which given. 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
2. Please give as accurately as possible answers to the following: 1947
3. Number of pupils failed (8th grade)
4. Number of pupils passed on condition
5. Number of pupils passed because of age, etc.

6. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Number of Teachers and Kind of Certificate Held
Number Kind of Certificate Held
1.

| 20 |
| :---: |
| 27 |
| 20 |

None (Average number of college hours, if any 7 $7 \frac{1}{2}$ )
Emergency ( 8 hours, but less than 30)
Cortificatie based on 30 college hours
Certificate based on 60 college hours
Certificate based on 90 college hours
Certificate based on Degree
Certificate based on Master's Degroe
Total
LANGUAGE ARTS
$\qquad$
Spel1. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.


## TABLE OF FREQUENCY IN READING

| Soore | Frequency | Score | Frequencr |
| :---: | :---: | :---: | :---: |
| $70-74$ |  | $50-54$ |  |
| $65-69$ | -1 | $45-49$ | - |
| $60-64$ | -2 | $40-44$ | - |
| $55-59$ | $-\frac{3}{2}$ | $35-39$ | - |

1. Have tests been given to all grades during the past 3 years? Yes_ No X If not, circle grades to which given. $1 \begin{array}{llllllll} & 2 & 4 & 5 & 6 & 7 & 8\end{array}$
2. Please give as accurately a mossible answers to the follovine. 1947
3. Number of pupils failed (Bth grade)
4. ITumber of punils passed or condition
5. Number of pupils yassed because of age, etc.
6. 

CERTIFICATIC: GF EERENTAR: TEACHERS IN COUNTY
Number of Teachers and kind of Certificate Held

| Number |  |  |
| :---: | :---: | :---: |
| 1. | 2 | None (Averase number of college hours, if any _ |
| 2. | $\cup$ | Emergency (8 hours, but less than 30) |
| 3. | 3 | Cortificate basod on 30 college hours |
| 4. | 5 | Certificate based on 60 college hours |
| 5. | 1 | Certificate based on 90 college hours |
| 6. | 2 | Certificate based on Degree |
| 7. |  | Certificate based on Miaster's Degree |
| 8. | $\because 2$ | Total |

LANGUAGE ARTS SOCIAL STUDIES Spell. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.


TABLE OF FREQUENCY IN READING

| Score | Frequency | Score | Frequency |
| :---: | :---: | :---: | :---: |
| 70-74 | 0 | 50-54 | 9 |
| 65-69 | 1 | 45-49 | 10 |
| 60-64 | 2 | 40-44 | $\cdots$ |
| 55-59 | $\because$ | 35-39 | 4 |
|  |  |  | 1 |

1. Have tests been given to all grades during the past 3 years? Yes No $X$ If not, circle grades to which given. $1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7$
2. Please give as accurately as nossible answers to the followinp: 1947
3. Number of pupils failed (8th grade)
4. Number of pupils passed on condition
5. Number of pupils passed because of age, etc.
6. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Number of Teachers and Kind of Certificat Held

| 1. $\quad$ Number |  | Kind of Certificate Held |
| :---: | :---: | :---: |
|  |  | None (Average number of college hours, if any ___) |
| 2. | 3. | Energancy (8 hours, but less than 30) |
| 3. | $?$ | Certificate basod on 30 college hours |
| 4. | 3 | Certificate based on 60 college hours |
| 5. | 5 | Certificate based on 90 college hours |
| 6. |  | Certificate based on Degree |
| 7. |  | Certificate based on Master's Degree |
| 8. | 9 | Total |

LANGUAGE ARTS
Spell. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.


