AN INVESTIGATION OF SOME FACTORS ATTENDING THE FAILURE OF FIFTY-FOUR PUPILS IN THE SEVENTH AND THE EIGHTH GRADES IN THE COUNTY DIPLOMA EXAMINATION GREENWOOD COUNTY, KANSAS.

By

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Approved by:

[Signatures]

Aug. 1929
Date
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAPTER 1.</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>CHAPTER 2.</td>
<td>Related Studies</td>
<td>3</td>
</tr>
<tr>
<td>CHAPTER 3.</td>
<td>A. Statement of the Problem</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>B. Plan of Study</td>
<td>10</td>
</tr>
<tr>
<td>CHAPTER 4.</td>
<td>A. Questions to be Answered by this Study</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>B. Presentation and Description of Data</td>
<td>19</td>
</tr>
<tr>
<td>CHAPTER 5.</td>
<td>A. Summary of Findings</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>B. Bibliography</td>
<td>1</td>
</tr>
<tr>
<td>APPENDIX</td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>
INDEX TO TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Chronological Age</td>
<td>15</td>
</tr>
<tr>
<td>2.</td>
<td>Mental Age</td>
<td>16</td>
</tr>
<tr>
<td>3.</td>
<td>Mental and Chronological Ages Combined</td>
<td>17</td>
</tr>
<tr>
<td>4.</td>
<td>School Progress and Mental Age</td>
<td>18</td>
</tr>
<tr>
<td>5.</td>
<td>Relation of School Marks to Mental Test Scores</td>
<td>20</td>
</tr>
<tr>
<td>6.</td>
<td>Variation of Teachers Marks</td>
<td>22</td>
</tr>
<tr>
<td>7.</td>
<td>Relative Difficulty of Questions in Reading</td>
<td>24</td>
</tr>
<tr>
<td>8.</td>
<td>Relation of Failures and Experience of Teachers</td>
<td>26</td>
</tr>
<tr>
<td>9.</td>
<td>Distribution of Physical Defects</td>
<td>28</td>
</tr>
<tr>
<td>10.</td>
<td>Attendance</td>
<td>30</td>
</tr>
<tr>
<td>11.</td>
<td>Grades Repeated</td>
<td>32</td>
</tr>
<tr>
<td>12.</td>
<td>Number of Schools Attended</td>
<td>34</td>
</tr>
<tr>
<td>13.</td>
<td>Attitude of Students toward School</td>
<td>35</td>
</tr>
</tbody>
</table>

Chart No. I.

Social Status of Parents. 33
CHAPTER 1

Introduction

During the months of April and May, 1929 - twenty-five per cent of the students in grades seven and eight in Greenwood County, Kansas, except those in Madison and Virgil, who are not required to take the County Diploma Examination failed in two or more subjects of this examination.

The Bi-monthly examination grades are averaged and count half in determining promotion. An average of eighty per cent with no grade below sixty in any subject is required for promotion.

More pupils failed in Reading than in any other subject and the smallest number of failures was in Geography.

Forty-one out of one hundred thirty-four rural school pupils failed in Reading or thirty per cent, and twenty-eight of one hundred thirty-four in Geography or twenty-four per cent. The grade schools had a smaller proportion of failures in each subject.

The writer has spent several years teaching in the rural communities of Kansas and is in sympathy with the problems of the boys and girls in these communities. He is aware of the significant findings of the School Code Commission which indicate that the rural schools are the weakest part of our state school system. The real seriousness of the problem of school failures can be realized in part from the report of the United States Census Bureau. "In the United States in the five years 1919 to 1923 inclusive, one thousand eight hundred and fourteen children, ten to nineteen years of age, took their own lives. Some of these children had become discouraged by
failure in school and had found no compensating sympathy at home.

"The worst consequences of failure are perhaps in acquiring the habit of failing and in coming to accept oneself as a failure." ¹

The writer has had experience in trying to adjust a high school program so as to enable pupils who failed in the County Diploma Examination and who were admitted on trial to overcome the effects of failure and to do high school work successfully. Parents are deeply concerned and constantly demanding an explanation of the schools as to why so many pupils fail.

CHAPTER 2

Related Studies

Some important facts are found in the literature related to this problem.

From Carpenters' Masters' thesis, based upon a study of one thousand one hundred thirty-five rural pupils of North Eastern Kansas, grades one to eight inclusive, the following facts are taken.

11 per cent were underage
55 " " " normal age
34 " " " overage

(1) Overageness exceeds underageness by twenty-three per cent.
(2) More divergence into overageness and underageness is found in the upper grades.
(3) In the eighth grade only forty per cent of the pupils are of normal age grade.

The report of the School Code Committee of 1921-1922 reveals the fact that of one thousand two hundred thirty-two rural pupils in the elementary grades in Kansas, twenty-two per cent were in the eighth grade, while in the second class city schools only fifteen per cent of one thousand seven hundred fourteen pupils were in the eighth grade. More than twice as many rural pupils in grades seven and eight were retarded as were accelerated.

The fact of experience of the teacher is very significant.

1. Kansas University, 1928.
for the boys and girls attending the ungraded schools.

There are other factors of greater consequence than the length of the school year.

The report of the Chanute Survey for 1924 shows that tests given to one hundred eighty pupils in the seventh grade and one hundred forty-six in the eighth grade reveals some pupils fourteen years old chronologically who are seventeen years mentally. Pupils fifteen years mental age varies from twelve to eighteen years chronologically.

"The more serious feature of this situation resides in the fact that such differences of mental age are almost certain to be accompanied by physical and emotional differences.

"In grades seven and eight the greater proportion of pupils are either normal or retarded. A relatively small number of pupils in these grades are accelerated. That individual differences must be met is apparent in these facts."

Table 25. Important differences are shown in, A Comparison of School Progress by Mental and Chronological Ages of Pupils.

<table>
<thead>
<tr>
<th></th>
<th>Grades VII</th>
<th>VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accelerated:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronologically</td>
<td>4.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Mentally</td>
<td>10.6</td>
<td>21.</td>
</tr>
<tr>
<td><strong>Normal:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronologically</td>
<td>58.8</td>
<td>65.5</td>
</tr>
<tr>
<td>Mentally</td>
<td>61.4</td>
<td>61.3</td>
</tr>
<tr>
<td><strong>Retarded:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronologically</td>
<td>36.7</td>
<td>32.7</td>
</tr>
<tr>
<td>Mentally</td>
<td>23</td>
<td>17.7</td>
</tr>
<tr>
<td><strong>Total Number of Pupils</strong></td>
<td>180</td>
<td>146</td>
</tr>
</tbody>
</table>

1. Percival’s study showed that fewer parents of failure pupils are found in the business and professional classifications and more in public service skilled work and agriculture.

2. Odell found small correlation between attendance and achievement among high school pupils.

3. Glad investigated the relation of school achievements of the five hundred eighty-five pupils in the one-teacher schools in nine Kansas Counties. He concludes:—There are other factors more important than variation of school attendance influencing achievement of pupils. On the whole attendance is not a weighty factor.

