

THE UNIVERSITY OF MINNESOTA

GRADUATE SCHOOL

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The undersigned, acting as a Committee  
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for the degree of **Master of Arts**  
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ments of the Graduate School of the University of  
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Date Dec. 4, 1923.

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CERTAIN CHARACTERISTICS OF A GROUP OF  
OVERAGE PUPILS

A Thesis

SUBMITTED TO THE GRADUATE FACULTY  
of the  
UNIVERSITY OF MINNESOTA

by

ALBERT ANDERSON

IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE DEGREE OF  
MASTER OF ARTS

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## CHAPTER I

### INTRODUCTION

During the school year, 1922-23, Mr. A. M. Christensen, a graduate student in the College of Education at the University of Minnesota, made a study of a group of pupils who had progressed rapidly through the grades in Minneapolis schools.<sup>1</sup> This study revealed a number of valuable facts relative to the characteristics and educational history of rapid progress pupils and their progress through the grades.

From that study it became apparent that a similar study of the characteristics of overage pupils in the Minneapolis schools would supplement the above mentioned study of characteristics of rapid progress pupils, and make possible the study of those factors which affect the overage child's progress through the grades.

The present study of certain characteristics of overage pupils in the Minneapolis schools was suggested jointly by the

1. Christensen, A. M., The Characteristics of Rapid Progress Pupils, Thesis (unpublished) June, 1923, University of Minnesota.

Department of Administration and Supervision in the College of Education of the University of Minnesota and the Minneapolis public school authorities. Through the efforts of Dr. Neale, acting for the University and Dr. Brueckner and Mr. Hegel, acting for the Research Bureau of Minneapolis public schools, the necessary arrangements were made to make the study possible.

#### BASIC CONSIDERATIONS IN SELECTING A REPRESENTATIVE GROUP:

Mr. Christensen's study included pupils who had skipped two or more terms of school. It was decided that the present study should include pupils who were more than a year overage. It was furthermore decided that the group selected should be sufficiently large so as to include enough more-than-a-year-overage pupils to make the study worth while, and if possible of one grade of the entire school population.

It was necessary to obtain the intelligence scores of the entire number of pupils in the group selected in order to make a comparison of the overage pupils with those who were not overage. It was also necessary for the same reason to obtain the achievement scores in at least two achievement tests. There were eighty-two public grade schools in operation in the city of Minneapolis during the school year of 1922-23. It would have been an almost

impossible task for one individual to give these tests in so many schools. It was therefore necessary to select a group of pupils to whom such tests had been given and whose scores were available.

Fortunately such scores were obtainable for grade VI A. The Minneapolis school authorities through the Department of Research had given a series of three achievement tests to the entire A section of grade VI, during the third term of 1922-23. These tests were the Curtis Supervisory Arithmetic Test A, the Monroe Silent Reading Test II, and a test in spelling made up from words selected from Ayres' Spelling List. These tests had been administered by the teachers in the respective schools under the direction of the school principals.

During the spring term of the school year, 1922-23, Dr. Miller, Professor of Educational Psychology, University of Minnesota, in connection with his university class in mental tests gave the Haggerty Intelligence Test Delta II to the VI A class in approximately two-thirds of the schools in the city. The students under Dr. Miller's direction, worked out from the test results the individual mental ages of the children. Through the kindness of Dr. Miller the mental ages for all of the 2006 pupils were made available.

**THE PROBLEM:** The problem with which this study is concerned is certain characteristics of a group of 213 average pupils in grade VI A and the discovery of some of the reasons for the

overageness. The study is largely an accumulation of data relative to:

1. Chronological age and mental age.
2. Rate of progress through the grades.
3. Location of repeats.
4. Reading ability.
5. Arithmetic ability.
6. Spelling ability,
7. Teachers' rating as to scholarship, intelligence, industry and ability.
8. Scholarship as shown by teachers' marks.
9. Place of birth of children.
10. Nationality of fathers or guardians.
11. Occupation of parents or guardians.
12. Transfer from one school to another.
13. Change of address.
14. Kindergarten attendance.
15. Attendance of summer school.
16. Attendance.
17. Health.
18. Study of individual pupils (limited to a few extreme cases).

IMPORTANCE OF THE PROBLEM: In 1904 Dr. William H. Maxwell,

City Superintendent of Schools in New York City, found that thirty-nine percent of the pupils in the elementary grades were above the normal age for the grade they were in.<sup>1</sup>

Leonard P. Ayres estimated in connection with the extensive study undertaken by the Russell Sage Foundation, beginning in the fall of 1907, that average pupils were found in all school systems, varying with local conditions from five to seventy-five percent of the pupils in the grade, or that thirty-three percent of all the pupils in public schools were average.<sup>2</sup>

The average percentage of pupils in the elementary school grades who repeated school work was estimated to be a little over sixteen. In other words, in the country as a whole one-sixth of the school population were repeating studies costing the country annually about \$27,000,000.<sup>3</sup>

Mr. W. F. Webster, Superintendent of Schools, Minneapolis, Minnesota, speaks of the education of repeaters as "the most expensive extravagance" of his school system. An extensive study of retardation in Minneapolis schools made during the school year of 1922-23 showed that out of 34,333 pupils who had had all their training in the Minneapolis schools there were 34.3 percent who had lost from one to five terms. Mr. Webster estimated that this group

1. Ayres, Leonard P., The Laggards in Our Schools, Charity Publication Committee, New York, 1909, p. 1.

2. Ibid, p. 3.

3. Ibid, p. 4.

group of children costs the city approximately \$125,000<sup>1</sup> extra per year.

The present study shows that the 94 pupils who were more than a year overage repeated a total of 165 1/6 years in the first six grades. In terms of money, reckoning an expense of \$86.00 per child per year,<sup>2</sup> these 94 pupils alone cost the city \$14,204.33 more than it would if they had made normal progress. In terms of time the 165 1/6 years is equivalent to the average life time of five persons. In addition repetition has a demoralizing effect on pupils, school and parents. In view of these facts retardation is a very serious problem confronting our elementary schools.

SOURCE OF INFORMATION: The present study is based primarily on the school records, the results of four different tests, and personal information. The school records were:

1. Pupil's permanent record card<sup>3</sup> on which was recorded pupil's name, sex, race, birthplace, date of birth, name of parent or guardian, parent's birthplace, occupation, date of child's enrollment, place of enrollment, school last attended, date withdrawn and reason, if any, address and telephone number, change of address, if any, and record of attendance.

1. Webster, W. F. Article printed in the Minneapolis Journal, July 1, 1923, p. 9.
2. Ibid., p. 9.
3. See appendix A for sample.

2. Report and promotion card<sup>1</sup> on which the school marks were recorded.
3. Pupil's physical record card<sup>2</sup> on which was recorded diseases which the pupil had had, physical defects, height, and weight.

The complete data on each child were collected on a card or sheet.<sup>3</sup> The school records and the scores of the three achievement tests were all kept at the pupils' respective schools. In all, 57 schools were visited personally and the data copied directly from the records as found in the schools. The personal information in connection with a few of the extreme cases was obtained through personal interview with teachers and pupils. The secondary sources are books, monographs, and magazine articles on the different phases of retardation in public schools.

DIFFICULTIES ENCOUNTERED: - The study has its limitations. The records from which the data were gathered were in some instances inadequate. The information given on the permanent record card as to the nationality of the pupil's parent or guardian was not always intelligible; at times the place of birth was recorded while in other

1. See appendix A for sample.
2. Ibid.
3. Ibid.



instances the parent was classified as "Norwegian" or "Italian", etc. The latter is very indefinite, since a great number of the people who are of foreign descent in this country will call themselves "Norwegian" or "Italian", etc., even though they are born in the United States. Occasionally the information as to nationality was lacking.

There was a similar lack of definiteness and accuracy with respect to occupation of parent or guardian. Such terms as "Lumber Co.," "Grain business", and "Domestic", have little or no meaning relative to occupation. The health record was very unsatisfactory and incomplete and in many cases wanting entirely.

There were two kinds of pupil's permanent record cards in use during the time the pupils were in school. The old type <sup>1</sup> was in use before the quarter system was introduced and the new type <sup>2</sup> was in use after its introduction. As a rule it was not stated whether the term recorded was a semester or quarter term. On many of the cards the school year was not given. The following is a record taken from a pupil's permanent record card:

1920 4 C 58 days  
1920 4 B 20 days  
1920 4 B 63 days  
1920 4 A 55 days

1. See appendix A for sample.
2. Ibid.

The fact that two promotion schemes were in use during the period in which these pupils were in school made the location of repetitions difficult. Previous to the year 1918-19 the semi-annual promotion scheme was used. The quarter system was adopted that year. But the quarter system plan was not, however, introduced that year. An influenza epidemic broke out during the first term and the schools had to be closed for nine weeks. In place of closing the first term early so as to begin the second term January 27, 1919, as planned, the school authorities decided to extend the first term to March 21st. This arrangement made the first term 17 weeks and the second term 13 weeks. In some of the schools the latter was called "C" term or third term, in others "B" term or second term. Since one term was dropped during that year it was evidence that pupils who began the "A" section or term in the fall of that year would either gain or lose half a term or one-sixth of a school year. Pupils in the "A" section during the term that ended March 21st who were advanced to the "C" section the next term gained one-sixth of a school year while those who were advanced to the "B" section lost one-sixth of a school year. Being the school year consisted of thirty-eight weeks a sixth of a year would equal a little more than six weeks.

While in reality there was either a gain or a loss of six weeks that year the same has been disregarded in this study for the following reasons:

1. The gain or the loss was uniform for all the pupils in the particular class and was not based on scholarship.
2. This study aims to designate retardedness in units of school years and school terms and not in units of weeks.

METHOD OF PRESENTATION:- In presenting the data it was found convenient to organize the material as follows:

- I. A Brief Survey of <sup>certain</sup> Studies in Retardation.
- II. Chronological Age and Intelligence.
- III. Rate of Progress Through Grades.
- IV. Location of Repetitions, Skips and Demotions.
- V. Scholarship as Shown by Teachers' Marks and Achievement Scores.
- VI. Personal History and School History of Pupils
- VII. Individual Study of Extreme Cases.
- VIII. Summary and Recommendations.

## CHAPTER II

### A BRIEF SURVEY OF CERTAIN STUDIES IN RETARDATION

It is not so very long ago that school men commenced to focus their attention on the problem of retardation. Twenty-five years ago there was very little definite knowledge as to the extent of overageness in our public schools, and when the study of retardation was commenced it was practically impossible to find the necessary data. There was little or no system for the accumulation of records in schools, and it is not possible to make a study of school progress unless there is a complete school history available.

Most of the early studies in this field were based on age and grade data.<sup>1</sup> There was no specific data available with respect to progress, scholarship and the like. Furthermore, the studies consisted largely of analysis and interpretations of existing printed reports. No one went into the schools to investigate and gather data regarding the actual, existing conditions.

There were a number of educators previous to 1907, who attempted to obtain facts with respect to attendance. The first one to make a study of retardation according to modern statistical meth-

1. Monroe, Paul, Retardation, Cyclopedia of Education, Vol.V, p.169.

ods was Professor Edward L. Thorndike whose study was published in 1907, by the United States Bureau of Education as Bulletin No. 4, under the title, "The Elimination of Pupils from School."

Thorndike's aim was to secure data through observation and study of school conditions as they were.<sup>1</sup>

Among the findings which he made, the following are of interest in connection with retardation:

1. Only one-fourth of the pupils entering school remain long enough to learn to read and write simple English and beginning arithmetic.<sup>2</sup>

2. Only a fifth of the children entering city schools stay until they reach the fifth grade.<sup>3</sup>

3. Only one half of the children in public schools have had a man teacher.<sup>4</sup>

4. Only about a third of them graduate from an elementary school of seven grades or more.<sup>5</sup>

5. Less than one out of ten graduate from the high school.<sup>6</sup>

6. In city high schools there are 25 percent more girls than boys.<sup>7</sup>

7. There is a great variability amongst cities as to the extent of elimination.<sup>8</sup>

1. Thorndike, Edward L., "The Elimination of Pupils from Schools,  
U. S. Bureau of Education, No. 4, 1907, p. 10;

2. Ibid., p. 9.

3. Ibid., p. 10.

4. Ibid., p. 10.

5. Ibid., p. 10.

6. Ibid., p. 10.

7. Ibid., p. 10.

8. Ibid., p. 10.

8. The superiority of one city over the other in retaining children in school is not due to any peculiarities in the curriculum or scheme of administration of the schools but rather due to the nature of the population.<sup>1</sup>

9. "One main cause of elimination is incapacity for and lack of interest in the sort of intellectual work demanded by present courses of study."<sup>2</sup>

In connection with studies in retardation it was soon found desirable to have some basis for comparison. Consequently, a census was taken in December, 1908, by the U. S. Bureau of Education.<sup>3</sup> City and village school authorities carried out the census, which was fairly complete. The results of this census were turned over to Professor George D. Strayer, of Teachers' College, Columbia University, for organization and further study. Results are given in his monograph, "Age and Grade Census of Schools and Colleges" published by U. S. Bureau of Education as bulletin No. 5.

The census included 318 cities. The report consists largely of statistical information as to attendance, giving the number of pupils attending school and their age. But there is a serious shortcoming with this monograph, as there was with that of Thorndike's; it is limited to a study of pupil attendance.

Thorndike's monograph, "The Elimination of Pupils from School," stimulated an extensive investigation. The school authorities in various cities became interested in the problem of retardation. The school authorities of New York had become vitally

1. Thorndike, Edward L., The Elimination of Pupils from Schools, U. S. Bureau of Education, No. 4, 1907, p. 10.

2. Ibid., p. 10.

3. Strayer, George D., Age and Grade Census of Schools and Colleges U. S. Bureau of Education, No. 5, 1911, p. 5.

interested in a study of the actual situation in their city when the City Superintendent of Schools, Dr. William H. Maxwell, in his annual report for 1904, called attention to the fact that fully one-third of the pupils in the elementary grades were overage.<sup>1</sup>

It became apparent to schoolmen that retardation was a problem sufficiently important to merit investigation. Accordingly, when applications were made to the Russel Sage Foundation, a grant was made to finance a preliminary survey. Dr. Leonard P. Ayres was secured to superintende the investigation. The survey included the public schools of 58 cities. The aim of the survey was three-fold:

1. To collect useful material relative to retardation.
2. To develop some method by which to eliminate retardation.
3. To give such a plan or method a ~~fair~~<sup>2</sup> trial so as to demonstrate the utility of the method.

The results of this extensive survey has been summarized by Mr. Luther H. Gullick, chairman of the "Backward Children Investigation," as follows:

1. "That the most important causes of retardation of school children can be removed."
2. "That the old fashioned virtues of regularity of attendance and faithfulness are major elements of success."
3. "That some cities are already accomplishing excellent results by measures that can be adopted by all."

1. Ayres, Leonard P., Laggard in Our Schools, Charity Publication Committee, 1908, p. 1.

2. Ibid., p. 1.



4. "That relatively few children are so defective as to prevent success in school life."<sup>1</sup>

The survey found that there was an enormous variability as to extent of retardation among cities. In certain cities the retarded pupils numbered only 7 percent of the children in school and in other cities there were as many as 75 percent retarded. The estimate was that 33 percent of all the pupils in public schools were retarded. It was also found that the majority of retarded pupils did not complete the elementary school course. In certain cities only seventeen pupils out of a hundred who started school finished the grades, eighty-three fell by the wayside. Only a few of the retarded pupils were overage because of late entrance. Slow progress was the one great factor that brought about retardation.<sup>2</sup>

The survey found that there were eight or ten pupils who made slow progress for every pupil who made rapid progress. There was little or no relation between the percentage of foreigners in the city and the amount of retardation. It was found that there was thirteen percent more retardation among boys than among girls. Likewise, that there was thirteen percent more repeaters among boys than among girls. And seventeen percent more girls than boys finished the elementary school course.<sup>3</sup>

The remedies<sup>4</sup> suggested were:

1. Regular attendance in school.

1. Ayres, Leonard P., Laggards in Our Schools, Charity Publication Committee, 1909, p.xv.  
2. Ibid., p. 4.  
3. Ibid., p. 5.  
4. Ibid., p. 7.