TABLE OF FREQUENCY IN READING

| Score | Frequency | Score | Frequency |
| :---: | :---: | :---: | :---: |
| $70-74$ | $\frac{2}{2}$ | $50-54$ | 27 |
| $65-69$ | -8 | $45-49$ | -23 |
| $60-64$ | -11 | $40-44$ | 15 |
| $55-59$ | -29 | $35-39$ | 12 |

1. Have tests been given to all grades during the past 3 years? Yes No $x$ If not, circle grades to which given. $\begin{array}{llllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8\end{array}$
2. Please give as accurately as possible answers to the following:
3. Number of pupils failed (8th grade)
4. Number of pupils passed on condition
5. Number of pupils passed because of age, etc.
6. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Númber of Teachers and Kind of Certificate Held

| Number Kind of Certificate Held |  |  |
| :---: | :---: | :---: |
| 1. | 30 | None (Average number of college hours, if any___) |
| 2. | 37 | Emergency ( 8 hours, but less than 30) |
| 3. |  | Certificate based on 30 college hours |
| 4. | 13 | Certificate based on 60 college hours |
| 5. |  | Certificate based on 90 college hours |
| 6. |  | Certificate based on Degree |
| 7. |  | Certificate based on Master's Degree |
| 8. | 80 | Total |

Spell. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.


TABLE OF FREQUENCY IN READING

| Score | Frequency | Score | Frequency |
| :---: | :---: | :---: | :---: |
| $70-74$ | $-\frac{1}{2}$ | $50-54$ | $\frac{22}{}$ |
| $65-69$ | $-\frac{5}{15}$ | $45-49$ | $\frac{34}{}$ |
| $60-64$ | -21 | $40-44$ | 27 |
| $55-59$ | $-25-39$ | 12 |  |
|  |  |  | 137 |

1. Have tests been given to all grades during the past 3 years? Yes No $x$ If not, circle grades to which given. $1223 \leq \underline{4} 6 \underline{7}$
2. Please give as accurately as possible answers to the following:
3. Number of pupils failed (8th grade)
4. Number of pupils passed on condition
5. Number of pupils passed because of age, etc.

| $\frac{6}{0}$ |
| ---: |
| -2 |

3. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Number of Teachers and Kind of Certificate Held
Number
Kind of Certificate Held
1.


None (Average number of college hours, if any $\qquad$ $)$

Emergency ( 8 hours, but less than 30)
Certificate based on 30 college hours
Certificate based on 60 college hours
Certificate based on 90 college hours
Certificate based on Degree
Certificate based on Master's Degree
8.

Total
$\qquad$ SOCIAL STUDIES

Spell. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.


TABLE OF FREQUENCY IN READING

| Score | Frequenc | Score | Frequency |
| :---: | :---: | :---: | :---: |
| 70-74 | 1 | 50-54 | 17 |
| 65-69 | 1 | 45-49 | 16 |
| 60-64 | 4 | 40-44 | 10 |
| 55-59 | 3 | 35-39 | 2 |
|  |  |  | 47 |

1. Have tests been given to all grades during the past 3 years? Yes Nox If not, circle grades to which given. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
2. Please give as accurately as nossible answers to the following. 1947
3. Number of pupils failed (8th grade)
4. Ilumber of pupils passed or condition
5. Number of pupils passed because of age, etc.
6. 

CERTIFICATION OF ELEMENTARY TEACHERS IN COUNTY
Numbor of Teachers and Iind of Certificate Held

|  | mb | Kind of Certificate Held |
| :---: | :---: | :---: |
| 1. | 0 | None (Averar, number of college hours, if any $\qquad$ <br> Emergency (8 hours, but less than 30) |
| 2. | 10 |  |
| 3. | 6 | Certificate based on 30 college hours |
| 4. | 3 | Certificate based on 60 college hours |
| 5. |  | Certificate based on 90 college hours |
| 6. | 2 | Certificate based on Degree |
| 7. |  | Certificate based on Master's Degree |
| 8. | 21 | Total |

## LANGUAGE ARTS <br> SOCIAL STUDIES <br> ARITHMETIC SKILLS

Spell. Eng. Read. Hist. Geo. Science Lit. Comp. Prob. Reas.



[^0]:    1. Educational Test Bureau (Philadelphia, Educational Publishers, Inc.)
[^1]:    2. Coordinated Scales of Attainment, Master Manual, Educational Test Bureau (Philadelphia, Educational Publishers, Inc., 1947), p. 37.