4. Sears quotes Gulick and Ayres as follows: “On the basis of nearly a half million children examined in nine American cities:

41.5% had defective teeth
20.1% had throat trouble
15.3% had eye defects
10.8% had nasal trouble
11.8% had other trouble

72.2% of two hundred thirty thousand two hundred forty-three New York City children were in need of treatment, fifteen

1. Kansas University, 1925.
3. Kansas University, 1924.
per cent had hypertrophied tonsils, eleven and nine tenths per cent had defective nasal breathing, ten and six tenths per cent had defective vision, fifty-nine per cent had defective teeth, twenty-five per cent were suffering from malnutrition.

1. Ayers, in the Cleveland, Ohio, School Survey of 1917, said that there was a surprising number of children unable to keep up with their classes. The terms "backward" and "retarded" were applied to them. The school physicians showed that they were backward merely because of removable physical defects.

2. Ruch contends that examinations serve three general purposes: motivation of learning, training in organization and expression of thought and educational measurement. The traditional written examination serves none of these purposes very well. Objective examinations are claimed to be superior to the traditional essay type in accuracy of scoring and measurement.

The work of Starch and Elliott established very definitely that marks assigned to the same paper by different teachers varied enormously in terms of the same percentage scale. Starch speaks of variation in human capacities as follows: The best pupil in reading is one and one-half to twenty-five times as capable as the poorest pupil. The best pupil in Arithmetic reasoning in

3. Starch, Daniel Educational Psychology.
the third grade is as capable as the poorest pupil in the eighth grade. Three pupils out of nine are correctly placed in the eighth grade, two are equal only to the average seventh grader and one is equal only to the average sixth grader.

1.

O'Brien pointed out in his study of failures that:

(1) School records tend to understate facts of failure. (2) The pupils who lack native ability for the work are not a large number. (3) The early elimination of pupils, the number that fail and notable cases of non-success are evidence of something wrong with the kind of education.

1. O'Brien, F.P. Contributions to Education No. 102, Columbia University, New York.
CHAPTER III

Statement of the Problem

The purpose of this study is to investigate some of the probable contributing causes for the failure of the fifty-four pupils included in the study. These circumstances are listed: - grades in school, chronological age, mental age, attendance this year, average grades for all subjects taken in the county diploma examination, number of schools attended, grades repeated, experience of teachers, occupation of parent, the health defects of each pupil, the relative difficulty of the questions in reading, the rating of the median paper in Geography and also in Reading by forty teachers.

These facts presented in tabular form in a series of charts as listed below tend to show the characteristics of the group with whom this study is concerned. It is not assumed that this will show all the causes for the failure of these pupils, but that certain attending circumstances will be investigated and a summary of findings set forth.

The factors specifically investigated are: -

1. Age-grade distribution.
2. Mental capacity.
3. Relationship of grades and mental scores.
4. Variation of teachers' marks.
5. Method of rating examination questions.
7. Physical defects.
8. Regularity of Attendance.
9. Grades repeated.
10. Occupation of parents.
11. Number of schools attended.
12. Attitude of pupils toward school.
CHAPTER III - B

Plan of Study

In considering the plan of the study, a recognition of its limitations must be considered. The methods employed must be governed by the amount, kind and sources of data available. In order to get the mental test scores, notices were mailed by the County Superintendent to ninety-five pupils, which is the total number of failures in Greenwood County in 1929, asking them to come to Eureka for a special examination on June 7, 1929 at 10 A.M. In spite of heavy rains and muddy roads, fifty-four pupils came for the examination. Some pupils came a distance of forty-five miles.

With the assistance of the County Superintendent the Terman Group Test, Form A, was given and the papers scored. Students who had not been examined previously by the County Health Physician were examined immediately following the giving of the Terman Group test. All items relating to physical condition of pupils were obtained from the County Health Department and carefully checked with the assistance of Dr. O.L. Miller, County Health Physician.

The middle paper of those receiving a failing grade in Reading, and the middle paper of those receiving a failing grade in Geography were each rated separately by a University Class of
Graduate students in the Administration Seminar.

All other records were obtained from the County Superintendent's Office. The specific facts to be used in this study were determined arbitrarily by the writer.

As these fifty-four failures were scattered widely over the county and were the eliminations from some three hundred eighty-seventh and eighth grade pupils they may be assumed to be representative, as far as attending circumstances are concerned. It was considered best to find out many things about a few cases rather than a few facts about many cases. Therefore, forty-one of the ninety-five failure pupils were discarded as they were the pupils from whom no mental test scores could be obtained, leaving fifty-four pupils who had failed in two or more subjects to be used in this study. Boys and girls were not considered separately.

Tabulations were made of all facts pertinent to the problem as listed in this study under a statement of the problem, and these were arranged on a source sheet and checked for errors. Except for some clerical assistance in the office of the County Superintendent, practically all of the data have been gathered and assembled under the personal supervision of the writer.

A series of tables was constructed for the purpose of more clearly describing the facts and relationships which show what were the circumstances attending this particular group of failures.
CHAPTER IV

Questions to be Answered by this Study

A. What are the facts concerning these fifty-four failures with reference to:

1. The extent of chronological underageness, normal agenesis and overageness.

2. The extent of mental underageness, normal agenesis and overageness.

3. Relationship between school marks and mental test scores.

4. Variation of teachers' marks in Geography and Reading relation to the objectivity of the tests.

5. Method of evaluating questions as related to the comparative difficulty of the questions.

6. Relation of the amount of experience to the number of failures per teacher.

7. The extent and manner of distribution of certain physical defects.

8. Total number of days attended by each student during the year.

9. The number of times and in what grades they had failed previously.

10. The occupational status as determined by the number of parents listed in each occupation.

11. The number of separate schools attended.

12. Attitude of students toward school and reason for absence
as determined by replies to these questions: (1) Did you like your last teacher? (2) Do you intend to go to high school? (3) What caused most of your absence from school?
The Ages at Which Pupils are Considered Normal

Age for Each Grade are as Follows:

<table>
<thead>
<tr>
<th>Ages</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>13</td>
<td>8</td>
</tr>
</tbody>
</table>

At six years of age a pupil should be in the first grade, at seven years of age a pupil should be in the second grade, etc.

If a pupil is eight years of age and in the second grade, he is over age one year. A pupil is under age two years if at twelve years of age he is doing eighth grade work. This plan is used to determine underageness, normal ageness and overageness.

Table 1. shows the ages and grades taken as they existed June 7, 1929. Fractional years were not accounted for.
TABLE 1

CHRONOLOGICAL AGE DISTRIBUTION OF FIFTY-FOUR STUDENTS WHO FAILED IN THE NINETEEN HUNDRED TWENTY-NINE COUNTY DIPLOMA EXAMINATION.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Under age</th>
<th>Normal</th>
<th>Over age</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 yrs.</td>
<td>1 yr.</td>
<td>1 yr.</td>
<td>2 yrs.</td>
</tr>
<tr>
<td>Seventh</td>
<td>7</td>
<td>11</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Eighth</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>18</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Per cent</td>
<td>17%</td>
<td>34%</td>
<td>34%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Table 1 shows that:

1. Eighty-three per cent of these pupils are overage.
2. Forty-nine per cent are two years or more retarded.
3. Retardation is very pronounced in both the seventh and eighth grades.
4. The seventh grade has greater normality and a smaller per cent of overageness than the eighth grade.
5. A range of five years in the seventh and four years in the eighth between the oldest and the youngest pupils.
TABLE 2.