2. More and better medical inspection.
3. Adoption of suitable courses of study to fit the abilities of the overage pupils.
4. Flexible grading system.

Another extensive study along this same line was undertaken by Dr. Charles Henry Keyes. His study was that of acceleration and arrest and printed by Columbia University, Teachers College, as Contributions to Education, No. 42, in 1911. The monograph is entitled "Progress Through the Grades of City Schools." The purpose of his study was to investigate as to quantity, place and causes of acceleration and arrest of pupils in going through the grades. The schools studied were those of a single supervision district in the city of New York. The enrollment in the district was about 5,000. The social position, the economic conditions and the like of the population were what they are in the average city community.<sup>1</sup>

The portion of Keyes' study which relates to the overage pupils is chapter III. The study of arrests included 683 cases. The following topics relative to pupils' progress through the grades are discussed by Dr. Keyes:

1. The age at which repeaters entered school.<sup>2</sup>
2. In what grades were most of the repetitions made?<sup>3</sup>
3. The extent of repetition among boys and among girls.<sup>4</sup>
4. At what ages did the pupils repeat?<sup>5</sup>

1. Keyes, Charles Henry, Progress through the Grades of City Schools, 1911, p. 38.
2. Ibid., p. 16.
3. Ibid., p. 18.
4. Ibid., p. 17.
5. Ibid., p. 19.

5. What effect does absence from school have on the extent of repetition?<sup>1</sup>
6. Is illness a cause of retardation?<sup>2</sup>
7. Is change of address a marked factor in causing arrest of progress through the grades?<sup>3</sup>
8. What effect has repetition of school work upon the scholarship of the repeater?<sup>4</sup>
9. Did certain subjects retard the child?<sup>5</sup>

Dr. Keyes' investigation showed that:

1. A much greater percentage of the pupils who begin school at a very early age and of those who begin very late make slow progress through grades than is the case with children who enter school at the normal age.<sup>6</sup>
2. The greatest number of repetitions are made in the fourth, fifth and third grades respectively.<sup>7</sup>
3. More boys repeat school work than girls.<sup>8</sup>
4. The greatest percentage of repeaters are among children of the age of twelve.<sup>9</sup>
5. Short absences because of the common child sicknesses do not cause arrests in school work but long absences do.<sup>10</sup>

1. Keyes, Charles Henry, Progress Through the Grades of City Schools, 1911, p. 23.
2. Ibid., p. 24.
3. Ibid., p. 24.
4. Ibid., p. 26.
5. Ibid., p. 30.
6. Ibid., p. 16.
7. Ibid., p. 18.
8. Ibid., p. 17.
9. Ibid., p. 19.
10. Ibid., p. 23.

6. Change of residence is a cause of retardation.<sup>1</sup>
7. Repetition of school work lowers the scholarship of the pupil.<sup>2</sup>
8. The most difficult subject for pupils to finish in normal time is arithmetic.<sup>3</sup>

One very recent study of pupil's progress through the grades is that of Mr. Eugene A. Nifenecker, Director of the Bureau of Reference, Research and Statistics in the New York School. The study was published in 1922 and is entitled, "Pupils' Progress Through the Grades." It is a study of the pupils in New York School including grades IA to XB in which grades there were 732,448 pupils. The monograph is divided into five parts:<sup>4</sup>

1. "The Ages of Pupils in Relation to Their Grades."
2. "Rates of Progress Through the Grades."
3. "Promotions or Non-promotions."
4. "Classification of Pupils as a Factor of Progress."
5. "Flexibility Versus Uniformity in School Organization and Progress."

The whole problem of retardation and its effects are summed up in a paragraph by Mr. Nifenecker as follows:

"The actual progress of our pupils through the grades is a matter of great importance and significance from the point of view of the child as well as of the school system. A pupil who fails to be

1. Keyes, Charles Henry, Progress Through the Grades of City Schools, 1911, p. 24.
2. Ibid., p. 26.
3. Ibid., p. 30.
4. Nifenecker, Eugene A., Pupils' Progress Through the Grades, U. S. Bureau of Education Publications, No. 19, New York City, 1922, p. 15.

promoted or to progress "normally" is obliged to repeat the work already covered. His progress is "retarded", he becomes overage or older than he should be for his grade. If such failure is frequent the pupil finds himself at fifteen or sixteen in a comparatively low grade. He drops out, is eliminated. Failure to progress normally means the repetition by the pupils of work already covered, and such repetition means twice or thrice the educational cost of a given amount of instruction. Failure to progress normally means congestion or overcrowding, particularly in the lower grades. Failure to progress normally means also the probably elimination of very many pupils and their entrance upon life of the outside world with only a fifth or sixty year schooling. Last, but even more vital, repeated failure to progress upon the part of pupils means a loss of self-esteem, a lack of self-confidence and a degree of personal discouragement which must have its effect, more or less permanent, upon the pupils attitude in their subsequent contact with the problems of after-school life. Retardation, overageness and elimination are the sources of educational, economic and childhood wastage.<sup>1</sup>

The chapter, ~~on~~ "The Ages of Pupils in Relation to Their Grades" is of special value in connection with the study of overage pupils. The following conclusions are <sup>of</sup> special interest:

1. The lowest rate of overageness is found in grade IA. The rate rises until it reaches the maximum in VIA and then falls away until it reaches the VIIIB.<sup>2</sup>

1. Nifenecker, Eugene A., Pupils' Progress Through the Grades., U.S. Bureau of Education Publications, No. 19, New York City, 1922, p. 15.
2. Ibid., p. 29.

2. The range of the middle 50 percent is smallest in grade I A, 11 months. The range gradually increases upward through the grades until it reaches a maximum in grade VI A where it is 21 months or 1 year, 9 months, then the range subsides until the grade VIII B where it is 18 months.<sup>1</sup>

3. In grade VI B the children are of ten different ages, a range greater in years than the time required theoretically to complete the elementary course.<sup>2</sup>

4. The median for ages of pupils entering grade VI B is 11 years, 9 months, the lower quartile is 11 years 6 months, the upper quartile is 13 years, 3 months.<sup>3</sup>

5. The greatest percentage of pupils in school were those 11 years of age, 38.25 percent, the next greatest percentage were those 12 years old, 27.03 percent, the next greatest percentage were those 13 years old, 15.60 percent.<sup>4</sup>

6. The approximately eighty thousand twelve-year-old pupils were distributed from grade I A to IX B.<sup>5</sup>

7. The study of twelve-year-old children in school reveals that under optimum conditions, even if we assume that all pupils will remain in school until the age of sixteen and that all the pupils will make normal progress, there will be thousands of the pupils in New York City who will be eliminated without com-

1. Nifenecker, Eugene A., Pupils' Progress Through the Grades, U. S. Bureau of Education Publications, No. 19, New York City, 1922, p. 23.

2. Ibid., p. 20.

3. Ibid., p. 23.

4. Ibid., p. 21.

5. Ibid., p. 40.

### CHAPTER III

#### CHRONOLOGICAL AGE AND INTELLIGENCE

The school laws in Minnesota require that the child must begin school at the age of eight.<sup>1</sup> The majority of children start school at the age of six. If all of them made normal progress there would be very little variation as to age in the respective grades. It is, however, apparent that there is a great variation. This variation is to a great extent brought about by slow, normal, and rapid progress through the grades. Intelligence is a fundamental factor, determining as much as the chronological age does whether the child is likely to make rapid, normal, or slow progress. The purpose of this chapter is to investigate the chronological age and intelligence of the entire group of 2006 pupils in grade VI A, Minneapolis schools, 1922-23, end term.

The change made by the Minneapolis school authorities in the school year of 1918-19 from the semi-annual promotion scheme to the quarter system has made it necessary, in studies like the present, to classify children according to chronological age on a sixth of a year standard or basis rather than on the more common half-year basis.

1. Laws of Minnesota Relating to the Public School System, 1921, p.78.

pleting the elementary grades and will drop out of school with a fifth or sixth year education.<sup>1</sup>

8. There was a wide range as to the percentage of overage pupils in the respective schools of the city, one school showed more than 70 percent of overage pupils while another showed less than 5 percent, the median percent of the group was 31.6 percent.<sup>2</sup>

9. 31.6 percent of the boys are overage as compared to 28.4 percent of the girls. In other words to every 100 boys that are overage there are only 90 girls.<sup>3</sup>

10. In grade VI B the number of terms that pupils had been in school varied from 3 to 24. The pupils had attended all the way from 1 1/2 years to 12 years.

11. 38.24 percent of the total enrollment in grade VI B were overage pupils. Among these only 1.62 percent made rapid progress, 5.81 percent made normal progress while 33.12 percent made slow progress.<sup>5</sup>

Causes of overageness in elementary grades are given as:

1. Late entrance into school.
2. Slow progress or retardation.
3. Late entrance combined with retardation.<sup>6</sup>

Of 213,227 overage pupils 18.27 percent were due to late entrance, 64.54 percent were due to slow progress and 17.19 percent were due to late entrance and slow progress.<sup>7</sup>

1. Nifenecker, Eugene A., Pupils' Progress Through the Grades, U. S. Bureau of Education Publications, No. 19, New York City, 1922, p. 41.

2. Ibid., p. 32.

3. Ibid., p. 32.

4. Ibid., p. 47.

5. Ibid., p. 62.

6. Ibid., p. 33.

7. Ibid., p. 34.



### DEFINITION OF CHRONOLOGICAL AGES FOR PUPILS IN MINNEAPOLIS SCHOOLS

Although there is no age fixed as the normal age by the Minneapolis School authorities for the respective grades, there is ~~however~~ a standard followed arbitrarily when age grade studies are made. The standard is on the sixth-of-a-year basis. Studies based on this standard are not only comparable to studies based on half-year or third-year standards but also present facts on age conditions in a more detailed manner. The standard is in the form of two tables, and defines the chronological ages and the age span for the respective grades.

TABLE I.

Definition of Ages for Pupils in Minneapolis Schools.

Age	From		To		
	Yr.	Mo.	Yr.	Mo.	Da.
5	4	11	5	0	30
5 1/6	5	1	5	2	30
5 2/6	5	3	5	4	30
5 3/6	5	5	5	6	30
5 4/6	5	7	5	8	30
5 5/6	5	9	5	10	30
6	5	11	6	0	30
Etc.					

The above definition of ages gives the pupil's age to the nearest sixth of a year. All tables in the present study relative to age and progress of Minneapolis pupils will be based on the above definition.

TABLE II

Definition of Normal Ages for Minneapolis Public School Grades

I C	I B	<u>Grades</u>	I A	I C
6				
6 1/6				
6 2/6	6 2/6			
6 3/6	6 3/6			
6 4/6	6 4/6		6 4/6	
	6 5/6		6 5/6	
	7		7	7
			7 1/6	7 1/6
			7 2/6	7 2/6
				7 3/6
				7 4/6
				Etc.

The table reads: The normal age for I C is from 5 years, 11 months to 6 years, 8 months, 30 days; the normal age for I B is from 6 years, 3 months to 7 years, 30 days; etc.

The above definition of normal age gives each grade a span of 18 months and each third of a grade a span of 10 months.

The normal age for grade VI A in the present study is based on the following table.

TABLE III

Limit of Underage, Normal Age, and Overage, for grade VI A, Minneapolis Schools, 1922-23, 3rd Term, at the Time the Intelligence Test was Given, Latter Part of April.

Extent of Underage, Normal Age, and Overage.				Chronological Age			
Yr.		Mo. to Yr. Mo.		Yr.		Mo. to Yr. Mo.	
<u>Underage:</u>							
More than		1		Below		10	
1	1	1	6	10	2	10	2
7	7	1		10	8	10	7
		6	6 or less	11	2	11	1
Normal Age				11	8	11	7
Normal Age				11		11	11
Overage:				12		12	5
		6 or less		12	6	12	11
	7	1		13		13	5
1	1	1	6	13	6	13	11
1	7	2		14		14	5
2	1	2	6	14	6	14	11
2	7	3		15		15	5
3	1	3	6	15	6	15	11
3	7	4		16		16	5
4	or more			16	6	16	11

The table reads; pupils 11 years, 8 months to 12 years, 5 months of age are normal age, pupils 11 years, 2 months to 11 years, 7 months are 6 months or less underage, pupils 12 years, 6 months to 12 years, 11 months, of age, are 6 months or less overage, etc.

The intelligence test was given during the second month after the third term of the school year opened. The pupils were then one month older than at the opening of school. Hence the normal age for the class at the time would be 11 years, 8 months to 12 years, 5 months.

UNDERAGE, NORMAL AGE AND OVERAGE PUPILS IN GRADE VI A

In order to show the number of pupils who were underage, normal age and overage and also the number of pupils who were six months or less, seven months to a year, etc., underage and overage the following table has been prepared.

TABLE IV

Number and Percentage of Pupils Underage, Normal Age and Overage in Grade VI A, Minneapolis Schools, 1922-23, 3rd Term.

Underage, Normal Age and Overage	Yr. Mo. to Yr. Mo.				Number of Pupils	Percent
	Yr.	Mo.	Yr.	Mo.		
<u>Underage:</u>						
More than	1	6			9	.45
	1	1	1	6	64	3.19
		7	1		187	9.32
				6 or less	382	19.04
<u>Normal age</u>					729	36.34
<u>Overage:</u>					267	13.31
		7	1		155	7.73
	1	1	1	6	89	4.44
	1	7	2		64	3.19
	2	1	2	6	28	1.39
	2	7	3		13	.65
	3	1	3	6	14	.70
	3	7	4		3	.15
	4	or more			2	.10
<u>Total</u>					<u>2006</u>	<u>100</u>

The table reads, 729 pupils are of normal age, 382 pupils are 6 months or less underage, 267 pupils are 6 months or less overage, etc.

The following table shows the relationship of the respective degrees of underageness and overageness to the total number of pupils included in the study.

TABLE V

Extent of Underage, Normal Age, and Overage Pupils by Groups of Six Months Each in Grade VI A., Minneapolis Schools, 1922-23, 3rd Term.

Extent of Underage, Normal age and Overage		Pupils	Percent
Yr.	Mo.		
<u>Underage:</u>			
More than	1 6	9	.45
More than	1	73	3.64
More than	6	260	12.96
Underage		642	32.
Normal age		729	36.34
Overage		635	31.66
<u>Overage:</u>			
More than	6	368	18.34
More than	1	213	10.62
More than	1 6	124	6.18
More than	2	60	2.99
More than	2 6	32	1.59
More than	3	19	.95
More than	3 6	5	.15
More than	4	2	.1

The table reads 729 pupils were of normal age, 642 were underage, 260 were more than 6 months underage, 635 were overage, 368 were more than 6 months overage, etc.

It will be observed from the above table that the normal age children in grade VI A constitute 36.34 percent of the total number, the underage children, 32 percent, and the overage children, 31.66 percent.