MENTAL AGE OF FIFTY-FOUR STUDENTS WHO FAILED IN THE NINETEEN
HUNDRED TWENTY-NINE COUNTY DIPLOMA EXAMINATION.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Under age</th>
<th>Normal</th>
<th>Over age</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 yrs.</td>
<td>1 yr.</td>
<td>1 yr.</td>
<td>2 yrs. 3 yrs. 4 yrs.</td>
</tr>
<tr>
<td>Seventh</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>8 7</td>
<td>6 3</td>
<td>5 2</td>
</tr>
<tr>
<td>Eighth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3 3</td>
<td>7 3 3</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>10 10</td>
<td>9 10 8</td>
<td>5 54</td>
</tr>
<tr>
<td>Per cent</td>
<td>3.7%</td>
<td>18.5%</td>
<td>18.5%</td>
<td>16.6%</td>
</tr>
</tbody>
</table>

Table 2 shows that:

1. Forty-one per cent are normal or above mentally.
2. Twenty-two per cent are above the average mentally.
3. Fifty-nine per cent are mentally retarded.
4. A range of seven years separates the poorest from the brightest pupils.
TABLE 3.

DISTRIBUTION OF FIFTY-FOUR STUDENTS WHO FAILED IN THE NINETEEN-TEEN TWENTY-NINE COUNTY DIPLOMA EXAMINATION ACCORDING TO MENTAL AND CHRONOLOGICAL AGES

<table>
<thead>
<tr>
<th>Chronological Age</th>
<th>Mental Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3 shows:

1. One pupil fourteen years chronological age is ten years old mentally.
2. Two pupils fifteen years chronological age are only eleven years old mentally.
3. Four pupils twelve years chronological age are sixteen years old mentally.
4. Only two pupils who are overage chronologically are mentally accelerated.

* Terman Test.
### Table 4.

**Comparison of School Progress of Fifty-Four Students Who Failed in the 1929 County Diploma Examination**

<table>
<thead>
<tr>
<th>Accelerated:</th>
<th>Grades VII No. of Pupils</th>
<th>VIII No. of Pupils</th>
<th>Total</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronologically —</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mentally ————</td>
<td>10</td>
<td>2</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td><strong>Normal:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronologically —</td>
<td>7</td>
<td>2</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Mentally ————</td>
<td>7</td>
<td>3</td>
<td>10</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>Retarded:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronologically —</td>
<td>26</td>
<td>19</td>
<td>45</td>
<td>83</td>
</tr>
<tr>
<td>Mentally ————</td>
<td>16</td>
<td>16</td>
<td>32</td>
<td>59+</td>
</tr>
</tbody>
</table>

Table 4 shows:

1. Mental acceleration to exceed chronological acceleration.
2. Chronological retardation greatly exceeds mental retardation.
3. The number who are normal chronologically is nearly the same as the number who are normal mentally.
It is not difficult to observe by reference to Table 3, that some of the pupils who are chronologically six are classified as twelve years mentally. Others who are twelve chronologically are fourteen mentally.

The significance of employing the mental or the chronological age in judging the school progress of pupils may be readily seen by studying the facts in Tables 1 - 2 - 3 and 4. These tables report the percentage of pupils in each grade who are chronologically or mentally younger than the standard age for that grade (accelerated) or if older (retarded). It will easily be noted that in grades seven and eight the greater proportion of the pupils are either normal or retarded. This is true of both chronological and mental age classifications.

Table 2 shows ten pupils of the fifty-four are mentally accelerated, but this number is especially large when we consider that we are dealing with failures. Twenty-two per cent are accelerated, over forty per cent are normal or above, not quite sixty per cent are retarded, and twenty-four per cent are mentally retarded more than two years.

Table 1 shows a range of five years chronologically with no pupils accelerated.

Table 2 shows a range of seven years with some pupils accelerated as much as two years.
RELATION OF SCHOOL MARKS TO MENTAL TEST—SCORES OF FIFTY-
FOUR STUDENTS WHO FAILED IN THE NINETEEN TWENTY-
NINE COUNTY DIPLOMA EXAMINATION.

TABLE 5
MENTAL TEST SCORES

<table>
<thead>
<tr>
<th>SCHOOL MARKS</th>
<th>74</th>
<th>69</th>
<th>64</th>
<th>59</th>
<th>54</th>
<th>49</th>
<th>44</th>
<th>39</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>77-78</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75-75</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>73-74</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>71-72</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>69-70</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>67-68</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>65-66</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>63-64</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>61-62</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>59-60</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>57-58</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55-56</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>53-54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51-52</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>49-50</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>47-48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Total - 1 1 1 1 5 4 6 7 4 9 5 6 2 2 54

Explanation on next page.
Table 5 shows the scores on the two tests divided roughly into quarters. Thirteen pupils have scores falling in the upper quarter of school marks and four of these are in the upper quarter of the mental test scores.

Of the thirteen scores in the upper quarter of the school marks seven are in the lower half of the mental test scores.

Of twelve students having scores falling in the lower quarter of school marks, six were in the lower quarter of the mental test scores.

Eight of these twelve students having scores in the lower quarter of the school marks also have scores in the lower half of the mental test scores.

Of the twenty-six scores in the upper half of the school marks, seventeen are in the upper half of the mental test scores.

Of the twenty-eight scores in the lower half of the school marks only one was in the upper quarter of the mental test scores and only nine were in the upper half of the mental test scores.

In the third quarter of the school marks we find thirteen cases, eight of these are in the upper quarter of the school marks.

Of the middle twenty-six mental test scores only five were in the lower quarter of school marks.

Of the middle twenty-eight scores of the school marks, eight were in the upper and six in the lower quarter of the mental test scores.
TABLE 6.

VARIATION OF TEACHERS' MARKS ON TWO PAPERS OF THE NINETEEN
TWENTY-NINE COUNTY DIPLOMA EXAMINATION

<table>
<thead>
<tr>
<th>Geography per cent</th>
<th>Reading per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating</td>
<td>Rating</td>
</tr>
<tr>
<td>83</td>
<td>70</td>
</tr>
<tr>
<td>80</td>
<td>65</td>
</tr>
<tr>
<td>75</td>
<td>63</td>
</tr>
<tr>
<td>73</td>
<td>62</td>
</tr>
<tr>
<td>68(\frac{1}{2})</td>
<td>61</td>
</tr>
<tr>
<td>68</td>
<td>59</td>
</tr>
<tr>
<td>65</td>
<td>58</td>
</tr>
<tr>
<td>64</td>
<td>57</td>
</tr>
<tr>
<td>63</td>
<td>56</td>
</tr>
<tr>
<td>61</td>
<td>51</td>
</tr>
<tr>
<td>59(\frac{1}{2})</td>
<td>50</td>
</tr>
<tr>
<td>59</td>
<td>49</td>
</tr>
<tr>
<td>58</td>
<td>47</td>
</tr>
<tr>
<td>57</td>
<td>46</td>
</tr>
<tr>
<td>56(\frac{1}{2})</td>
<td>45</td>
</tr>
<tr>
<td>55</td>
<td>42</td>
</tr>
<tr>
<td>54</td>
<td>40</td>
</tr>
<tr>
<td>52</td>
<td>39</td>
</tr>
<tr>
<td>45</td>
<td>35</td>
</tr>
<tr>
<td>44</td>
<td>25</td>
</tr>
</tbody>
</table>

Total Cases 40
Total Range 39 points
Median ---- 60
Q\(_1\) ---- 56
Q\(_3\) ---- 62
Q ---- 3

Total Cases 40
Total Range 45 points
Median ---- 53
Q\(_1\) ---- 48
Q\(_3\) ---- 60
Q ---- 6

Each of the above papers was assigned separate marks by forty teachers using a key on which was listed the correct answer to each question. The paper selected in each subject was the middle paper of the group failing in the subject.