It is difficult to obtain data with which to compare the percent of underage, normal age, and overage children in school. This is due to the fact that the definition of normal age varies in the different age-grade studies. Very often no mention is made in such

studies as to what the normal age is. In an editorial comment in the March issue of the Elementary School Journal for 1921<sup>1</sup> the situation with respect to retardation and acceleration in the schools at Alton, Illinois is discussed. There were at that school 35.5 percent of the pupils who were of normal age, 31.1 percent, underage and 32.7 percent overage. But no statement is made as to what age is considered normal age for the respective schools.

Furthermore, the method employed in gathering the statistics in the different age-grade studies differ in the detail. And if the total enrollment is used in place of the enrollment at a certain date the results would differ. It is evident that results from age-grade studies in different cities are comparable only when the information is gathered on the same basis. As there is yet no one standard which research students have as a basis it is practically impossible to compare the extent of overageness.

Mr. Nifenecker found that the lowest percentage of overageness in the City of New York was found in I A, (14.3 %). The percentage increased until it reached the maximum in the VI A (42.1 %) (corresponding to VI B in Minneapolis Schools) and then the percentage decreased grade by grade through the sixth, seventh and eighth, (VIII B with 26.5 %).<sup>2</sup> The fact that the mentally dull pupils in many cases struggle along as far as the sixth grade and by the time that is finished they have reached the age at which the compulsory school law does not compel them to attend school is one reason for the accumulation of overage pupils grade by grade up to the sixth.

1. Editorial, Elementary School Journal, Vol. 21, No. 7, March 21, 1921, p. 483.

2. Ayres, Leonard P., Laggards in Our Schools, Survey Associates, Inc., New York, p. 3.

Dr. Ayres in his work, "Laggards in Our Schools", estimates that on the average about 33 percent of all the pupils in our public schools belong to the retarded class. The average of the percent of retarded pupils in thirty-one cities investigated was thirty-three.<sup>1</sup> No distinction is made, however, in Ayres' study between overage and retardation. It is also impossible to ascertain what age span was used for the respective grades.

While exact data are not available for comparing the percentage of underage, normal age and overage pupils in grade VI A, Minneapolis schools, 1922-23, 3rd term, with the percentages of the same classes in other school systems there is, however, nothing to indicate that the extent of overageness in this particular grade in Minneapolis schools is any greater than the overageness in other school systems in the country.

It will be observed from table IV that 19.04 percent of the 32 percent underage pupils are 6 months or less underage and that 13.31 percent out of the 31.66 overage pupils are 6 months or less overage. Thus approximately two-thirds of the underage pupils are 6 months or less underage while only one third of the average pupils are only 6 months or less overage.

1. Ayres, Leonard P., Laggards in Our Schools, Survey Associates, Inc., New York, p. 3.

Hence, in grade VI A the number of underage, normal-age, and overage pupils is about the same. Most of the underage pupils are only a few months underage. Most of the overage pupils are more than 3 months overage.

CHRONOLOGICAL AGES REPRESENTED IN GRADE VI A.

A comparison of the number of pupils in the respective ages found in different school systems would be affected by fewer distributing factors than would be the case in comparing the extent of overageness. The two principal difficulties would be the method employed in computing the age and the time of the school year when the age distribution was made. In order to compare the age and number of pupils for each age the 2006 VI A pupils have been arranged in groups of 9, 10, 11 years, etc.

The following table is a comparison of the number of pupils in each respective age in Minneapolis Schools for the years 1914-15, 1915-16, 1916-17 and 1922-23.

TABLE VI

Number of Pupils for the Respective Ages Found in Grade VI A, Minneapolis Schools for the Years 1914-15, 1915-16, 1916-17, and 1922-23.

Year	Pupils' Ages											Total		
	9	10	11	12	13	14	15	16	17	18	19		20	21
1914-15 <sup>a</sup>	1	59	420	654	513	291	137	34	7	4	1	1	2	2124
1915-16 <sup>a</sup>	7	83	587	766	446	202	111	19	3	0	0	1	2	2227
1916-17 <sup>a</sup>	2	95	593	675	480	210	75	17	1	1	1			2149
1922-23 <sup>b</sup>	3	178	824	632	244	92	27	5						2006

a. Pupils' Ages are those at the time of enrollment.

b. Pupils' Ages are those of May 15, 1923.



The table reads: there was one pupil in the year of 1914-15 who was nine years old, fifty nine who were ten years old, etc.

From the above table the following facts will be observed:

1. The age span is less during the year 1922-23, than during the years 1914-15, 1915-16, and 1916-17.

2. In spite of the fact that the ages for the years 1914-15, 1915-16 and 1916-17 are those at the time of enrollment the number of pupils for each age from the age of 12 on is considerably greater proportionally than is the case in the year 1922-23, the ages for that being as for May 15.

3. The number of pupils of age 11 in the year 1922-23 is considerably larger than is the case in the years 1914-15, 1916-17 and 1917-18. The same is the case with the number of pupils of the age of 10.

In order to compare the age distribution in VI A of Minneapolis Schools within the age distribution for the same grade in two other large cities, the following table has been prepared and gives the number of pupils for each age and percentage in the Public Schools of Cincinnati, St. Paul, New York and Minneapolis.

TABLE VII

Showing Number of Pupils for Each Age and Percentage in the Public Schools of St. Paul, New York and Minneapolis.

Grade	Below	Ages										Total
	9	10	11	12	13	14	15	16	17	18		
VI A St. Paul pupils, Feb., 11, 1917	1	1	33	367	456	243	121	52	9	3	1	1286
Percentage	.08	2.57	28.54	35.46	18.89	9.41	4.04	.70	.23	.08		100
VI B New York pupils, Feb., 28, 1921	5	131	2937	16849	11908	6872	3742	1453	145	14		44056
Percentage	101	.30	6.67	38.24	27.03	15.60	8.49	3.30	.33	.03		100
VI A Minneapolis pupils, May 15 1923		3	179	824	632	244	92	27	5			2006
Percentage		.15	8.91	41.08	31.50	12.17	4.59	1.35	.25			100

- a. Report of A Survey of the School System of St. Paul, Minn., 1917, Board of Education, St. Paul, Minn.
- b. VI B in New York Schools Corresponds to VI A in Minneapolis.
- c. Nifenecker, Eugene A., Pupils Progress Through the Grades, Board of Education, New York.

The table reads, in VI A there was 1 pupil 9 years old in St. Paul schools, or .08, on Feb. 11, 1917; 131 pupils in New York schools on February 28, 1921; and 3 pupils in Minneapolis on May 15, 1923.

The fact that the chronological age given for Minneapolis is approximately three months later in the school year than is the case in St. Paul and New York adds weight to the conclusions arrived at in this table because the pupils in St. Paul and New York would have been three months older three months later in the year.

The fact that the ages in Minneapolis are those of the school year two years later than were the ages in New York and six

years later than were the ages in St. Paul gives St. Paul and New York a slight advantage as the average chronological age in the grade schools of Minneapolis has decreased a little of late years.<sup>1</sup>

The following facts are observed from table VII.

1. The age span of the VI A pupils in St. Paul is from 9 to 18, in New York from below 9 to 17 and in Minneapolis from 9 to 16.

2. The table shows that in St. Paul the largest number of pupils, 35.46 percent, are of age 12, in New York and Minneapolis it is in age 11 that the largest number of pupils are found, 38.24 and 41.08 percent respectively.

3. The percentage for the ages above the age of 12,<sup>2</sup> that is, ages 13, 14, 15, 16, 17 and 18, are for St. Paul, 18.89, 9.41, 4.04, .70, .23 and .08 respectively, for New York, 15.60 8.49, 3.30, .33, and .03 respectively, for Minneapolis 12,17, 4.59, 1.35 and .25.

4. The percentages of age 11 in St. Paul is 28.54, for New York 38.24 and for Minneapolis 41.08, for age 10, 2.57, 6.67, and 8.91 respectively, ages 9 and below 9 have too few cases for comparison.

With respect to chronological age of pupils in grade VI A the following facts are observed from the study: The age span of the pupils in grade VI A is becoming less year by year. Pupils who are very much overage are getting fewer and the number of normal age pupils is increasing from year to year.

1. See table VI, p. 31.

2. The age which is most approximately the normal age for the last term in grade VI throughout the country is that of twelve.

The age span pupils in the grade is shorter for Minneapolis than for either St. Paul or New York in the corresponding grade.

The eleven year old pupils make up the largest percentage in Minneapolis schools while in St. Paul the largest percentage is that of twelve year old children. While the largest percentage in New York Schools is also that of the eleven year old children, the percentage in Minneapolis is larger.

The percentage for each of the respective ages above twelve is smaller for Minneapolis than that for the same ages for either St. Paul or New York.

The percentage for each of the respective ages below twelve is smaller for Minneapolis than that for the same ages for either St. Paul or New York.

#### INTELLIGENCE QUOTIENTS OF 2006 PUPILS

The intelligence quotients of the 2006 pupils are based on the mental ages obtained by the Haggerty Intelligence Test, Delta II. The pupils were grouped according to chronological ages. The groups include six months wherever the divisions underage, normal age, and overage permit. The average I. Q., was found for each group.

The following table gives the average intelligence quotients for each six-months group of underage, normal age and overage pupils, together with the chronological age for the same.

TABLE VIII

Average I. Q. of the Respective Six-Months Age Groups of Underage, Normal Age, and Overage Pupils in Grade VI A, Minneapolis Schools, 1932-33, 3rd Term.

Six Months Group of Underage, Normal Age, or Overage Pupils				Chronological Age	Number of Pupils	I.Q.
Underage:	Yr. Mo. to Yr. Mo.					
more than	1	6		Below 10:2	9	119
	1	1	6	10:2 to 10:7	64	129
		7	1	10:8 to 11:1	187	124
			6 or less	11:2 to 11:7	382	118
Normal Age:	11	8	11	11:9 to 11:11	364	111
	12		5	12 to 12:5	265	107
Overage:			6 or less	12:6 to 12:11	267	100
		7	1	13 to 13:5	155	96
	1	1	6	13:6 to 13:11	89	92
	1	7	2	14 to 14:5	64	83
	2	1	6	14:6 to 14:11	28	79
	2	7	3	15 to 15:5	13	79
	3	1	6	15:6 to 15:11	14	75
	3	7	4	16 to 16:5	3	71
	4 or more			16:6 to 16:11	2	62

The table reads: the nine pupils who are more than one year six months underage and who are below ten years and two months of age have an average I. Q. of 119, etc.

The following facts will be observed from table VIII:

1. The average I. Q., for the group of pupils who are one year and one months to one year and six months underage (that is, those who are from ten years, two months to ten years, seven months old) have a higher average I. Q. than the next older group; and the same is true with each successive group.

2. No one of the respective groups of overage pupils has an average I. Q. that exceeds 100.

3. No one of the respective groups of underage pupils has an average I. Q. that is lower than 118.

The older pupils in a class have on the average lower I. Q.s than the younger pupils.

The I. Q. of the average overage pupil is not above 100.

The underage pupils average a high I. Q.

#### THE GROUP OF 209 OVERAGE PUPILS

The pupils who were selected for special study in this thesis were those who were more than a year overage. There were 213 of these pupils among the 2008 VI A grade pupils to whom the Haggerty Intelligence Test Delta II was given. All the pupils in seven out of nine groups of overage pupils in table VIII are included. No one of them was younger than 13 years and 6 months, at the time the intelligence test was given, while a few of them were as old as 16 years and 11 months. Among these 213 more-than-a-year-overage pupils there were four whose records could not be obtained.

The intelligence quotients of the 209 pupils who were more than a year overage have been grouped so that those pupils who had an I. Q. of 55 - 59 constitute one group, those who had an I. Q. of 60 - 64 make up another group, etc.

The following table shows the distribution of 209 overage pupils by sex and percentage according to their I.Q.'s.

TABLE IX

Distribution of 209 Overage Pupils in Grade VI A by Sex and Percentage, According to Intelligence Quotient. (I.Q. determined on basis of the Haggerty Intelligence Test, Delta II).

I. Q.	BOYS	Percent	Girls	Percent	Total	Percent
55-59	3	2.56	1	1.09	4	1.91
60-64	2	1.71	2	2.17	4	1.91
65-69	3	6.84	5	5.44	13	6.22
70-74	13	11.11	12	13.04	25	11.96
75-79	16	13.68	8	8.70	24	11.49
80-84	15	12.63	12	13.04	27	12.92
85-89	16	13.68	19	20.65	35	16.75
90-94	19	16.24	12	13.04	31	14.83
95-99	3	6.84	11	11.96	19	9.09
100-104	3	6.84	5	5.44	13	6.22
105-109	5	4.27	2	2.17	7	3.35
110-114	3	2.56	0		3	1.43
115-119	1	.85	1	1.09	2	.96
120-125	0		2	2.17	2	.96
Totals	117	100	93	100	209	100
Range	55-114		67-120		55-120	

The table reads: There were three boys and one girl (2.56 percent of the boys and 1.09 percent of the girls) or 1.91 percent of all the pupils, whose I. Q.'s were between 55 and 59.

1. It will be noticed that those pupils who had an I. Q. of 100 or more are comparatively few, only 27 pupils or 12.92 percent. There are four pupils or approximately 2 percent with an I. Q. of 115 or above.

2. There are 85 pupils or 40.67 percent of normal age.

3. There are 97 pupils, or 46.41 percent, who have an I.Q. of less than 85. Twenty-one, or 10.04 percent are border-line cases, that is, of an I. Q. less than 70.

4. As to the difference between the intelligence of boys and girls, it will be observed that there are 17 boys, or 14.52 percent, and 10 girls, or 10.87 percent, who have an I. Q. of 100 or more. There are 57 boys, or 48.72 percent, and 20 girls, or 43.45 percent, who have an I. Q. of less than 85. While the range of I. Q. is approximately the same for the boys and the girls there are proportionally fewer girls than boys who are below normal mentality as well as above. That is, a larger percent of the girls have an I. Q. between 85 and 100 (38.76 percent of the boys and 45.85 percent of the girls).

Among the 209 average pupils there were 96 who had had all their training in Minneapolis schools and whose records were complete, and 103 pupils who had received part of their training elsewhere. In order to ascertain whether the pupils who had entered the Minneapolis schools from other school systems were of superior, equal, or inferior mentality than those who had commenced school in Minneapolis and remained, the pupils of each of the two groups were distributed on the basis of their I. Q.'s.



Table X gives the distribution of 86 overage pupils in grade VI A on the basis of intelligence quotients. These pupils had had all their training in Minneapolis schools.

TABLE X

Distribution on the Basis of Intelligence Quotients of 86 Overage Pupils in Grade VI A, by Sex and Percentages. (I. Q.'s Determined on Basis of the Duggerty Intelligence Test, Delta II).

I. Q.	Boys	Percent	Girls	Percent	Total	Percent
55-59	2	3.5	0		2	2.1
60-64	1	1.6	0		1	1.
65-69	4	7.	3	7.6	7	7.3
70-74	8	14.	8	20.5	16	16.7
75-79	9	15.6	1	2.6	10	10.4
80-84	6	10.5	6	15.4	12	13.5
85-89	6	10.5	10	25.6	16	16.7
90-94	9	15.6	6	15.4	15	15.6
95-99	5	8.6	2	5.1	7	7.3
100-104	2	3.5	1	2.6	3	3.1
105-109	3	5.3	1	2.6	4	4.2
110-114	2	3.5	0		2	2.1
115-119	0		0		0	
120-125	0		1	2.6	1	1.
Totals	57	100	39	100	96	100
Range	55-114		67-120		55-120.	

The table reads:

There were two boys, 3.5 percent, and no girls, or 2.1

percent of all the pupils, whose I. Q.'s were between 55 and 59, etc.

Table XI gives the distribution of 113 overage pupils in grade VI A on the basis of intelligence quotients. These pupils had had part of their training elsewhere.