The Geography examination was decidedly more objective
than the Reading examination. The highest mark (eighty three per cent) given the Geography paper was thirty-nine points above the lowest mark given it.

A spread of forty-five points from the best to the poorest mark given the Reading paper is shown. The variation in the marks assigned to Geography was eighty-six per cent of the spread in Reading. The spread of the middle fifty per cent is twice as great in Reading as in Geography.

Table 6 shows that the range of the middle fifty per cent of the Geography ratings was six points while in the Reading the range was twelve points or twice as great.

The total range of the Reading ratings is greater than for the Geography by six points.

The Geography examination of twenty-five questions was objective except questions twenty-four and twenty-five which were of the discussion type.

The Reading examination was composed of ten questions of the type usually used in the County Diploma Examinations.

The more objective in type of the two examinations, the less range in the teachers' ratings.

The type of Reading examination was such that when the paper was rated separately by forty teachers the rating given the paper is forty-five points more and forty-five points less than ratings actually assigned to it. The more objective type of examination showed less variation.
TABLE 7.

RELATIVE DIFFICULTY OF QUESTIONS IN READING AS MEASURED BY RATING OF FIFTY-FOUR STUDENTS WHO FAILED IN THE NINETEEN TWENTY-NINE COUNTY DIPLOMA EXAMINATION.

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Total Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>277</td>
</tr>
<tr>
<td>6</td>
<td>269</td>
</tr>
<tr>
<td>3</td>
<td>248</td>
</tr>
<tr>
<td>6</td>
<td>203</td>
</tr>
<tr>
<td>7</td>
<td>174</td>
</tr>
<tr>
<td>9</td>
<td>167</td>
</tr>
<tr>
<td>8</td>
<td>166</td>
</tr>
<tr>
<td>2</td>
<td>144</td>
</tr>
<tr>
<td>1</td>
<td>117</td>
</tr>
<tr>
<td>4</td>
<td>108</td>
</tr>
</tbody>
</table>

Reading papers of thirty-one pupils were used and the rating assigned the answer to each question were listed separately and totaled. The questions were then ranked in order of their difficulty.

Question No. 4 is two and five tenths times as difficult as question No. 10.

Question No. 4 and 1 are more than twice as difficult as Nos. 10, 5 and 3.

These facts were not considered in the rating of each question in the Reading examination as ten per cent was the value assigned to each question answered correctly as though all questions were of equal difficulty.
No two questions are of equal difficulty.

Question No. 4 is the most difficult and question No. 10 is the least difficult.

Question No. 10 is given a value of ten points on a percentage scale.

Question No. 4 rated on the same scale in proportion to difficulty has a value of twenty-seven points.

Questions from one to ten are ranked in order according to difficulty.
TABLE 8.

DISTRIBUTION OF FAILURES AND EXPERIENCE OF TEACHERS

OF FIFTY-FOUR STUDENTS WHO FAILED IN THE NINE-
TEEN TWENTY-NINE COUNTY DIPLOMA EXAM-
INATION

<table>
<thead>
<tr>
<th>Teacher's years of Experience</th>
<th>No. of failures per teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>8 (7)</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>3 (7)</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2 (7)</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1 (9)</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>0 (8)</td>
<td>1</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 38  Total 54
Table 8 shows that teachers with the most failures are those who are without experience.

Teachers with one year of experience have more failures than teachers with two years of experience.

Teachers with three years experience have more failures than those having from four to fifteen years of experience.

Teachers with two years of experience have the same number of failures as teachers of three years experience.

Teachers with no experience have almost twice as many failures as teachers of one or more years of experience.

Teachers with one or more years of experience have slightly more failures than those having two or more years of experience.
TABLE 9.
DISTRIBUTION OF PHYSICAL DEFECTS OF FIFTY-FOUR STUDENTS WHO FAILED IN THE NINETEEN TWENTY-NINE COUNTY DIPLOMA EXAMINATIONS.

<table>
<thead>
<tr>
<th>MARKED</th>
<th>PHYSICAL DEFECTS</th>
<th>TOTAL</th>
<th>PER CENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undernourished</td>
<td>13</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Adenoids</td>
<td>30</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Defective teeth</td>
<td>16</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Hypertrophied Tonsils</td>
<td>37</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Enlarged Glands (Thyroid)</td>
<td>10</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Bad Posture</td>
<td>11</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Defective Eyes</td>
<td>8</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Defective Hearing</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Defective Heart</td>
<td>5</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>*Other Defects</td>
<td>7</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>**Total Defects</td>
<td>140</td>
<td>98</td>
<td></td>
</tr>
</tbody>
</table>

* Tuberculosis, Diabetes, Skin Diseases.

Total number of Pupils examined, 47.

Only one pupil was without any defect.

Forty-six pupils have an average of three physical defects.

Adenoids and diseased tonsils are the defects most frequently found as they include over forty-seven
per cent of the total defects.

Undernourishment and defective teeth are together responsible for twenty per cent of the defects.

Of the forty-seven pupils examined for physical defects only three had defective hearing.

Twice as many have defective teeth as have defective eyes.
### TABLE 10.

**Attendance of Fifty-Four Students Who Failed the Nineteen Twenty-Nine County Diplomas Examination**

<table>
<thead>
<tr>
<th>Attended</th>
<th>Pupils</th>
</tr>
</thead>
<tbody>
<tr>
<td>178-180</td>
<td>1</td>
</tr>
<tr>
<td>171-175</td>
<td>3</td>
</tr>
<tr>
<td>166-170</td>
<td>6</td>
</tr>
<tr>
<td>161-165</td>
<td>2</td>
</tr>
<tr>
<td>156-160</td>
<td>10</td>
</tr>
<tr>
<td>146-150</td>
<td>7</td>
</tr>
<tr>
<td>141-145</td>
<td>6</td>
</tr>
<tr>
<td>136-140</td>
<td>2</td>
</tr>
<tr>
<td>131-135</td>
<td>0</td>
</tr>
<tr>
<td>126-130</td>
<td>3</td>
</tr>
<tr>
<td>119-125</td>
<td>1</td>
</tr>
<tr>
<td>116-120</td>
<td>1</td>
</tr>
<tr>
<td>111-115</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
</tr>
</tbody>
</table>

Median 150

\( Q_1 \) 145

\( Q_3 \) 159

\( Q \) 7

Thirty-one pupils coming from one room schools having an eight months term attended an average of one hundred thirty-three days of the one hundred fifty-eight days school was actually
in session, or eighty-four per cent.

Twenty-three pupils having a nine months term averaged one hundred fifty eight days of one hundred seventy six days taught or eighty nine + per cent. One pupil had perfect attendance for nine months. One pupil attended only one hundred twelve days of an one hundred eighty-five day term which is the poorest attendance of any in the group of fifty-four pupils.
TABLE 11.