TABLE XI

Distribution of 113 Pupils by Sex and Percentages, on Basis of Intelligence Quotients. These Pupils have not had all their training in Minneapolis Schools. (I.Q.'s determined on Basis of the Haggerty Intelligence Test, Delta II).

I. Q. Intervals	Boys	Percent	Girls	Percent	Total	Percent
55-59	1	1.67	1	1.89	2	1.77
60-64	1	1.67	2	3.78	3	2.66
65-69	4	6.67	2	3.78	6	5.31
70-74	5	8.33	4	7.54	9	7.96
75-79	7	11.67	7	13.20	14	12.39
80-84	9	15.00	6	11.32	15	13.27
85-89	10	16.67	9	16.98	19	16.81
90-94	10	16.67	6	11.32	16	14.16
95-99	3	5.00	9	16.98	12	10.62
100-104	6	10.00	4	7.54	10	8.85
105-109	2	3.33	1	1.89	3	2.65
110-114	1	1.66	0		1	.89
115-119	1	1.66	1	1.89	2	1.77
120-125	0		1	1.89	1	.89
Totals	60	100	53	100	113	100
Range	59-117		55-120		55-120	

The table reads:

There was one boys, 1.67 percent, and one girl, 1.89 percent, or 1.77 percent of all the pupils, whose I. Q.'s were between 55 and 59.

Of the 96 pupils who had had all their schooling in the Minneapolis system 10.4 percent had I. Q.'s below 70, and 10.4 percent had I. Q.'s of 100 or more. Of the 113 pupils who had had part of their training elsewhere there were 9.74 percent whose I. Q.'s were below 70 and 10.05 percent whose I. Q.'s were 100 or more.

The following facts are observed with respect to the intelligence of overage pupils:

There is a comparatively small percentage of mentally superior children among pupils who are more than a year overage. Approximately 50 percent of the pupils who are more than a year overage are below normal in mentality. Among overage pupils there is a larger percentage of girls who are of normal mentality than boys. There are proportionally fewer girls than boys who are either below or above normal mentality. Overage pupils who have had part of their training outside of Minneapolis schools have on the average a slightly higher I. Q. than the pupils who have had all their training in the city.

#### CONCLUSIONS

1. In grade VI A Minneapolis schools, 1922, 23, the number of underage normal age and overage pupils were about the same.
2. The average extent of underageness was smaller than the average extent of overageness.
3. Overageness in Minneapolis schools is diminishing from year to year.
4. The number of older pupils in Minneapolis schools is smaller than is the case in either St. Paul or New York.
5. The older pupils in a class have on the average a lower I. Q. than the younger pupils.
6. The average overage pupils is of a comparatively low mentality while the average underage pupils has a high I. Q.
7. Very few pupils who are more than a year overage are of

a superior mentality while the great bulk of them are below normal mentality.

8. A larger percentage of overage girls are of normal mentality than boys.

9. In the group of pupils who are more than a year overage in grade VI A the pupils who have had all their training in Minneapolis schools had on the average a lower I. Q. than those who had had part of their training elsewhere.

## CHAPTER IV

### RATE OF PROGRESS THRU GRADES

Among the 213 pupils who were more than a year overage there were 96 who had had all their training in the Minneapolis schools and whose records are complete, and 117 who had had part of their training elsewhere. The object of this chapter is to study the rate of progress thru the grades of these 96 pupils.

The school records of these 213 pupils were collected in June, six weeks later than the time that the tests were given. By this time there were four of the group of 117 pupils whose records were not available. At the time two of the group of 96 pupils were found to be in grade VI B, so the number of pupils whose records were obtained were 207.

The following table shows the year and grade in which these 207 overage pupils entered the Minneapolis schools. Because of the change in the school system in the school year of 1918-19 from the half-year plan to the quarter system it was necessary to divide the table into two parts. The first part shows in what year and in what grade pupils entered previous to the year **the** change was made and part two shows the same for the years after the change was made.

TABLE XII

Part I

Giving Year and Grade in Which 207 More Than a Year Overage Pupils Entered Minneapolis Schools. These Pupils Were in Grade VI A in the 3rd Term of the School Year 1922-23.

Year	Term	I	II	III	IV	V	VI	Total
		B	A	B	A	B	A	B
1912-	1st	1 B	:	:	:	:	:	1
1913		:	:	:	:	:	:	
	2nd	:	:	:	:	:	:	
1913-	1st	1 B	:	:	:	:	1	2
1914		1 G	:	:	:	:	:	
	2nd	1 B	:	:	:	:	1	1
1914-	1st	12 B	:	:	:	:	12	14
1915		2 G	:	:	:	:	:	
	2nd	8 B	:	:	:	:	8	14
		6 G	:	:	:	:	:	
1915-	1st	31 B	1 B	:	:	:	32	46
1916		14 G	:	:	:	:	:	
	2nd	4 B	:	:	:	:	4	11
		7 G	:	:	:	:	:	
1916-	1st	8 B	1 B	1 B	:	:	10	23
1917		13 G	:	:	:	:	:	
	2nd	3 B	:	:	:	:	3	5
		1 G	1 G	:	:	:	:	
1917-	1st	2 B	:	:	:	:	2	5
1918		2 G	1 G	:	:	:	:	
	2nd	1 B	1 B	:	:	:	2	5
		1 G	:	2 G	:	:	:	
Total		118	6	1	2		76	127

PART II

Year	Term	Grades																Total					
		1G	1B	1A	2G	2B	2A	3G	3B	3A	4G	4B	4A	5G	5B	5A	6G		6B	6A	B	G	B&G
1918-	1st:				1B	1B			1B														
1919			1G		2G			3G														3	6
	2nd:																					2	2
1919-	1st:			1B		1B		1B	1B		1B	1B											
1920							1G	3G			1G											6	5
	2nd:																					1	1
	3rd:							1B		2B	2B											1	1
										1G	1G			1G								5	3
1920-	1st:										2B	1B	1B										
1921			1G								3G	1G										4	5
	2nd:																					1	1
	3rd:		1B																			1	1
					2G									2G								1	4
1921-	1st:														1B	2B	1B	1B					
1922															2G	2G			1G			5	5
	2nd:																		1G			2	2
	3rd:																			1G		1	1
																						1	1
1922-	1st:																						
1923																1G	2G		1G	1G	4	4	14
	2nd:				1B																2B		
																					1G		
	3rd:																				1B		
																						1G	1
																						1	1
Totals		2	1	3	1	4	2	5	6	4	10	5	3	3	7	2	15	5	2	3	4	1	80

The table reads, there was one pupils, a boy, who commenced school the first term of the school year, 1912-13, two pupils, a boy and a girl, who started in school in the first term of the school year, 1913-14, and one pupil, a boy, who started the second term that year, etc.

The heavy lined square indicates pupils who have made normal progress since they entered school. Those pupils to right of the heavy lined square in each respective year have made slow progress while those to the left have made rapid progress. Of the 207 pupils

there are 149, or 72 percent, who have made slow progress and 14, or 9 percent who have made rapid progress.

Table XII is supplemented by table number 1 given in appendix.<sup>1</sup> The same is the key by which it is possible to locate the number of any one of the 207 pupils. In order to ascertain who the pupil was who entered school the first term of the school year 1912-13, turn to the key and look up 1912-13, 1st term, 1B, the number to the right, 112, is the number of the pupil and so on for each case. In the case several grades have pupils enrolled for the first time in the same term, look up in the key that particular grade of the term. When there are several pupils who entered school at the same time and same grade the numbers of each pupil will be given in connection with that particular grade and time.

A list has been prepared containing the names of the 207<sup>2</sup> pupils arranged according to schools and numbered consecutively. When a pupil's number has been obtained by use of the key it remains simply to look up this particular number in the list to find the pupil's name and in what school he is. The table shows that there were 120 pupils who started in the first term of the first year in Minneapolis Schools. Of these 120 there were at the time 24 who had left the public school either permanently or for a shorter period, and two of them were found to be in grade VIB. This left 94 pupils who had all their training in Minneapolis schools and whose records were complete.

1. See appendix B.  
2. See appendix B.



The following table is a classification of the grade progress of these 94 pupils. The progress is recorded from the year and time of the year which the respective pupils entered school.

TABLE XIII

Grade Progress Classification of 94 Overage Pupils in Grade VI A, Minneapolis Schools. (Classification taken for the 3rd Quarter of the School Year 1922-23)

	Years in School	Grade VI A		Total Boys & Girls
		Boys	Girls	
	3			
Less than normal time	3 1/6			
	3 2/6	1		1
	3 3/6		1	
	3 4/6		1	1
	3 5/6			
	-----			
Normal time	5 4/6	1		1
	5 5/6			
	6	1	2	3
	6 1/6		1	1
	6 2/6	1		1
	6 3/6	2		2
	6 4/6	1	3	4
	6 5/6	1	2	3
	7	3	6	9
	7 1/6	2		2
More than normal time	7 2/6	3	3	6
	7 3/6	1	3	4
	7 4/6	5	1	6
	7 5/6	6	4	10
	8	6	1	7
	8 1/6	3	2	5
	8 2/6	2	4	6
	8 3/6	4		4
	8 4/6	3	2	5
	8 5/6	2	2	4
9	2		2	
9 1/6	1		1	
9 2/6	1	1	2	
9 3/6	1		1	
	-----			
	10	1		1
	10 2/6	1	1	2
Total		55	39	94

The table reads: One pupil, a boy, had reached grade VI A in three and two-sixth years; one pupil, a girl, had reached the same grade in three and four-sixth years, etc.

While table XIII shows the number of years spent in school by the pupils it was desirable to know the extent of the progress, rapid and slow progress.

Table XIV shows the extent of rapid and slow progress based on the time elapsed since the pupils entered school.

TABLE XIV

Extent of Rapid and Slow Progress by Sex and Percentage of 94 Overage Pupils in Grade VI A, Minneapolis Schools.

Kind of Progress:	: Years : in : School:	: Boys :	: Percent :	: Girls :	: Percent :	: Total :	: Total Percent :
Less than normal time; Rapid Progress	2 4/6	1	1.82			1	1.06
	2 3/6			1	2.56	1	1.06
	2 2/6						
	2/6	1	1.82			1	1.06
	1/6						
Normal Progress	0	1	1.82	2	5.13	3	3.19
More than normal time; Slow Progress	1/6			1	2.56	1	1.06
	2/6	1	1.82			1	1.06
	3/6	2	3.64			2	2.13
	4/6	1	1.82	3	7.69	4	4.26
	5/6	1	1.82	2	5.13	3	3.19
	1	3	5.45	6	15.41	9	9.58
	1 1/6	2	3.64			2	2.13
	1 2/6	3	5.45	3	7.69	6	6.38
	1 3/6	1	1.82	3	7.69	4	4.26
	1 4/6	5	9.09	1	2.56	6	6.38
	1 5/6	6	10.90	4	10.26	10	10.64
	2	6	10.90	1	2.56	7	7.45
	2 1/6	3	5.45	2	5.13	5	5.32
	2 2/6	2	3.64	4	10.25	6	6.38
	2 3/6	4	7.27			4	4.26
	2 4/6	3	5.45	2	5.13	5	5.32
	2 5/6	2	3.64	2	5.13	4	4.26
	3	2	3.64			2	2.13
	3 1/6	1	1.82			1	1.06
	3 2/6	1	1.82	1	2.56	2	2.13
	3 3/6	1	1.82			1	1.06
	4	1	1.82			1	1.06
	4 1/6						
4 2/6	1	1.82	1	2.56	2	2.13	
Totals		55	100	39	100	94	100

The table reads: one pupil, a boy, used two and four-sixth

years less than normal time to reach grade VI A; one pupil, a girl, used two and two-sixth years less than normal time; etc. The percentages read the say way.

The table reveals the following facts as to pupil's progress in school.

1. Three pupils, or 3.19 percent, made rapid progress.
2. Three pupils, or 3.19 percent, made normal progress, while eighty-eight pupils, or 93.63 percent, made slow progress.
3. Fifty-two boys or 94.54 percent and thirty-six girls, or 92.31 percent made slow progress.
4. The average number of years lost per slow progress boy is two years.
5. The average number of years lost per slow progress girl is 1.71 years.
6. The average number of years lost per slow progress pupil is 1.76 years.
7. Forty-seven boys, or 85.44 percent, thirty girls, or 76.93 percent, in all seventy-seven pupils, or 81.93 percent, needed one year or more than the normal time to reach grade VI A.
8. Twenty-seven boys, or 49.09 percent, Thirteen girls, or 33.52 percent, in all forty pupils, or 42.56 percent, needed two years or more than the normal time to reach grade VI A.
9. Seven boys, or 12.74 percent, Two girls, or 5.12 percent, in all nine pupils, or 9.57 percent, needed three years or more than normal time to reach grade VI A.
10. Two boys, or 3.64 percent, one girl or 2.56 percent, in all three pupils, or 3.19 percent, needed four years or more than normal time to reach grade VI A.

The facts in paragraphs 7, 8, 9 and 10 may be summarized in the following tables:

TABLE XV

Extent of Retardation of Overage Pupils in Grade VI A, Minneapolis Schools, 1922-23, 3rd Term.

	: :Boys:	:Percent: :of Boys:	:Girls:	:Percent : :of Girls:	Total	: Percent of : Total
1 year or more	47	85.44	30	76.93	77	81.93
2 years or more	27	49.09	13	33.32	40	42.56
3 years or more	7	12.74	2	5.12	9	9.57
4 years or more	2	3.64	1	2.56	3	3.19

The table reads: There were 47 boys, or 85.44 percent, who were one year or more retarded, etc.

#### CONCLUSIONS

1. The percentage of boys making slow progress is a little greater than the percentage of girls, the difference being 2.23 percent.

2. The percentage of boys who are a year or more overage is greater than the percentage of girls, the difference being 8.51 percent.

3. The percentage of boys who are two years or more overage is considerably greater than the percentage of girls, the difference being 15.77 percent.

4. The percentage of the boys who are three years or more overage is more than twice as great as the percentage of the girls, the percentage of the boys being 12.74 and that of the girls 5.12.

5. While only a slightly smaller percentage of the girls made slow progress than that of the boys there were considerably fewer girls who were retarded a great deal.

## CHAPTER V

### LOCATION OF REPETITIONS, SKIPS AND DEMOTIONS

In Chapter IV the rate of progress through the grades was studied. In this present chapter the aim will be:

1. To find the extent of repetitions, skips or demotions made per pupil.
2. To find the number of terms repeated once, twice, three, four or five times, and in which grades.
3. To find the extent of time lost per term and to find the percentage of total time lost each term.

#### REPETITIONS MADE BY OVERAGE PUPILS

The following table gives the number of repetitions made by the boys and the kind of terms repeated.

TABLE XVI

Number of Grades Repeated by 55 boys in Grade VI A, Minneapolis Schools, 3rd Term, 1922-23.

Boys	Grades Repeated		Total
	Half-year Terms	Third-year Terms	
4	3	5	8
7	1	4	5
10	3	3	6
14	2	3	5
18	2	3	5
19	1	1	2
20	0	1	1
25	2	3	5
26	3	3	6
32	0	1	1
36	0	2	2
41	2	3	5
48	4	2	6
50	2	5	7
53	2	5	7
54	2	3	5
57	3	3	6
61	0	4	4
64	2	0	2
66	4	0	4
67	1	1	2
71	0	1	1
72	3	2	5
81	2	2	4
82	2	2	4
86	2	1	3
89	2	1	3
97	1	2	3
98	1	2	3
101	0	1	1
106	0	1	1
111	3	3	6
112	3	4	7
117	3	3	6
118	4	4	8
120	2	5	7
121	0	3	3
122	0	0	0
123	1	1	2
129	2	3	5
132	1	3	4
138	3	1	4
139	3	4	7
140	2	2	4
142	0	0	0
146	2	4	6

Continued on next page:



TABLE XVI Continued:

Boys	Grades Repeated		Total
	Half-year Terms	Third-year Terms	
160	1	0	1
161	3	2	5
167	3	3	6
171	2	2	4
175	3	2	5
177	2	3	5
178	6	0	6
179	3	1	4
201	3	1	4
Totals	126	137	263

The table reads: pupil number four repeated three half-year terms and five third-year terms, in all eight terms, etc. In order to find pupil's name and in what school he attended look up the pupil's number in the pupil's list.<sup>1</sup>

The following facts are observed from the above table:

1. There were 263 terms repeated by 55 boys, the average number of terms repeated per boys is 4.78.

2. There is one boys who repeated 10 terms, one 9 terms, four 8 terms, five 7 terms, eight 6 terms, thirteen 5 terms, ten 4 terms, five 3 terms, three 2 terms, three 1 term, and two of them had not repeated any term.

3. The number of half year repeats is slightly smaller than is the number of third year repeats, the former is 126 and the latter is 137, a difference of 11 terms.

1. See appendix B.

The following table gives the number of repetitions made by the girls and the kind of terms repeated.

TABLE XVII

Number of Grades Repeated by 39 Girls in Grade VI A, Minneapolis Schools, 1922-23, 3rd Term.

Girls	Grades Repeated		Total
	Half-year Terms	Third-year Terms	
1	1	4	5
2	0	0	0
5	1	3	4
12	1	3	4
13	3	2	5
23	0	0	0
42	2	1	3
43	2	2	4
44	2	1	3
55	3	3	6
75	4	4	8
84	1	3	4
83	1	0	1
84	1	1	2
85	3	1	4
88	3	1	4
103	2	0	2
107	2	4	6
108	2	2	4
110	4	2	6
113	0	2	2
136	1	2	3
126	3	2	5
131	0	3	3
134	3	4	7
137	0	3	3
143	3	5	8
145	0	3	3
147	2	4	6
152	1	4	5
156	2	1	3
158	0	3	3
176	0	0	0
183	2	4	6
191	4	0	4
193	6	4	10
197	2	4	6
198	2	1	3
205	2	5	7
Totals	68	91	159

The table shows that:

1. There were 159 terms repeated by 39 girls, the average number of terms repeated per girl is 4.08.

2. There is one girl who repeated ten terms or grades, two 8 terms, two 7 terms, six 6 terms, four 5 terms, six 4 terms, ten 3 terms, four 2 terms, one 1 term and three of them had not repeated any terms.

3. The number of half-year repetitions is smaller than the number of third-year repetitions, the former is 68 while the latter is 91. Hence, there appears to be a greater number of repetitions since the quarter system school year was adopted.

The following table is a summary statement of the extent of repetitions made by the 94 pupils who are more than a year over-age in grade VI A, Minneapolis schools, 1922-23, 3rd term.

TABLE XVIII

A Comparison Between the Extent of Repetitions Made by 55 Boys and by 39 Girls.

Number of Terms Repeated:	Number of Boys	Percentage of Boys	Number of Girls	Percentage of Girls
10	1	1.82	1	2.56
9	1	1.82	0	
8	4	7.27	2	5.13
7	5	9.09	2	5.13
6	8	14.55	6	15.39
5	13	23.64	4	10.26
4	10	18.19	6	15.39
3	5	9.09	10	25.64
2	3	5.45	4	10.26
1	3	5.45	1	2.56
0	2	3.63	3	7.68
Totals	55	100	39	100

The table reads: one boy repeated ten times, one boy repeated nine times, etc.

CONCLUSIONS.

1. The average number of terms repeated is greater for the boys than for the girls, the average number of terms repeated per boy being 4.78 and per girl 4.08, a difference of .70 of a term.

2. The percentage of boys repeating as many as four, five, seven, eight and nine terms is larger for the boys than the percentage for the girls in the same extent of repetition, while the percentage of boys who repeated six and ten terms is smaller than the same for the girls. The difference however is very slight, being less than one percent in either case. Hence fewer girls than boys repeat a large number of terms.

3. The percentage of the girls who repeated three terms and two terms is greater than that of the boys. While the percentage of girls who repeat only one term is smaller than that of boys, the number of pupils repeating only one term as well as the number repeating ten terms is very small. Hence there are fewer boys who repeat a small number of the terms than girls.

4. The percentage of girls who do not repeat is greater than that of the boys.

SKIPS MADE BY OVERAGE PUPILS

The following table shows who of the 94 pupils skipped grades, the number and kind of grades skipped.

TABLE XIX

Showing Who of the 94 Overage Pupils in Grade VI A, Minneapolis Schools, 1922-23, 3rd Term, Skipped Grades and the Number of Grades Skipped.

Pupils	Terms Skipped		Total
	Half-year Terms	Third-year Terms	
Boys			
19	1		1
32		2	2
36		1	1
41		1	1
48		1	1
53		1	1
67		1	1
86		1	1
98		1	1
111		1	1
129		1	1
132		1	1
142		2	2
161		1	1
177		1	1
201		1	1
Total (16 boys)	<u>1</u>	<u>23</u>	<u>24</u>
Girls			
44		1	1
55		1	1
83		1	1
103		1	1
126		1	1
128		1	1
143		1	1
176		7	7
198		1	1
Total (9 girls)		<u>15</u>	<u>15</u>

The table reads: one pupil, a boy, skipped one half-year grade, one pupil, a boy, skipped two third-year grades; etc.

The table shows the following facts regarding skipping:

1. There were 24 terms skipped by 55 boys, the average number of terms skipped per boy is .44 and there were 15 terms skipped by 39 girls, the average number of terms skipped per girl is .38.

2. There was one boy who skipped as many as 8 terms and one girl who skipped as many as 7 terms, and one boy who skipped 2 terms. The rest of the pupils, 22 in all, skipped only one term each.

3. There were 39 boys among the 55, or 70.99 per cent, who did not skip any grade, among the 39 girls there were 9, or 23.08 per cent.

#### CONCLUSIONS:

1. The average amount of time skipped by the boys was .44 of a term, for the girls .38 of a term.

2. The average number of terms skipped per pupil is practically the same for the boys and for the girls, the difference being only .06 of a term.

3. The percentage of girls who did not skip any term is slightly greater than that of the boys, the difference being 5.93 percent.

4. All the skips, with the exception of one, are third-year term skips. That is there were practically no skips made by these overage pupils previous to the introduction of the quarter system, school year in 1918-1919.

#### DEMOTION AMONG THE OVERAGE PUPILS

There were a few pupils among the 94 who were demoted during the progress thru the grades to grade VI A. The following table shows who of the 94 overage pupils were demoted.

TABLE XX

Showing Who of the 94 Overage Pupils in VI A, Minneapolis Schools, 1922-23, 3rd Term, were Demoted and the Number of Grades Demoted.

Pupils	Grades		Total
	Half-year	Third-year	
Boys			
48		1	1
72	1		1
112	1	1	2
120		1	1
Total (4 boys)	<u>2</u>	<u>3</u>	<u>5</u>
-----			
Girls			
137		1	1
183	1		1
197		1	1
Total (3 girls)	<u>1</u>	<u>2</u>	<u>3</u>

The table reads: one pupil, a boy, was moved back one third-year term, etc.

The following facts are observed from the above table with respect to demotion.

There was one pupil, a boy, who was demoted two terms, a half-year term and a third-year term; the rest of the pupils were demoted but once.

There were five boys out of the 55, or 9.09 per cent, who were demoted and three girls, or 7.59 percent.

Demotion occurred four times in the half-year grades and five times in the third year grades.

CONCLUSIONS:

1. The amount of demotions per pupil is not large, limited to one term per pupil, except in the case of one pupil.
2. The percentage of boys demoted is a little greater than

that of the girls but the difference is only 1.5 percent and not large enough to be marked.

3. There is practically no difference as to the number of times pupils were demoted during the half-year term system and the quarter system.

4. There is no indication that the pupils were demoted oftener when the quarter system school year was introduced than before but the number of demotions, being only four previous to the change and only five after the change is too small to determine anything definitely.

#### REPETITIONS AND SKIPS IN TERMS OF SCHOOL YEARS.

Thus far the number and kind of terms repeated or skipped have been discussed. Because of the fact that the pupils included in this study attended school both before and after the introduction of the quarter system in Minneapolis schools it is necessary to deal both with the number of terms and the equivalent in years. The repetitions and skips will now be dealt with in terms of years.

The following table gives the extent of school work repeated and the extent of school work skipped in terms of years for the group of 55 boys. In order to conveniently find the actual time lost or gained per pupil in terms of years, the years repeated and the years skipped are given in the same table.



TABLE XXI

Showing Extent of School Work Repeated and Extent of School Work Skipped in Terms of Years by 55 Boys in Grade VI A, Minneapolis Schools, 1922-23, 3rd Term.

Pupil's Number (Boys)	Years Repeated	Years Skipped	Actual Time Lost in School Years	Actual Time Gain- ed in School Years
4	3 1/6		3 1/6	
7	1 5/6		1 5/6	
10	2 1/2		2 1/2	
14	2		2	
16	2		2	
19	1 1/6	1/2	2 2/3	
20	1 1/3		1 1/3	
25	2 2/3		2 2/3	
26	2 1/2		2 1/2	
32	1 1/3	2 2/3	0	1/3
33	2 1/6	1/3	1 5/6	
41	2	1/3	1 2/3	
48	3 1/3	1/3	3	
50	2 2/3		2 2/3	
53	2 2/3	1/3	2 1/3	
54	2		2	
57	3 1/6		3 1/6	
61	1 1/3		1 1/3	
64	1		1	
66	2		2	
67	5/6	1/3	1 1/2	
71	1		1	
72	2 1/6		2 1/6	
81	1 2/3		1 2/3	
82	2		2	
86	1 2/3	1/3	1 1/3	
90	1 1/3		1 1/3	
97	1 1/6		1 1/6	
98	2 2/6	1/3	1 5/6	
101	2 5/6		2 5/6	
108	2		4	
111	2 1/2	1/3	2 1/6	
112	4 1/3		4 1/3	
117	2 1/2		2 1/2	
118	3 1/3		3 1/3	
120	2 2/3		2 2/3	
121	1		1	
122	0		0	
123	5/6		5/6	
129	2	1/3	1 2/3	
132	1 1/2	1/3	1 1/6	
138	1 5/6		1 5/6	
139	2 5/6		2 5/6	
140	1 2/3		1 2/3	
142	0	2 2/3	0	2 2/3

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TABLE XXI Continued:

Pupil's Number (Boys)	Years Repeated	Years Skipped	Actual Time Lost in School Years	Actual Time Gain- ed in School Years
146	2 1/3		2 1/3	
160	1/2		1/2	
161	2 1/6	1/3	1 5/6	
167	2 1/2		2 1/2	
171	1 2/3		1 2/3	
175	2 1/6		2 1/6	
177	2	1/3	1 2/3	
178	3		3	
179	1 5/6		1 5/6	
201	1 5/6	1/3	1 1/3	
Totals	108 2/3	8 1/6	103 1/2	3

The table reads: one pupil, pupil number 4, repeated 3 1/6 years of school work; one pupil, number 19, repeated 1 1/6 years of school work and skipped 1/2 year, the actual loss of time was 2/3 of a year; etc.

The table shows the following facts as to school time lost or gained by boys:

1. There were 52 boys out of 55, or 94.54 percent, who lost time, the most time any one pupil lost was 4 1/3 years and the least time any one pupil lost was 1/3 of a year. The number of years lost and number of boys losing the respective amounts of time is as follows:

2. There were two boys, or 3.63 percent who had gained time. One had gained 2 2/3 years and the other 1/3 year.

3. One boy, or 1.81 percent, had neither lost nor gained time.

4. The amount of school time lost and the number of boys losing the respective amounts of time were as follows:

TABLE XXII

Amount of School Time Lost and the Number of Boys who Lost the Respective Amounts.

School Years:	4 1/3	4	3 1/3	3 1/6	3	2 5/6	2 2/3	2 1/3	2 1/3	2 1/6
---------------	-------	---	-------	-------	---	-------	-------	-------	-------	-------

Number of Boys	1	1	1	2	2	3	3	4	2	3
----------------	---	---	---	---	---	---	---	---	---	---

School Years:	2	1 5/6	1 2/3	1 1/2	1 1/3	1 1/6	5/6	2/3	1/2	1/3
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Number of Boys	5	6	6	1	3	2	1	1	2	1
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The following table gives the extent of school work repeated and the extent of school work skipped in terms of years for the 39 girls in the group of 94 pupils.

TABLE XXIII

Showing Extent of School Work Repeated and Extent of School Work Skipped in Terms of Years by 39 Girls in Grade VI A, Minneapolis Schools, 1922-23, 3rd Term.

Pupil's Number (Girls)	Years Repeated	Years Skipped	Actual Time Lost in School Years	Actual Time Gained in School Years
1	1 5/6		1 5/6	
2	0		0	
5	1 1/2		1 1/2	
12	1 1/2		1 1/2	
13	2 1/6		2 1/6	
23	0		0	
42	1 1/3		1 1/3	
43	2/3		2/3	
44	1 1/3	1 1/3	1	
55	2 1/2	1/3	2 1/6	
75	3 1/3		3 1/3	
84	1 1/2		1 1/2	
93	1/2	1/3	1/6	

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TABLE XXIII Continued:-

Pupil's Number (Girls)	Years Repeated	Years Skipped	Actual Time Lost in School Years	Actual Time Gain- ed in School Years
94	5/6		5/6	
95	1/3		1/3	
98	1 5/6		1 5/6	
103	1	1/3	2/3	
107	2 1/3		2 1/3	
109	1 2/3		1 2/3	
110	2 2/3		2 2/3	
113	2/3		2/3	
126	1 1/6	1/3	5/6	
128	2 1/6	1/3	1 5/6	
131	1		1	
134	2 5/6		2 5/6	
137	1		1	
143	3 1/6	1/3	2 5/6	
145	1		1	
147	2 1/3		2 1/3	
152	1 5/6		1 5/6	
156	1 1/3		1 1/3	
158	1		1	
176	0	2 1/3	0	2 1/3
183	2 1/3		2 1/3	
191	2		2	
193	4 1/3		4 1/3	
197	2 1/3		2 1/3	
198	1 1/3	1/3	1	
205	2 2/3		2 2/3	
Totals	64 2/6	5	61 4/6	2 1/3

The table reads:

One pupil, pupil No. 94, repeated 5/6 of a school year, etc.

The table shows the following facts as to school time lost or gained by girls.

1. There were 36 girls out of the 39, or 92.31 percent who lost time.
2. There was one girl, or 2.56 percent, who had gained time, 2 1/3 years.
3. Two girls, or 5.12 percent had neither lost nor gained time.

4. The amount of time lost and the number of girls losing the respective amounts of time is as follows:

TABLE XXIV

Amount of School Time Lost and the Number of Girls Who Lost the Respective Amounts.

School Years-	4 1/3	3 1/3	2 5/6	2 2/3	2 1/3	2 1/6	2	1 5/6	1 2/3
Number of Girls	1	1	2	2	4	2	1	4	1
School Years-	1 1/2	1 1/3	1	5/6	2/3	1/6			
Number of Girls	3	3	6	2	3	1			

For the purpose of comparison a summary table has been prepared, giving the net amount of time in years lost or gained, and the number of pupils for the respective amounts of time.

TABLE XXV

A Comparison Between the Net Amount of Time in Years Lost or Gained by 55 boys and by 39 girls.