GRADEN REPEATED BY THIRTY-THREE OF FIFTY-FOUR STUDENTS WHO

FAILED IN THE NINETEEN TWENTY-NINE COUNTY DIPLOMA

EXAMINATION.

<table>
<thead>
<tr>
<th>Number of grades</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Number of Pupils</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>33</td>
</tr>
</tbody>
</table>

The above table shows that thirty-three of these fifty-four pupils have failed one or more times before. Four pupils have failed twice before.

More pupils have repeated the seventh grade than any other.

The grade repeated the least is the eighth as most of these pupils (thirty-three) were in the seventh grade and only one pupil was repeating the eighth grade. No opportunity was given for more failures in the eighth grade.

Only two of the thirty-three repeaters had repeated the first grade.

Twenty-one of the 37 repetitions were in grades four and above.

The upper grades were most frequently repeated.

Referring to table 12 we find that thirty-five per cent had not changed schools and table 11 shows thirty-eight per cent had not repeated grades previously.
CHART 1.

OCCUPATION OF PARENT OF FIFTY-FOUR STUDENTS WHO FAILED
IN THE NINETEEN TWENTY-NINE COUNTY DIPLOMA EXAM-
INATION.

<table>
<thead>
<tr>
<th>Number of Parents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

(46) Farmer

(6) Oil Field Worker

Forty-six pupils came from farm homes or eighty two plus per cent.

Eight came from homes of oil field workers, or seventeen plus per cent.

No other occupations were represented.

More than five and almost six times as many students came from farm home.

By referring to Table 12, which shows the number of schools attended, we find fifty-two per cent changed schools three or more times and thirty-five per cent attended only one school for the entire period, some to the seventh and others up to the eighth grade. The status of the home from which more than half of these pupils come is indicated by the fact that three times or more in seven or eight years these children have changed with their parents to a new home.

There is less stability and permanency to the homes where three or more moves are made in seven years than those where no moves are made during the seven years.
TABLE 12

NUMBER OF DIFFERENT SCHOOLS ATTENDED BY FIFTY-FOUR FAILURES
IN THE NINETEEN HUNDRED TWENTY-NINE COUNTY DIPLOMA EXAM -
INATION.

<table>
<thead>
<tr>
<th>Number of Schools Attended</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>19</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>54</td>
</tr>
</tbody>
</table>

Per cent - 35% have attended the same school for the entire period.

65% have changed schools more than once.

52% have changed schools three times or more.

Information was not available to show how many changes were made during and at the close of the school year, nor how many changes were from a better to a poorer type of school or vice versa. Since these pupils are now in the rural and small grade schools, the reader is left to assume what possibility there is that they have changed from a poorer to a better school.

Chart 1 shows that eighty-two per cent of these children came from farm homes and as Table 12 shows that fifty-two per cent of these fifty-four pupils changed schools three or more times in the last seven or eight years and as March first is the usual moving time for farmers who move as frequently. The reader may judge the extent of such interruptions. A portion of the interruptions occur about March first due to the prevailing custom of moving at this time of the year. Table 11 shows sixty-one per cent failed once or oftener. Table 12 shows sixty-five per cent have changed schools once or oftener.
### TABLE 13.

QUESTIONS ASKED AND REPLIES MADE BY FIFTY-FOUR STUDENTS WHO FAILED IN THE NINETEEN TWENTY-NINE COUNTY DIPLOMA EXAMINATION.

1. Do you intend to go to high school?  
   - Yes: 48  
   - No: 4  
   - Undecided: 2

2. Did you like your teacher?  
   - Yes: 40  
   - No: 12  
   - Blank: 2

3. What caused most of your absence from school?  

   Some mentioned only one cause, some two and others three.  

   Below is listed the number of times each cause of absence was mentioned by the fifty-four pupils.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sickness</td>
<td>43</td>
</tr>
<tr>
<td>Flu</td>
<td>10</td>
</tr>
<tr>
<td>Measles</td>
<td>8</td>
</tr>
<tr>
<td>Whooping Cough</td>
<td>3</td>
</tr>
<tr>
<td>Small Pox</td>
<td>1</td>
</tr>
<tr>
<td>Mumps</td>
<td>1</td>
</tr>
<tr>
<td>Croup</td>
<td>1</td>
</tr>
<tr>
<td>Chicken Pox</td>
<td>1</td>
</tr>
<tr>
<td>Quarantine</td>
<td>1</td>
</tr>
<tr>
<td>Tonsils</td>
<td>1</td>
</tr>
<tr>
<td>Bad Weather</td>
<td>13</td>
</tr>
<tr>
<td>Work</td>
<td>7</td>
</tr>
</tbody>
</table>

Total: 70
Table 13 shows eighty-nine per cent of the fifty-four failures by their replies indicate that they expect to continue with their school work in spite of the fact that they had failed.

Referring to Table 9 we find that four pupils had failed twice before this and Table 13 shows four pupils indicate they do not intend to go to high school.

These four pupils are not the same pupils in each case as reference to the source sheet discloses.

Seventy-four per cent of these fifty-four failure pupils said they liked their teacher; twenty-two per cent of these pupils said they did not like their teacher; twenty-nine pupils of the who fifty-four/had failed one or more times previously said they intended to go on to high school. Only six pupils were not planning to attend high school, yet twice that number disliked their teacher.

The reasons given by the pupils for their absences show sickness is the most common cause of absence as it was mentioned seventy times. Various contagious diseases were mentioned twenty-six times. Bad weather was mentioned less than one fifth as many times as sickness.

Work as an excuse for absence was mentioned one seventh as many times as sickness. Evidently the cause of most of the absences was sickness. Health while in school, getting behind due to absence, has been a possible contributing factor in explaining why these pupils failed.
CHAPTER V

A. Summary of Findings.

As stated previously, this study is concerned with an investigation of certain possible contributing causes of the failure of the fifty-four pupils included in the study.

The facts disclosed by the investigation of each of these factors are enumerated.

1. None of the fifty-four pupils of this study were accelerated, only seventeen per cent were of normal age, while eighty-three per cent were overage with a range of five years from the oldest to the youngest.

2. Twenty-two per cent of these pupils are mentally accelerated, eighteen per cent are of normal mental age and fifty-nine per cent are retarded, some as much as four years. A range of seven years separates the poorest from the brightest pupils.

3. Pupils whose average grade was in the upper half of the school marks ranged all the way from the highest to the lowest in the mental test scores. Pupils whose scores were in the lower half of the school marks were with one exception be low the third quarter of the mental test scores and two-thirds were in the lower half of the mental test scores. There is a distinct tendency for pupils to rank lower on school marks than on mental test scores.

4. Teachers' marks vary by thirty-nine points on the ratings
of the examination in Geography and forty-five points in Reading. The more objective examination shows the less variation.

5. Ten questions in Reading in County Diploma Examination are each rated as of equal value on a percentage scale though no two questions are of equal difficulty. Some questions are two and a half times more difficult than others.

6. Teachers without experience have twice as many failures as those with experience. Teachers with more experience have fewer failures.

7. Forty-six pupils have an average of three physical defects. Adenoids and diseased tonsils are responsible for forty-seven per cent of the defects found.

8. Thirty-one pupils coming from eight month schools attended one hundred thirty-three of one hundred fifty-eight days or eighty-four per cent. Twenty-three pupils from nine month schools averaged one hundred fifty-eight days attended of one hundred seventy-six days school was in session or eighty-nine per cent.