Years	Number of Boys	Percent-age	Number of Girls	Percent-age	Total Pupils	Percentage of Totals
4 1/3	1	1.82	1	2.56	2	2.13
4	1	1.82			1	1.06
3 1/3	1	1.82	1	2.56	2	2.13
3 1/6	2	3.64			2	2.13
3	2	3.64			2	2.13
2 5/6	2	3.64	2	5.13	4	4.26
2 2/3	3	5.45	2	5.13	5	5.32
2 1/2	4	7.27			4	4.26
2 1/3	2	3.64	4	10.27	6	6.38
2 1/6	3	5.45	2	5.13	5	5.32
2	5	9.09	1	2.56	6	6.38
1 5/6	6	10.90	4	10.27	10	10.64
1 2/3	6	10.90	1	2.56	7	7.45
1 1/2	1	1.82	3	7.69	4	4.26
1 1/3	3	5.45	3	7.69	6	6.38
1 1/6	2	3.64			2	2.13
1	3	5.45	6	15.38	9	9.57
5/6	1	1.82	2	5.13	3	3.19
2/3	1	1.82	3	7.69	4	4.26
1/2	2	3.64			2	2.13
1/3	1	1.82			1	1.06
1/6			1	2.56	1	1.06
0	1	1.82	2	5.13	3	3.19
1/3	1	1.82			1	1.06
2 1/3			1	2.56	1	1.06
2 2/3	1	1.82			1	1.06
Totals	55	100	39	100	94	100

The table reads: One boy, or 1.82 percent of the boys, and one girl, or 2.56 percent of the girls lost 4 1/3 years of school work, etc.

The table shows that:

1. The percentage of boys who lost more than one year's

school work was larger in connection with the following years overage:  
4, 3 1/6, 3, 2 2/3, 2 1/2, 2 1/6, 2, 1 5/6, 1 2/3 and 1 1/6 years  
than is the percentage of the girls for the same ages, while for ages  
4 1/3, 3 1/3, 2 5/6, 1 1/2 and 1 1/3 years the percentage of the  
girls was larger than that of the boys.

2. The percentage of boys who lost one year or less was  
smaller than that of the girls.

3. The percentage of boys who neither lost nor gained was  
smaller than that of the girls.

4. The percentage of boys who gained time was slightly  
less than that of the girls.

#### CONCLUSIONS:

1. The extreme cases of loss of time were fewer among the  
girls than among the boys.

2. The percentage of girls who neither lost nor gained  
time was greater than the percentage of boys.

3. The percentage of girls who gained time was greater  
than the percentage of boys.

#### EXTENT OF REPETITIONS

It is of value in connection with the study of repetition  
of school work to know what number of pupils who repeated a term  
once, twice, three times, or more.

In order to show the number of terms repeated once, twice,  
et., as well as the number of pupils who did, tables XXVI and XXVII  
have been prepared. It was necessary to prepare two tables because  
there were two kinds of terms repeated, the half-year term and the  
three-year term.

TABLE XXVI

Showing The Number of Times Half-year Germs were Repeated Once, Twice, Three, Four or Five Times by 94 Pupils More Than a Year Overage.

Times Repeated	Grades														Total		
	1B	1A	2B	2A	3C	3B	3A	4C	4B	4A	5C	5B	5A	6C		6B	6A
<u>Once</u>																	
Boys	27	17	19	9		7	1		1		1	1					83
Girls	18	11	10	6		3	1										49
<u>Twice</u>																	
Boys	10	1	2	1													14
Girls	5	1	0	2													8
<u>Three Times</u>																	
Boys	2																2
Girls	1																1
<u>Four Times</u>																	
Boys	1																1
Girls																	
<u>Five Times</u>																	
Boys	1																1
Girls																	
<u>Total Number of Terms</u>																	
	93	32	33	21		10	2		1		1	1					194

The table reads: In 1 B there were 27 repetitions by boys and 18 repetitions by girls, etc.



TABLE XXVII

Showing The Number of Terms Third-year Terms Were Repeated Once, Twice, Three, Four, or Five Times by 94 Pupils More Than a Year Overage and Which Grades were Repeated While They Progressed Thru the Grades I to VI A, in Minneapolis Schools.

Times Repeated	Grades															Total	
	1B	1A	2B	2A	3C	3B	3A	4C	4B	4A	5C	5B	5A	6C	6B		6A
<u>Once</u>																	
Boys		2	4	1	7	7	12	17	9	7	7	8	15	7	5		108
Girls			3		6	6	5	5	5	5	6	8	9	5	11		76
<u>Twice</u>																	
Boys						3	1	1	1		1	2	1	2		1	13
Girls						1	1				2	1			1		6
<u>Three Times</u>																	
Boys									1								1
Girls										1							1
<u>Four Times</u>																	
Boys																	
Girls																	
<u>Five Times</u>																	
Boys																	
Girls																	
<u>Total</u>		2	7	1	21	19	19	27	17	18	19	18	28	14	16		228

The table reads: In II B there were 2 repetitions by boys and none by girls, etc.

1. It will be observed that the number of terms repeated once, twice, three, four or five times is proportionally the same for boys and for girls.

2. The extent of repetition is practically the same for the half-year term period as that for the third-year term period.

3. The great bulk of repetitions are single repetitions. Approximately one-fifth only of them are double repetitions.

4. There was one pupil who repeated a term as many as four times and another pupil five times.

The following table gives the total number of repetitions for each grade and percentage. In this table the number of terms includes both the half-year term and the third-year term.

TABLE XVIII

Location of Repetitions by Term and Percentage, Made by 94 Overage Pupils (55 boys and 39 girls) While They Progressed Through the Grades I to VI A, in Minneapolis Schools.

Terms	:Location: :of Repe- :made by :55 Boys :	Percent :of Repe- :made by :55 Boys : :Per Term:	:Location: :of Repe- :made by :39 Girls :	Percent :of Repe- :made by :39 Girls : :Per Term:	:Location of :Repetitions :Made by Boys :and Girls :Combined	:Percent of :Repetitions :Made by Boys :and Girls :Combined :Per Term
1B	62	23.6	31	19.5	93	22
1A	19	7.2	13	8.2	32	7.6
2B	25	9.5	10	6.2	35	8.3
2A	15	5.7	13	8.2	28	6.6
3C	1	.3	0	0	1	2.2
3B	20	7.5	11	6.9	31	7.4
3A	10	3.8	11	6.9	21	5.
4C	14	9.4	5	3.1	19	4.5
4B	23	8.8	5	3.1	28	6.6
4A	9	3.4	8	5.	17	4.1
5C	10	3.8	9	5.7	19	4.5
5B	12	4.6	8	5.	20	4.7
5A	10	3.8	8	5.	18	4.3
6C	19	7.2	9	5.7	28	6.6
6B	7	2.7	7	4.5	14	3.3
6A	7	2.7	11	6.9	18	4.3
Total	263	100	159	100	422	100
Average Number of Repe- titions Per Pupil	4.77		4.08		4.49	

The table reads: In I B there were among the 55 boys 62 repetitions, 23.6 percent and among the 39 girls 31 repetitions, 19.5 percent, and a total of 93 repetitions, 22 percent for the boys and girls combined, etc.

The table shows that,

1. The greatest percentage of repetitions made either by girls or by boys is that of the first term in school.
2. The percentage of repetitions in the other grades vary comparatively little, ranging from 0 to 9.5; the fact that grade III C has so few repetitions is due to the fact that the majority of these 94 pupils were beyond grade III C at the time the quarter system was adopted.
3. The variation in percentage in the respective grade is about the same for the boys and for the girls.
4. The average number of repetitions per boys is 4.77 and per girl is 4.08.

Table XIX gives the number of years lost for each grade and percentage.

TABLE XIX

Location of Total Repeats in Terms of Years and Percentage Made by 94 Overage Pupils (55 boys and 39 girls) While They Progressed Through the Grades I to VI A, Minneapolis Schools.

	:Number :of Years :Lost Each :Term by :55 Boys :	:Percentage :of Years :Lost Each :Term by :55 Boys :	:Number :of Years :Lost :Each :Term by :39 Girls :	:Percentage :of Years :Lost Each :Term by :39 Girls :	:Number :of Years :Lost :Each :Term, :Boys :and Girls :Combined :	:Percentage :of Years :Lost Each :Term by :Boys :and Girls :Combined :
1B	31	28.5	15 1/2	24.1	46 1/2	26.9
1A	9 1/2	8.8	6 1/2	10.1	16	9.2
2B	12 1/6	11.2	5	7.8	17 1/6	9.9
2A	6 5/6	6.3	6	9.3	12 5/6	7.4
3C	1/3	.3	0	0	1.3	.2
3B	7 5/6	7.2	4 1/6	6.5	12	6.9
3A	3 1/2	3.2	3 5/6	6	7 1/3	4.2
4C	4 2/3	4.3	1 2/3	2.6	6 1/3	3.7
4B	7 5/6	7.2	1 2/3	2.6	9 1/2	5.5
4A	3	2.8	2 2/3	4.1	5 2/3	3.3
5C	3 1/2	3.2	3	4.7	6 1/2	3.8
5B	4 1/6	3.8	2 2/3	4.1	6 5/6	3.9
5A	3 1/3	3.	2 2/3	4.1	6	3.5
6C	6 1/3	5.8	3	4.7	9 1/3	5.4
6B	2 2/3	2.2	2 1/3	3.6	4 2/3	2.7
6A	2 1/3	2.2	3 2/3	5.7	6	3.5
	108 2/3	100	64 1/3	100	173	100.
Average Number Years Lost	1.98		1.65			

The table reads: In grade I B 31 school years were lost by the group of 55 boys, that is, 28.5 percent of the time lost by the group, etc.

The following facts are observed from the table:

1. In the lower grades where the bulk of the repetitions were half-year terms, the percentage per term is greater when based on years lost in school work than is the case when based on the num-

ber of terms while the opposite is the case in the grades beyond 4B where the bulk of the repeats were third year terms.

2. The greatest loss of time both for the boys and the girls is in grade I B, averaging 26.9 percent. Grades II B and I A rank second and third as to percentage of time lost per term, averaging 9.9 and 9.2 percent respectively.

3. The average percentage of loss of time for both boys and girls is higher for the first term of the school year than for the last term.

4. The range of percentage of years lost per term in grades beyond I B for boys is .3 and 11.2 years while for the girls it is 0 to 6.5 years.

5. The average number of years lost per boys is 1.96 and per girl is 1.65.

Table XXX shows in which grades skips were made giving the number and percentage. Being that only one skip occurred before the introduction of the quarter system the percentage of the respective grades are the same whether based on the number of terms or based on the number of years gained.

TABLE XXX

Location of Skips Made by 94 Overage Pupils (55 boys and 39 girls) While They Progressed Thru the Grades I to VI A, Minneapolis Schools, Giving the Number of Skips and Percentage Per Grade.

Terms:	55 Boys	Percent of Skips Made by 55 Boys	39 Girls	Percent of Skips Made by 39 Girls	Boys and Girls Combined	Percent of Skips Made by Boys and Girls Combined
1B	1	4.2	1	6.7	2	5.1
1A	1( $\frac{1}{2}$ yr)	4.2	1	6.7	2	5.1
2C	1	4.2	1	6.7	2	5.1
2B	1	4.2	1	6.7	2	5.1
2A	1	4.2	1	6.7	2	5.1
3C	2	8.3	1	6.7	3	7.7
3B	3	12.4			3	7.7
3A	2	8.3	2	13.3	4	10.3
4C	4	16.7	1	6.7	5	12.9
4B	4	16.7	2	13.3	6	15.4
4A						
5C						
5B			1	6.6	1	2.6
5A	2	8.3	1	6.6	3	7.7
6C	2	8.3			2	5.1
6B			2	13.3	2	5.1
6A						
	24	100	15	100	39	100
Average Number of Skips Per Pupil	.44		.38		.41	

The table reads: In I B one skip, or 4.2 percent was made by the boys, one skip, or 6.7 percent was made by the girls, etc.

All skips except one (marked 1/2 year) are third year terms.

1. It will be observed that practically all the skips occurred after the adoption of the quarter-system school plan.

2. The skips are more numerous from grade III C on. This is due to the fact that but a very few of the 94 pupils had any third term school work below III C.

3. The average number of skips for boy is .44 and for girl is .38.

#### CONCLUSIONS

1. The average number of terms repeated by boys in the group of average pupils was 4.78 and the same for the girls was 4.08 in six years.

2. There are fewer girls who repeat a large number of terms than boys.

3. There are fewer boys who repeat a small number of terms than girls.

4. There are more girls than boys who do not repeat.

5. The average time gained per average pupil is less than one-half term in six years.

6. There is practically no difference between boys and girls as to number of terms skipped.

7. More skips were made since the introduction of the quarter-



ter system school year than formerly.

8. Less than ten percent of the overage pupils were demoted.

9. The big bulk of repetitions are single repetitions.

10. The overage pupil has the greatest difficulty with the first year's work.

11. The girls have less trouble with the work in the first term than the boys.

## CHAPTER VI

### SCHOLARSHIP AS SHOWN BY TEACHER'S MARKS AND ACHIEVEMENT TEST SCORES

#### SCHOLARSHIP AS SHOWN BY TEACHER'S MARKS

The teacher's marks gathered in this study of the 207 over-  
age pupils in grade VI A Minneapolis Schools for the school year 1922-  
23 are the term marks for the second term of that year. The value of  
these marks will undoubtedly vary, be different, in the respective  
schools. The 207 pupils were attending school at the time in 57 differ-  
ent schools in the city. A teacher in valuating an overage pupil who  
is mentally slow and retarded will be affected more or less by the  
class of pupils enrolled in her particular school. In certain sect-  
ions of the city there are a great number of foreigners who are not,  
as yet, Americanized. Schools located in such centers will have  
a large percentage of pupils whose work will be of a low standard.  
Overage pupils whose intelligence quotient is low will naturally  
be less conspicuous in a school where the majority of the pupils are  
bright and accelerated. For this reason the scholarship marks given  
by the pupils are not as objective as are the marks obtained from a  
standardized achievement test. These marks, however, have their  
value and are of sufficient interest to be included in a study of  
the characteristics of overage pupils. The marks are the teacher's  
estimation of the pupil's accomplishments in school. While they are  
not objective in the sense that the achievement test scores are they  
nevertheless give the teacher's estimations as to who of these over-  
age pupils are doing school work comparable to the Best pupils, next

best, etc.

The fact that at least 57 teachers have contributed these scholarship marks increases their value and eliminates the effects of the teacher's personal likes and dislikes for the average pupil working under difficulties.

The aim in this study of scholarship marks is not to investigate as to the kind of work accomplished subject by subject. Such a study would involve the marks given for several terms. This study is based upon the average scholarship mark received for subjects taken during one term.

The aim may be given in the form of three questions:

1. Do pupils who have had all their training in Minneapolis schools obtain better school marks than pupils who have had part of their training outside of the Minneapolis schools, or visà versa?
2. Do boys do better schoolwork than the girls or visa versa?
3. What proportion of the average pupils receive A, B, C, D, or F marks on their school work?

Table XXXI gives the number of "A", "B", "C", "D", and "F" scholarship marks received by average pupils in the respective elementary school subjects and table XXXII gives the total number and percentage of "A", "B", "C", "D" and "F" scholarship marks received.

TABLE XXXI

Distribution of A, B, C, D and F Scholarship Marks Received by 196 Overage Pupils, 109 Boys and 87 Girls in Elementary School Subjects Given in Grade VI A, Minneapolis Schools, 1922-23, 3rd Term.

	Read- ing :	Spell- ing :	Lang- uage :	Arith- metic :	Geog- raphy :	His- tory :	Writ- ing :	Draw- ing :	Music
<b>A</b>									
Boys I <sup>a</sup>	2	6	0	3	3	3	2	7	2
Boys II <sup>b</sup>	3	11	1	2	4	4	2	7	3
Girls I	1	9	0	2	2	2	3	5	8
Girls II	1	17	2	2	3	0	3	4	6
<b>B</b>									
Boys I	11	12	3	6	7	9	12	11	10
Boys II	22	17	8	9	15	14	12	19	17
Girls I	10	13	8	7	8	6	12	13	12
Girls II	17	15	16	14	9	11	20	18	7
<b>C</b>									
Boys I	2	15	30	24	22	19	27	22	23
Boys II	19	12	27	20	17	24	26	19	21
Girls I	20	11	21	13	12	20	21	17	16
Girls II	20	23	22	14	22	22	24	18	25
<b>D</b>									
Boys I	12	5	10	9	11	10	8	5	10
Boys II	5	10	18	11	11	5	14	5	17
Girls I	3	4	6	5	8	3	3	2	2
Girls II	7	2	8	7	8	8	1	5	6
<b>F</b>									
Boys I	6	14	9	10	9	6	3	4	2
Boys II	7	10	4	13	9	4	2	1	2
Girls I	5	2	3	10	10	6	0	0	1
Girls II	4	2	0	10	7	4	0	0	2

- a. Group I includes pupils who have had all their training in the Minneapolis schools.
- b. Group II includes pupils who have had part of their training outside of Minneapolis schools.

The table reads: Two "A's" were obtained in reading by boys in group I, three "A's" by boys in group II, one "A" by girls in group I and one "A" by girls in group II, etc.

TABLE XXXII

Showing Total Number and Percentage of A, B, C, D or F Scholarship Marks Received by 196 Overage VI A grade Pupils, 109 Boys and 87 Girls in Reading, Spelling, Language, Arithmetic, Geography, History, Writing, Drawing and Music in the Elementary Schools of Minneapolis, Minnesota, 1922-23, 3rd Term.

	1	2	3	4	5	6
	Number of	Per-	Number of	Per-	Number of	Percent-
	Scholar-	cent-	Scholar-	cent-	Scholar-	age
	ship Marks:	age	ship Marks:	age	ship Marks:	
	:	:	:	:	Boys and	:
	:	:	:	:	Girls	:
<b>A</b>						
Boys I <sup>a</sup>	28	6.4	65	6.9	135	7.9
Boys II <sup>b</sup>	37	7.5				
Girls I	32	9.3	70	9.		
Girls II	38	8.7				
<b>B</b>						
Boys I	81	18.6	204	21.8	420	24.6
Boys II	123	24.8				
Girls I	89	25.8				
Girls II	127	29.1	216	27.7		
<b>C</b>						
Boys I	185	42.3	370	29.7	711	41.5
Boys II	185	27.4				
Girls I	151	43.8	341	43.7		
Girls II	190	43.6				
<b>D</b>						
Boys I	80	18.3	176	18.8	264	15.4
Boys II	96	19.4				
Girls I	36	10.5	88	11.3		
Girls II	52	11.9				
<b>F</b>						
Boys I	63	14.4	117	12.8	182	10.6
Boys II	54	10.9				
Girls I	36	10.5	65	8.3		
Girls II	29	6.6				
	1712		1712		1712	

- a. Column marked "Boys I" are all the scholarship marks which boys who had had all their training in Minneapolis schools received.
- b. Column marked "Boys II" are all the scholarship marks which boys who had had part of their training outside of the Minneapolis school system received. Same explanation for columns marked "Girls I" and "Girls II".

The table XXXII reads: The total number of "A" scholarship marks received by boys who had had all their training in Minneapolis schools were 28 or 6.4 percent of the total 437 scholarship marks received by this group. The total number of "A" scholarship marks received by boys who had had part of their training outside of the Minneapolis schools were 37 or 7.5 percent of the total 495 scholarship marks received by this group. The total number of "A" scholarship marks received by girls who had received all their training in Minneapolis schools were 28 or 9.3 percent of the total 344 scholarship marks received by this group. The total of "A" scholarship marks received by girls who had had part of their training outside of Minneapolis schools were 38 or 8.7 percent of the 436 scholarship marks received by this group, etc.

Columns 3 and 4 give the number of scholarship marks and percentage received by boys and girls. Columns 5 and 6 give the combined number of scholarship marks and percentages received by boys and girls.

1. It will be observed from columns 1 and 2 of table XXXII that a slightly larger percentage of "A" scholarship marks were received by pupils who have had part of their training outside of Minneapolis school system than the percentage received by pupils who have had all their training in the Minneapolis Schools. The same was also the case with "B" marks. The percentage of "C" and "D" marks received by the two respective groups is practically the same. While a slightly smaller percentage of "F" marks were received by pupils who have had part of their training outside of the Minneapolis school system than the percentage received by pupils who have had all their

training in the Minneapolis school system.

2. Columns 3 and 4 show that a larger percentage of "A", "B" and "C" marks are received by the girls than the percentage received by the boys, while a smaller percentage of "D" and "F" marks are received by the girls than the percentage received by the boys.

3. Columns 5 and 6 show that the distribution of "A", "B", "C", "D" and "F" scholarship marks for 196 average pupils is practically according to the normal distribution curve.

#### CONCLUSIONS:

1. Pupils who have had part of the training outside of the Minneapolis Schools receive slightly better scholarship marks than do pupils who have had all their training in Minneapolis Schools.

2. The girls receive better scholarship marks than the boys.

3. There is a normal distribution of the scholarship marks given by the teachers.

### ACHIEVEMENT TESTS

The aims in the study of the achievement test scores are:

1. To compare the accomplishment of the two groups of average pupils, those who have had all their training in the Minneapolis schools, and those who have had part of their training elsewhere.
2. To compare the accomplishment of the boys and the girls.
3. To compare the scores with the standard scores and with the Minneapolis scores for the same grade.

### ARITHMETIC TEST.

Pupils taking the Curtis Supervisory Arithmetic Test are grouped into five sections. The five groups are (1) Children of standard ability, (2) Children for whom regular work will furnish sufficient drill, (3) Children in need of thorough drill, (4) Children who need special attention and extra drill, and (5) Children for whom some special adjustment is needed. The grouping is based on the score obtained in the test.



The following table gives the number of points obtained by overage pupils in each of the five groups of the Courtis Supervisory Arithmetic Test A.

TABLE XXXIII

Tabulation of Scores Obtained in Courtis Supervisory Arithmetic Test A by 175 Overage Pupils in Grade VI A, Minneapolis Schools, 1922-23, 3rd Term.

Group	Boys		Girls		Boys	Girls	Total
	I <sup>a</sup>	II <sup>b</sup>	I	II	I&II	I&II	Boys and Girls
I	60	80	170	120	70	140	100
II	333	333	306	360	333	333	333
III	217	259	238	147	238	189	217
IV	76	32	44	84	56	68	60
V	0	0	0	0	0	0	0
Totals	686	704	758	711	697	730	710

a. "I" includes the scores of pupils who have had all their training in the Minneapolis schools.

b. "II" includes the scores of pupils who have had part of their training outside of the Minneapolis schools.

The table reads: The total number of points obtained in group I by boys who had all their training in Minneapolis schools were 60, that of boys who had had part of their training elsewhere 80, etc.

The table shows:

1. The total number of points received by the boys who had had all their training in the Minneapolis schools is slightly smaller than the number of points obtained by the boys who had had part of their training elsewhere, while among the girls the reverse

is the condition. The difference, however, is insignificant.

2. The girls have 33 more points in the total number than the boys.

3. The total number of points obtained by all the pupils combined is 710. The total number of points for VI A grade pupils in Minneapolis schools is 828. The standard in the same grade, for the whole country is 820. Thus the total number of points obtained by overage pupils in this particular grade is 118 points less than that obtained by the entire VI A grade pupils in Minneapolis and 110 points less than the standard for the whole country.

#### CONCLUSIONS:

1. There is practically no difference in arithmetic ability between pupils who have had all their training in Minneapolis schools and those who have had part of their training elsewhere.

2. The girls ability in arithmetic is better than that of the boys.

3. The arithmetic ability of overage pupils in grade VI A is inferior to that of the average V C grade pupil in Minneapolis and also inferior to that of average V B grade pupil in general.

READING TEST: In order to ascertain whether there was any difference in reading ability between the pupils who have had all their training in Minneapolis schools and those who have part of their training elsewhere, the scores for the two groups were tabulated separately, both for the boys and for the girls. The following table is the tabulation of the comprehension and rate scores obtained by 167 overage pupils who took the Monroe Silent Reading Test II.

TABLE XXXIV

Group Tabulation of Rate and Comprehension Scores Obtained in the Monroe Silent Reading Test II by 167 Overage Pupils in Grade VI A, Minneapolis schools, 1922-23, 3rd Term, and Median for Each Group.

Boys				Girls			
I <sup>a</sup>		II <sup>b</sup>		I		II	
Rate	Comp	Rate	Comp	Rate	Comp	Rate	Comp
Score	No	Score	No	Score	No	Score	No
265	1	265	1	265		265	2
255		255		255		255	
245		245		245		245	
235	1	235	1	235	3	235	1
225	2	225	2	225		225	
215		215		215		215	
205	21	205	3	205	1	205	21
195	20	195	3	195		195	20
185	19	185	1	185	2	185	2
175	3	175	1	175		175	4
165	17	165	17	165	3	165	4
155	4	155	4	155	1	155	2
145	9	145	3	145	3	145	7
135	5	135	5	135	3	135	5
125	13	125	3	125		125	4
115	5	115	10	115	4	115	3
105	2	105	1	105	3	105	2
95	5	95	1	95	1	95	1
85	3	85	2	85	1	85	3
75	2	75	2	75		75	3
65	2	65	7	65	1	65	7
55	6	55	6	55		55	6
45	5	45	5	45		45	5
35	4	35	4	35		35	4
25	3	25	3	25		25	3
15	2	15	2	15		15	2
5	4	5	2	5	3	5	3
Total	48	48	45	45	31	43	43
Median	137	9.5	138	9.8	143.3	10.6	145.7

- a. "I" includes scores for pupils who have had all their training in Minneapolis schools.
- b. "II" includes scores for pupils who have had part of their training elsewhere.

The table reads: One boy who had had all his training in Minneapolis schools received a score of 265 in rate, one boy who had had part of his training elsewhere had a score of 265, two girls

who had had part of their training outside of Minneapolis schools had a score of 265, etc.

It will be observed that:

1. The pupils who had had part of their training outside of the Minneapolis schools have a slightly higher median in both rate and comprehension than the pupils who have had all their training in the Minneapolis schools.

2. The difference between the medians in reading rate of the boys in the two groups is 1 point, and the difference between the medians in comprehension is .3 points.

3. The difference between the medians in reading rate of the girls in the two groups of pupils is 2.4 points, while both groups have the same median in comprehension.

In order to show the relationship between the scores of the boys and those of the girls in both rate and comprehension table XXXV has been prepared giving the total scores received by the boys and the total scores received by the girls.

TABLE XXXV

Tabulation of Rate and Comprehension Scores Obtained in the Monroe Silent Reading Test II by 93 Boys and 74 Girls in Grade VI A., Minneapolis Schools, 1922-23, 3rd Term, and Median for Same.

Boys				Girls			
Rate		Comprehension		Rate		Comprehension	
Score	No	Score	No	Score	No	Score	No
265	2			265	2		
255		255		255			
245				245			
235	2			235	4		
225	4			225			
215				215			
205	3	21	1	205	1	21	1
195	3	20		195	2	20	
185	1	19	1	185	4	19	
175	4	18		175	4	18	
165		17		165	7	17	
155	8	16	1	155	3	16	1
145	12	15		145	10	15	3
136	10	14	6	135	8	14	3
135	3	13	5	125	4	13	5
115	15	12	6	115	7	12	9
105	3	11	10	105	5	11	10
95	6	10	9	95	2	10	14
85	5	9	20	85	4	9	5
75	4	8	9	75		8	4
65	2	7	13	65	1	7	9
55		6	7	55		6	4
45		5	3	45		5	3
35		4	1	35		4	1
25		3		25		3	1
15		2	1	15		2	1
5	6	1		5	6	1	
Total	93		93		74		74
Median	137.5		9.4		145		10.6

It will be observed from the above table that:

1. The median of the rate scores for boys in grade VI A is 137.5, while for girls it is 145.

2. The median of the comprehension scores for the boys in grade VI A is 9.4 while for the girls it is 10.6.

3. The average girls in grade VI A did better in the Monroe Silent Reading Test both in rate and comprehension than the average boys in the class, the difference in the median in rate is 7.5 scores and the difference in the median in comprehension is 1.2 scores.

Table XXXVI shows the total scores obtained by the 167 overage pupils together with median for same.

TABLE XXXVI

Total Scores Obtained in Monroe Silent Reading Test II by 167 Overage Pupils in Minneapolis Schools, 1922-23, 3rd Term, and Median for Same.

Score	Rate		:	Comprehension	
	:	Number		:	Number
265		4			
255					
245					
235		6			
225		4			
215					
205		4	21		2
195		5	20		
185		5	19		1
175		8	18		
165		7	17		
155		11	16		2
145		23	15		3
135		18	14		9
125		7	13		10
115		22	12		15
105		8	11		20
95		8	10		23
85		9	9		25
75		4	8		13
65		3	7		22
55			6		11
45			5		6
35			4		2
25			3		1
15			2		2
5			1		
Total		167			167
Median		140.8			10.1
Q 1		112.2			7.9
Q 3		166.8			12.1
Q		27.3			4.2

It will be observed from the above table that:

1. The median rate in the Monroe Silent Reading Test II for the 167 overage pupils who took the test is 140.8. The standard

median rate for VI A for the entire country is 168. Thus these 167 average pupils VI A grade have a median for rate in reading that is 27.3 points lower than that of all the pupils throughout the country. The median for VI A grade pupils in Minneapolis last year was 158. The average pupils included in this study then have a median of 17.3 points lower than the average median for the grade in which they are.

2. The median for the above mentioned average pupils in comprehension is 10.1. The standard median for the entire country for grade VI A is 11.6 and for Minneapolis 12.5. Thus the 167 average VI A grade pupils have a median in comprehension that is 1.5 points lower than the standard for the entire country and 2.4 points lower than the standard median for Minneapolis.

3. Q 1 in rate for the average pupils is 112.2 and Q 3 166.8. Q 1 for the entire VI A grade in Minneapolis in which these average pupils were is 144 and Q 3 159. Q 1 in comprehension for the average pupils is 7.9 and Q 3 12.1, while Q 1 for Minneapolis in that same grade is 11.1 and Q 3 is 13.7. Thus the scores of the average pupils are more scattered than is the case with the scores for all the VI A grade pupils.



The following table gives the standard median for rate and comprehension for grades III C to VIII A both for Minneapolis and for the entire country.

TABLE XXXVII

Median in Rate and Comprehension Obtained by the Monroe Silent Reading Test II by Grades 3C to 8A in Minneapolis and the Standard Median for the Entire Country.