9. Thirty-three of the fifty-four failures of this study have failed one or more times previously and grades above the fourth have been most frequently repeated.

10. Eighty-two per cent of the fifty-four pupils of this study have occupation of the parent listed as farmer and seventeen per cent have the occupation of parent listed as oil field worker. No other occupations are represented.
11. Fifty-two per cent of these pupils have changed school three or more times; thirty-five per cent have not changed schools; sixty-five per cent have changed one or more times, and sixty-one per cent have failed one or more times.

12. Replies from pupils intended to show their attitude toward school show that forty-eight of the fifty-four intend to go to high school. Forty of the fifty-four say they like their teacher. The cause of absence from school as given by the fifty-four pupils, mention of sickness if made seventy times, contagious disease was mentioned twenty-six times, bad weather thirteen times and work seven times.
BIBLIOGRAPHY

Ayres, I.P. Health Work in the Public School.

Carpenter, James M. Circumstances attending 1335 Rural Pupils in the One-teacher Schools in Eastern Kansas, Masters' Thesis, 1928.

Glad, Amos W. The Relation of Rural School Attendance to School Achievement, Masters' Thesis, 1924.


Rush, G.M. The Improvement of the Written Examination.


KEY

7th Grade Geography, April 20, 1929

1. True
2. True
3. True
4. False
5. False
6. Europe
7. Oasis
8. Suez
9. India
10. Congo, Amazon
11. Atlantic, Gibraltar, Mediterranean
12. Diamonds
13. It is unexplored.
14. Camel
15. Asia
16. Cooperative methods
17. Intensive
18. Wichita, Hutchinson, Topeka, Dodge City
19. a. Berlin - Germany   d. Athens - Greece
    b. Liverpool - England  e. Venice - Italy
    c. Peking - China   f. Delhi - India
20. City - Austria   Winds - India
   (People of desert (countries). People of Arabia or Egypt.)
21-25. South America exports wheat, meat, wool, corn, coffee, cocoa, hides, and rubber to the United States and Europe and receives manufactured articles as flour, clothing, machinery, gasoline, paper, coal, from United States and Europe. Some trade is with Japan and Australia also.
KEY

Seventh Grade Reading. April 20, 1929.

I.

A. Cooper — The Last of the Mohicans.

   2. Duncan Heyward, an English Officer.
   3. Muro, the father of two girls whom the Indians carried away.
   4. Uncas, son of the Mohican Chief serving the English.
   5. Chingachgook, last chief of the Mohican or Delawares.

II.


B. Any of the above briefly told.

III.

A. Longfellow.

B. Miles Standish, the Puritan Captain, short, strong, athletic.
   John Alden, his friend, a rube, fair, youthful, delicate complexion.
   Priscilla, a lovely, angelic, Puritan Maiden. The Elder and Magistrate fervent and devout.

C. Alden weds Priscilla, Standish reported "killed by Indians," strode into the room as the wedding ceremony ends. Groups
IV.
A. Longfellow
B. Lowell
C. Burns
D. Longfellow
E. Bates

V.
A. Line nine has "whole" for all. Line ten has "cheer" for cheered and "year" for yea. Line fourteen has "know" for no. Line fifteen has "so" for some. "As" is omitted in the last line. It should read as worse.
B. George Eliot.

VI.
A. A legend is a romantic story, a myth or fable.
B. A legend grows by being retold.
C. The Legend of Sleepy Hollow.
D. Washington Irving.

VII.
A. Charles Dickens.
B. Smike, a lame lad of nineteen years.

VIII.
1. Knight, hero in Marmion.
2. Yussouf, a son of the desert.
3. The Mighty Magician, coach of King Arthur.
4. The hero, draws sword from a stone.
5. Lysander, Athenian youth, lover of Hermia.

6. A Russian Jew girl emigrant to United States.

7. Rowan - Hero who carried Message to Garcia.

8. The hero likeness of The Great Stone Face.


10. Magi - the wise men.

IX.

A. James Whitcomb Riley.

B. An Arrow, A Spoken Work and The Lost Opportunity.

C. Part I, Tales of Adventure, Part II, Home and Native Land,
   Part III, Out of Doors, Part IV, Legends, Poems and Stories.

X.

A. The Bobsey Twins in a Great City, by Laura Lee Hope.

B. The twins went with their parents to New York, got lost, at last were found and returned home.
READING.
(Mrs. Inez Kibler-Scott.)
FOR SEVENTH GRADE.

1. (a) Who wrote "The Battle of the Canoes"? From what book is it taken?
(b) Name the five characters in this story, and make a statement describing each.

2. (a) Name a story of Opportunity and Achievement studied this year.
(b) Tell the story briefly.

3. (a) Who wrote "The Courtship of Miles Standish"?
(b) Name and describe three characters in it.
(c) Describe the incident or scene in the story that impressed you most.

4. Who wrote the following selections:
   (a) Paul Revere's Ride, (b) A Day in June, (c) To a Mountain Daisy,
   (d) The Ship of State, (e) America the Beautiful?

5. Write from memory a poem learned this year. Who wrote it?

6. (a) What is a legend? (b) Name and describe a story that is a legend.
(c) How do legends grow? (d) Who wrote it?

7. (a) Who wrote "Dotheboys Hall"?
(b) Name and describe three characters in the story.

8. Who were the following characters: Lochinvar, Yussouf, Merlin, King Arthur, Lysander, Mary Antin, Rowan, Ernest, Brom Bones, the Magi?

9. Fill the following blanks with the proper word:
   (a) Is sometimes called the "Hoosier Poet.
   (b) These three things come not back: an , a , and the .
   (c) Part one of the Seventh Reader contains Tales of ; part two, and ; part three, ; and part four , and .

10. (a) Name a library book you have read this year, and name its author.
(b) Tell the story.

Copy these statements, then underscore the correct answers:

13. Africa is called the Dark Continent because (Negroes live there; it is unexplored).
14. The (camel, llama, elephant) is known as the Ship of the Desert.
15. (Europe, Asia, North America) has a greater population than any other continent.
16. Denmark's wealth is due to (cooperative methods, manufacturing fishing).
17. Holland has (intensive, extensive) farming.
18. Four cities of Kansas are (St. Louis, Wichita, Hutchinson, Cleveland, Topeka, St. Paul, Denver, Dodge City).
19-21. Match any five of the following cities with their respective countries:
   a. Berlin
   b. Liverpool
   c. Peking
   d. Delhi
   e. Venice
   f. Athens
   a. England
   b. Germany
   c. Italy
   d. China
   e. India
   f. Greece
22. Fill these blanks:
   a. Vienna, in .
   b. Monsoons, near .
   c. Nomads, of .
23-25. Discuss the foreign trade of South America, naming the raw material exported and to what countries sent, and the manufactured articles and from what country received.
# Terman Group Test of Mental Ability

For Grades 7 to 12
Prepared by Lewis M. Terman, Stanford University, California

**EXAMINATION: FORM A**

<table>
<thead>
<tr>
<th>Test</th>
<th>Score</th>
<th>Remarks or Further Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Best Answer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Word Meaning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Logical Selection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Arithmetic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Sentence Meaning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Analogies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Mixed Sentences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Classification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Number Series</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do not turn the page until you are told to.
TEST 1. INFORMATION

Draw a line under the ONE word that makes the sentence true, as shown in the sample.

SAMPLE. Our first President was Adams Jefferson Lincoln Washington

1 Coffee is a kind of  
   bark berry leaf root............................... 1
2 Sirloin is a cut of  
   beef mutton pork veal............................ 2
3 Gasoline comes from  
   grains petroleum turpentine seeds................ 3
4 Most exports go from  
   Boston San Francisco New Orleans New York. 4
5 The number of pounds in a ton is  
   1000 2000 3000 4000............................. 5
6 Napoleon was defeated at  
   Leipzig Paris Verdun Waterloo................... 6
7 Emeralds are usually  
   blue green red yellow........................... 7
8 The optic nerve is for  
   seeing hearing tasting feeling................. 8
9 Larceny is a term used in  
   medicine theology law pedagogy............... 9
10 Sponges come from  
   animals farms forests mines.................... 10
11 Confucius founded the religion of the  
   Persians Italians Chinese Indians.............. 11
12 The larynx is in the  
   abdomen head throat shoulder.................. 12
13 The piccolo is used in  
   farming music photography typewriting........ 13
14 The kilowatt measures  
   rainfall wind-power electricity water-power. 14
15 The guillotine causes  
   death disease fever sickness................... 15
16 A character in "David Copperfield" is  
   Sindbad Uriah Heep Rebecca Hamlet.............. 16
17 A windlass is used for  
   boring cutting lifting squeezing............... 17
18 A great law-giver of the Hebrews was  
   Abraham David Moses Saul...................... 18
19 A six-sided figure is called a  
   scholium parallelogram hexagon trapezium...... 19
20 A meter is nearest in length to the  
   inch foot yard rod.............................. 20

Right........
TEST 2. BEST ANSWER

Read each question or statement and make a cross before the BEST answer, as shown in the sample.

Why do we buy clocks? Because

1. We like to hear them strike.
2. They have hands.
3. X 3. They tell us the time.

Spokes of a wheel are often made of hickory because

1. Hickory is tough.
2. It cuts easily.
3. It takes paint nicely.

The saying, "A watched pot never boils," means

1. We should never watch a pot on the fire.
2. Boiling takes a long time.
3. Time passes slowly when we are waiting for something.

A train is harder to stop than an automobile because

1. It has more wheels.
2. It is heavier.
3. Its brakes are not so good.

The saying, "Make hay while the sun shines," means

1. Hay is made in summer.
2. We should make the most of our opportunities.
3. Hay should not be cut at night.

If the earth were nearer the sun

1. The stars would disappear.
2. Our months would be longer.
3. The earth would be warmer.

The saying, "If wishes were horses, beggars would ride," means

1. Wishing doesn't get us very far.
2. Beggars often wish for horses to ride.
3. Beggars are always asking for something.

The saying, "Little strokes fell great oaks," means

1. Oak trees are weak.
2. Little strokes are best.
3. Continued effort brings results.

A steel battleship floats because

1. The engines hold it up.
2. It has much air space inside.
3. It contains some wood.

The feathers on a bird's wings help him to fly because

1. They make a wide, light surface.
2. They keep the air off his body.
3. They decrease the bird's weight.

The saying, "A carpenter should stick to his bench," means

1. Carpenters should not work without benches.
2. Carpenters should not be idle.
3. One should work at the thing he can do best.

The saying, "One swallow does not make a summer," means

1. Swallows come back for the summer.
2. A single sign is not sufficient proof.
3. Many birds add to the pleasures of summer.

Right ........ X 2 = Score ........
When two words mean the SAME, draw a line under “SAME.”
When they mean the OPPOSITE, draw a line under “OPPOSITE.”

**Samples**

<table>
<thead>
<tr>
<th>Fall — Drop</th>
<th>Same — Opposite</th>
</tr>
</thead>
<tbody>
<tr>
<td>North — South</td>
<td>Same — Opposite</td>
</tr>
</tbody>
</table>

1. expel — retain | Same — Opposite
2. comfort — console | Same — Opposite
3. waste — conserve | Same — Opposite
4. monotony — variety | Same — Opposite
5. quell — subdue | Same — Opposite
6. major — minor | Same — Opposite
7. boldness — audacity | Same — Opposite
8. exult — rejoice | Same — Opposite
9. prohibit — allow | Same — Opposite
10. debase — degrade | Same — Opposite
11. recline — stand | Same — Opposite
12. approve — veto | Same — Opposite
13. amateur — expert | Same — Opposite
14. evade — shun | Same — Opposite
15. tart — acid | Same — Opposite
16. concede — deny | Same — Opposite
17. tonic — stimulant | Same — Opposite
18. incite — quell | Same — Opposite
19. economy — frugality | Same — Opposite
20. rash — prudent | Same — Opposite
21. obtuse — acute | Same — Opposite
22. transient — permanent | Same — Opposite
23. expel — eject | Same — Opposite
24. hoax — deception | Same — Opposite
25. docile — submissive | Same — Opposite
26. wax — wane | Same — Opposite
27. incite — instigate | Same — Opposite
28. reverence — veneration | Same — Opposite
29. asset — liability | Same — Opposite
30. appease — placate | Same — Opposite

Right .......... Wrong .......... Score ............
FORM A

TEST 4. LOGICAL SELECTION

In each sentence draw a line under the TWO words that tell what the thing ALWAYS has. Underline TWO, and ONLY TWO, in each line.

Sample. A man always has

body cap gloves mouth money

1 A horse always has

harness hoofs shoes stable tail

2 A circle always has

altitude circumference latitude longitude radius

3 A bird always has

bones eggs beak nest song

4 Music always has

listener piano rhythm sound violin

5 An object always has

smell size taste value weight

6 Conversation always has

agreement persons questions wit speech

7 A banquet always has

food music persons speeches toastmaster

8 A pistol always has

barrel bullet cartridge sights trigger

9 A ship always has

engine guns keel rudder sails

10 A debt always involves

creditor debtor interest mortgage payment

11 A game always has

cards contestants forfeits penalties rules

12 A magazine always has

advertisements paper pictures print stories

13 A museum always has

animals arrangement collections minerals visitors

14 A forest always has

animals flowers shade underbrush trees

15 A citizen always has

country occupation privileges property vote

16 Controversy always involves

claims disagreement dislike enmity hatred

17 War always has

airplanes cannons combat rifles soldiers

18 Obstacles always bring

difficulty discouragement failure hindrance stimulation

19 Abhorrence always involves

aversion dislike fear rage timidity

20 Compromise always involves

adjustment agreement friendship respect satisfaction

Right...
TEST 5. ARITHMETIC

Find the answers as quickly as you can.
Write the answers on the dotted lines.
Use the bottom of the page to figure on.

1. How many hours will it take a person to go 66 miles at the rate of 6 miles an hour?  
   Answer: .........

2. At the rate of 2 for 5 cents, how many pencils can you buy for 50 cents?  
   Answer: .........

3. If a man earns $20 a week and spends $14, how long will it take him to save $300?  
   Answer: .........

4. $2 \times 3 \times 4 \times 6$ is how many times as much as $3 \times 4$?  
   Answer: .........

5. If two pies cost 66 cents, what does a sixth of a pie cost?  
   Answer: .........

6. What is 16$\%$ per cent of $120$?  
   Answer: .........

7. 4 per cent of $1000$ is the same as 8 per cent of what amount?  
   Answer: .........

8. A has $180, B has $\frac{3}{4}$ as much as A, and C has $\frac{1}{2}$ as much as B. How much have all together?  
   Answer: .........

9. The capacity of a rectangular bin is 48 cubic feet. If the bin is 6 feet long and 4 feet wide, how deep is it?  
   Answer: .........

10. If it takes 7 men 2 days to dig a 140-foot ditch, how many men are needed to dig it in half a day?  
    Answer: .........

11. A man spends $\frac{1}{4}$ of his salary for board and room, and $\frac{3}{4}$ for all other expenses. What per cent of his salary does he save?  
    Answer: .........

12. If a man runs 100 yards in 10 seconds, how many feet does he run in $\frac{1}{5}$ of a second?  
    Answer: .........

Right: $\times 2 = \text{Score}$
**TEST 6. SENTENCE MEANING**

Draw a line under the right answer, as shown in the samples.

<table>
<thead>
<tr>
<th>Samples</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is coal obtained from mines?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are all men six feet tall?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does a conscientious person ever make mistakes?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is an alloy a kind of musical instrument?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is scurvy a kind of medicine?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are mysterious things often uncanny?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are destitute persons often subjects of charity?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are anonymous letters ever properly signed?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is the mimeograph sometimes used by stenographers?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is a curriculum intended for horses?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are proteids essential to health?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Does &quot;perfunctory&quot; mean the same as &quot;careful&quot;?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are premeditated deeds always wicked?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Do alleged facts often require verification?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are sheep carnivorous?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are aristocrats subservient to their inferiors?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are venerable people usually respected?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is clematis sometimes cultivated?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are ultimate results the last to appear?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are cerebral hemorrhages helpful to thinking?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are all people religious who have hallucinations?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are intermittent sounds discontinuous?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are sable colors preferred for nations' flags?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Does social contact tend to reduce eccentricities?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Are tentative decisions usually final?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is rancor usually characterized by persistence?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

*Right ........ Wrong ........ Score ........*
TEST 7. ANALOGIES

Ear is to hear as eye is to
  table see hand play
Hat is to head as shoe is to
  arm coat foot leg

Do them all like samples.

1. Coat is to wear as bread is to
eat starve water cook ...
2. Week is to month as month is to
  year hour minute century ...
3. Monday is to Tuesday as Friday is to
  week Thursday day Saturday ...
4. Tell is to told as speak is to
  sing spoke speaking sang ...
5. Lion is to animal as rose is to
  smell leaf plant thorn ...
6. Cat is to tiger as dog is to
  wolf bark bite snap ...
7. Success is to joy as failure is to
  sadness luck fail work ...
8. Liberty is to freedom as bondage is to
  negro slavery free suffer ...
9. Cry is to laugh as sadness is to
  death joy coffin doctor ...
10. Tiger is to hair as trout is to
    water fish scales swims ...
11. 1 is to 3 as 9 is to ...
    18 27 36 45 ...
12. Lead is to heavy as cork is to
    bottle weight light float ...
13. Poison is to death as food is to
    eat bird life bad ...
14. 4 is to 16 as 5 is to ...
    7 45 35 25 ...
15. Food is to hunger as water is to
    drink clear thirst pure ...
16. b is to d as second is to
    third later fourth last ...
17. City is to mayor as army is to
    navy soldier general private ...
18. Here is to there as this is to
    these those that then ...
19. Subject is to predicate as noun is to
    pronoun adverb verb adjective ...
20. Corrupt is to depraved as sacred is to
    Bible hallowed prayer Sunday ...

Right....
TEST 8. MIXED SENTENCES

The words in each sentence below are mixed up. If what a sentence means is TRUE, draw a line under “TRUE.” If what it means is FALSE, draw a line under “FALSE.”

SAMPLES

he are with to ears .................................... true false

eat gunpowder to good is ............................. true false

1 true bought cannot friendship be .................... true false
2 good sea drink to is water ............................ true false
3 of is the peace war opposite ........................ true false
4 get grow they as children taller older ............... true false
5 horses automobile an are than slower ............... true false
6 never deeds rewarded be should good ............... true false
7 four hundred all pages contain books ............... true false
8 to advice sometimes is good follow hard .......... true false
9 envy bad greed traits are and ..................... true false
10 grow an than strawberries oak tree higher .......... true false
11 external deceive never appearances us ............. true false
12 never is man what show a deeds .................... true false
13 hatred bad unfriendliness traits are and .......... true false
14 often judge can we actions man his by a .......... true false
15 in are always American cities born presidents .... true false
16 certain always death of cause kinds sickness .... true false
17 are sheet blankets as as a never warm ............ true false
18 never who heedless those stumble are ............. true false

Right .......... Wrong .......... Score ............
TEST 9. CLASSIFICATION

SAMPLES
1. bullet cannon gun sword pencil
2. Canada Chicago China India France

In each line cross out the word that does not belong there. Cross out JUST ONE WORD in each line.

1. Frank James John Sarah William
2. Baptist Catholic Methodist Presbyterian Republican
3. automobile bicycle buggy telegraph train
4. Collie Holstein Shepherd Spitz Terrier
5. hop run skip stand walk

6. death grief picnic poverty sadness
7. bed chair dish sofa table
8. hard rough smooth soft sweet
9. mechanic doctor lawyer preacher teacher
10. Christ Confucius Mohammed Moses Cæsar

11. butterfly hawk ostrich robin swallow
12. cloth cotton flax hemp wool
13. digestion hearing sight smell touch
14. down hither recent up yonder
15. anger hatred joy pity reasoning

16. Australia Cuba Iceland Ireland Spain
17. Dewey Farragut Grant Paul Jones Schley
18. give lend lose keep waste

Right
**TEST 10. NUMBER SERIES**

**Samples**

\[
\begin{align*}
5 & \quad 10 & \quad 15 & \quad 20 & \quad 25 & 30 & 35 \\
20 & \quad 18 & \quad 16 & \quad 14 & \quad 12 & 10 & 8
\end{align*}
\]

In each row try to find out how the numbers are made up, then on the two dotted lines write the TWO numbers that should come next.

<table>
<thead>
<tr>
<th>Row</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>8 7 6 5 4 3</td>
</tr>
<tr>
<td>2nd</td>
<td>3 8 13 18 23 28</td>
</tr>
<tr>
<td>3rd</td>
<td>$11\frac{3}{4}$ 12 12$\frac{1}{4}$ 12$\frac{1}{2}$ 12$\frac{3}{4}$</td>
</tr>
<tr>
<td>4th</td>
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<td>1 2 4 8 16 32</td>
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<td>4 3 5 4 6 5 7</td>
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<td>7th</td>
<td>16 8 4 2 1 $\frac{1}{2}$</td>
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<tr>
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<td>8 9 12 13 16 17</td>
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<tr>
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<td>10th</td>
<td>31.3 40.3 49.3 58.3 67.3 76.3</td>
</tr>
<tr>
<td>11th</td>
<td>$\frac{1}{25}$ $\frac{1}{5}$ 1 5</td>
</tr>
<tr>
<td>12th</td>
<td>3 4 6 9 13 18</td>
</tr>
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**Right** \( \times 2 = \text{Score} \)