Grades:	Rate		Comprehension	
	Minneapolis <sup>a</sup>	Standard <sup>b</sup>	Minneapolis <sup>c</sup>	Standard <sup>d</sup>
3C	95	65	63	25
3B	119	78	6.9	3.8
3A	124	91	8.4	5.1
4C	127	104	8.7	6.4
4B	142	116	9.8	7.7
4A	140	122	9.9	8.4
5C	144	128	10.1	9.1
5B	149	135	11.1	9.8
5A	153	145	11.9	10.2
6C	153	155	11.4	10.7
6B	150	164	11.8	11.1
6A	158	168	12.5	11.6
7C	160	172	12.9	12.1
7B	170	176	13.3	12.6
7A	163	181	13.9	13.
8C	169	186	13.9	13.4
8B	168	191	14.7	13.8
8A	177	196	15.4	14.2

a. Educational Bulletin, No. 1, Minneapolis Public Schools, Apr. 5, 1923, p. 4.

b. Ibid., p. 4.

c. Ibid., p. 4.

d. Ibid., p. 4.

The table reads: That the median in rate for Minneapolis, grade VI A, is 95, the standard median for the same grade is 65, etc.

The table shows that:

1. The standard median rate in reading for grade VIII A is 196. Table XXXVI shows that there are 23 overage pupils in VI A

grade who had a score of 195 or more. The standard median for comprehension in reading for grade VIII A is 14.2. There are 17 overage pupils who had a score of 14 or more.

2. The standard median rate for reading for grade VI A is 168. There are among the overage pupils in that same grade in Minneapolis schools 36 pupils who scored 175 or more. The standard median for comprehension in reading for grade VI A is 11.6. Among the overage pupils in the same grade in Minneapolis schools there are 42 pupils who scored 12 or more. Thus there are fully one-fifth of the overage pupils who are above the median for their grade in both rate and comprehension in reading and fully ten percent who obtained a score in rate and comprehension equal to the standard median for VII A grade pupils.

3. The standard median rate in reading for grade III C is 65. There are three pupils among the overage VI A grade pupils who obtained a score of 65 in rate in reading. In comprehension the standard median in reading for III C grade pupils is 2.5. There are two pupils who obtained a score of 2 only. There are among the overage pupils in grade VI A 112 pupils who had a score of 155 or less in comprehension. Thus there are approximately 70 percent of the overage pupils in VI A grade in Minneapolis schools who are below the standard median.

#### CONCLUSIONS:

1. The pupils who have had part of their training outside of the Minneapolis schools did a little better in the reading test than the pupils who had had all their training in Minneapolis schools.

2. The girls did better in the reading test than the boys.

3. The median both for rate and comprehension is lower for the overage pupils in grade VI A than the standard median for that grade.

4. Of the overage pupils in grade VI A one tenth did as well or better in the Monroe Silent Reading Test II than the eighth grade pupils in general.

5. There are fully one-fifth of the overage pupils in grade VI A who obtained a score higher than the median for the grade.

6. There were two pupils among the overage pupils in grade VI A who obtained a score in rate and comprehension equivalent to the median for III C only and 70 percent of the overage pupils obtained a score lower than the standard median for grade VI A.

SPELLING TEST: The test given in spelling was made up<sup>1</sup> for the occasion from words found in the Ayres Spelling List. There were two tests given to elementary grade pupils during the year of 1922-23. One test was given before a special drill in spelling was carried out in the schools and one test was given after the drill period. The scores gathered in connection with these overage pupils in grade VI A are of those of the first test. While the spelling test results are not equally objective as were the results of the arithmetic and reading tests they nevertheless reveal sufficiently interesting facts to deserve consideration.

1. Educational Bulletin, No. 3, Minneapolis Public Schools, Oct. 4, 1923, p. 3.

In order to ascertain if there were any differences in spelling ability between the pupils who have had all their training in Minneapolis schools and those who have had part of their training elsewhere, the scores were tabulated separately for the two groups. The following table gives the spelling scores of the two groups.

TABLE XXXVIII

Tabulation of Spelling Scores Obtained by 133 Overage Pupils in Grade VI A, Minneapolis Schools, 1922-23.

Scores	Boys		Girls		Total	Total	Total
	I <sup>a</sup>	II <sup>b</sup>	I	II	Boys	Girls	Total
100	1	3	3	3	4	6	10
95	1	2	3	3	3	6	9
90	6	5	5	5	11	10	21
85	3	2	1	5	5	6	11
80	3	2	2	3	5	5	10
75	1	2	2	4	3	6	9
70	2	2	3	4	4	7	11
65	3	2		2	5	2	7
60	3	2	4	7	5	11	16
55	3	2	1	4	5	5	10
50	2	2	2	3	4	5	9
45	2		2	3	2	5	7
40	1	2			3		3
35		3		1	3	1	4
30	1	2			3		3
25				1		1	1
20							
15		1			1		1
10	2				2		2
Totals	34	34	28	48	58	86	144
Median	69.2	72.5	80	80	70.6	80	75.5

- a. Group I includes pupils who have had all their training in Minneapolis schools.  
 b. Group II includes pupils who have had part of their training elsewhere.

The table reads; One boy in group I scored 100, 3 boys in group II, one girl in group I, etc.

The table shows that:

1. The median for the boys in group I is 69.2 and for those in group II 72.5, a difference of 3.3, while the median for the girls in either group is 80. There is practically no difference in the range. The two groups of pupils are practically equal in spelling ability.

2. The median for the boys is 70.6 and that of the girls 80 and the range very much the same. Thus the girls are better in spelling than the boys are.

3. The median for the total number of overage pupils in the spelling test is 75.5. The median for the entire VI A grade in Minneapolis in the same test is 83.<sup>1</sup> Thus the overage pupils are less able in spelling than the class as a whole in which they are.

#### CONCLUSIONS:

1. There is practically no difference in spelling ability between those who have had all their training in Minneapolis schools and those who have had part of their training elsewhere, the little difference thereis, however, is in favor of those who have had part of their training outside of Minneapolis schools.

1. Educational Bulletin, No. 3, Minneapolis Public Schools, Oct. 4, 1923, p. 3.

2. The girls are superior in spelling than the boys.

3. The overage pupils in the class are less able in spelling than the class as a whole.

## CHAPTER VII

### PERSONAL HISTORY AND SCHOOL HISTORY OF THE 209 OVERAGE PUPILS

The aim in this chapter is to study certain facts given in connection with pupils' school records relative to personal and school history. The data was collected from the pupils' Permanent Record Card<sup>1</sup> kept in the respective schools where pupils attended. Such miscellaneous facts as were obtainable were grouped into two main divisions:

1. Personal History of Pupils.
2. School History of Pupils.

The facts in connection with the personal history of the pupils will be treated in the following order:

1. Place of birth.
2. Health.
3. Nationality of parent or guardian.
4. Occupation of parent or guardian.

The school history of the pupils will be treated in the following order:

1. Kindergarten attendance.
2. Summer school attendance.
3. Change of school and of address.
4. Attendance during the school year.

Such material as is found relative to place of birth, nationality, and occupation of parent will be grouped the same as Mr.

1. For sample see appendix A.

Christensen grouped similar material in his study of rapid progress pupils. This was found advisable in order to have a common basis for comparison of results.

PERSONAL HISTORY OF PUPIL

PLACE OF BIRTH: Table XXXIX shows where 207 pupils were born. The birth places are grouped into four classes, namely, Minneapolis, Minnesota, United State, and Foreign. Those who are born outside of the city of Minneapolis but in Minnesota are classified as born in Minnesota; those born outside of the state of Minnesota but in the States are included in those born in the United States; while those who are not born in this country are classed as foreign.

TABLE XXXIX

Birthplaces of 207 Overage Pupils in grade VI A, Minneapolis Schools, 1922-23, 3rd Term.

		Places of Birth										
		Minneapolis:		Minnesota :		United States :		Foreign :		Unknown :		Total
Boys	Girls:	Boys	Girls:	Boys	Girls:	Boys	Girls:	Boys	Girls:	Boys	Girls:	Both
I 22	13	9	6	11	6	13	11	0	3			94
II 16	11	17	8	14	20	12	11	1	3			113
38	24	26	14	25	26	25	22	1	6			207
Total 62		40		51		47		7				
Percent 29.95		19.32		24.64		22.71		3.38				100

The table reads: thirty-eight boys and twenty-four girls out of two-hundred-seven pupils or 29.95 percent were born in Minneapolis, etc. Column I, 22 boys, 13 girls, etc., includes all pupils whose records were complete and who had had all their training in the Minneapolis schools; column II, 16 boys, 11 girls, etc., includes



all pupils who had had part of their training elsewhere than in the Minneapolis schools.

1. It will be observed that the number of boys and girls born in Minneapolis is much greater among those who have had all their training in the Minneapolis schools than among those who have had part of their training elsewhere.

2. The number of foreign born among those who have had all their training in Minneapolis schools is 24, or 25.5 percent, while among those who have had part of their training elsewhere there are 23 pupils foreign born, or 20.4 percent.

3. There are 62 pupils, or 29.95 percent of the 207 overage pupils who are born in Minneapolis. Mr. Christensen found that 400 or 70.8 percent out of the 565 rapid progress pupils in Minneapolis schools were born in Minneapolis.

4. There are 47 pupils or 22.71 percent who are foreign born among the 207 pupils. In this group Mr. Christensen found only 34 pupils out of 565 or 6 percent.

5. Among those born outside of Minneapolis but in the United States there were among the 207 pupils 91 or 43.96 percent while among the 565 rapid progress pupils there were only 131 or 23.2 percent.

#### CONCLUSIONS:

1. There is a comparatively small percent of the overage pupils in the Minneapolis schools who are born in Minneapolis.

1. Christensen, A.M., The Characteristics of Rapid Progress Pupils, Thesis (unpublished), June 1923, U. of M., p. 98.
2. Ibid., p. 98.
3. Ibid., p. 98.

2. The percentage of overage pupils who are foreign born is approximately four times as great as it is among rapid progress pupils.

3. Approximately one-half of the overage pupils are born in the United States but outside of Minneapolis.

HEALTH: The following table gives the physical defects found among 131 overage pupils, 73 boys and 59 girls. The physical examination of these children had been given some time during their school career, a number had been examined shortly after they entered school, others when they had been in school a few years.

TABLE XL

Showing Physical Defects Found Among 131 Pupils, 73 Boys and 59 Girls, Giving Number of Pupils and Percentage of Total Number of Pupils Who Had the Different Defects.

Defects	Boys	Percent	Girls	Percent
Posture			2	3.4
Mouth Breathing	8	11.1	7	11.9
Eye Trouble	37	51.4	26	44.1
Hearing			3	5.1
Skin	1	1.4	3	5.1
Mucus Membrane	1	1.4		
Adenopathy	4	5.6	5	8.5
Cardiac	3	4.2		
Throat			1	1.7
Tonsil Hypertrophied	13	18.1	13	22.0
Adenoids	12	16.7	9	15.3
Teeth	54	75.0	45	76.3
Nutrition	11	15.3	4	6.8
Nervous	1	1.4	1	1.7
Orthopedic	1	1.4	1	1.7
Rachitic	6	8.3	1	1.7
Enlarged Glands	9	12.5	2	3.4
Defect of Speech	2	2.8	1	1.7
Thyroid	2	2.8		
Nasal Obstruction	1	1.4		
Goiter	1	1.4		
Totals	167		124	
Average Number of Defects	3.32		2.1	

The table reads: two girls, or 3.4 percent of the girls, had defective posture, etc.

The table shows that:

1. ~~There were~~ <sup>Three-fourths</sup> of the boys and three-fourths of the girls ~~who~~ have defective teeth..

2. Fully one-half of the boys and almost one-half of the girls have eye trouble. Bad teeth and some form of eye trouble are the two most common defects among the pupils examined.

3. 18.1 percent of the boys and 22.0 percent of the girls suffered from hypertrophied tonsils.

For the sake of comparison, a table which was prepared by Mr. Christenson in connection with a study of rapid progress pupils, is given. This table gives the physical defects found among 197 rapid progress pupils.

TABLE XLI

Physical Defects Found Among 197 Rapid Progress Pupils, 86 Boys and 111 Girls (Christensen<sup>z</sup>)

Defects	:Boys	Percent	:Girls	Percent
Posture	1	1.2	3	2.7
Mouth Breathing	2	2.3	2	1.8
Vision (R)	17	19.7	23	20.7
Vision (L)	16	18.4	21	19.0
Vision (both eyes)	15	17.4	19	17.1
Vision	18	20.9	25	22.5
Hearing (R)	2	2.3	0	0
Hearing (L)	1	1.2	0	0
Skin	1	1.2	2	1.8
Mucus Membrane	0	0	2	1.8
Ear Diseases	1	1.2	0	0
Eye Diseases	4	4.7	3	2.7
Adenopathy	4	4.7	3	2.7
Respiratory	1	1.2	0	0
Cardic	0	0	1	.9
Throat	0	0	1	.9
Tonsil Hypert.	8	9.3	9	8.1
Adenoid	4	4.7	3	2.7
Teeth	35	40.7	43	38.7
Nutrition	5	5.8	14	13.6
Nervous	0	0	2	1.8
Recurrent				
Headache	0	0	3	2.7
Orthopedic	0	0	2	1.8
Thyroid	4	4.7	27	24.3
Tonguetied	1	1.2		
Total <sup>a</sup>	92		144	

Average number of Defects Boys- 1.02 Girls - 1.3

z. Christensen, Arnold Michael, "The Characteristics of Rapid Progress Pupils". Thesis, U. of M., June 1923, p. 114.

a. Total omits Vision (right), Vision (left) and Vision (both) but counts Vision.

From tables XL and XLI it will be observed:

1. That both among the average pupils and among the rapid progress pupils teeth trouble is the most common defect. There is,

however, a greater percentage of the pupils among the overage who have defective teeth than is the case among the rapid progress pupil.

3. Eye trouble is the next most common defect among both groups; ~~but~~ the percentage is twice as great among the overage than is the case among the rapid progress pupil.

3. Hypertrophied tonsils is third as to extent among both groups but, as was the case with the eye trouble, the percentage is twice as great among the overage pupils as is the case among the rapid progress pupils.

4. Ayres found that physical defects influenced the progress of children. <sup>1</sup> ~~The~~ <sup>fact that the</sup> number of pupils who have eye trouble <sup>is</sup> being proportionally greater among the overage pupils ~~than~~ <sup>is</sup> ~~was~~ the case among the rapid progress pupils would lead one to conclude that sight has a distinct and important bearing on the progress of school children.

5. The findings in this study substantiate<sup>2</sup> Ayres' conclusion that hypertrophied tonsils and adenoids are causes that help to bring about retardation. One-fourth of the overage pupils had hypertrophied tonsils while in Mr. Christensen's study of the rapid progress pupils there were less than one-tenth. <sup>3</sup> One-seventh of the overage pupils had adenoids while among the rapid progress pupils only 1.7 percent of the boys and 2.7 percent of the girls had it.

6. Among the overage pupils the percentage of boys suffering from improper nutrition is much greater among the boys than is the

1. Ayres, Leonard P., Laggards in Our Schools, Charity Publication Committee, 1909, p. 131.

2. Ibid., p. 126.

3. Christenson, A. M., "The Characteristics of Rapid Progress Pupils." Thesis, (Unpublished) June, 1923, U. of M. p. 114.

case among the girls while just the opposite is the case among the rapid progress pupils.<sup>1</sup>

7. 12.5 percent of the boys suffer from enlarged glands and only 3.4 percent of the girls.

8. Eye trouble is a little more common among the average boys than is the case among the girls.

There was no uniformity as to time when weight and height measurements were taken. Weight and height were in some cases taken several years ago; in other cases more recently. This made it impossible to make a study of the physical stature of the average pupils.

#### CONCLUSIONS:

1. A larger percentage of the average boys have the prevailing diseases among children than the percentage of average girls.

2. The prevailing physical defects among children is more common among the average pupils than among the rapid progress pupils.

**NATIONALITIES OF FATHERS OR GUARDIANS:** The pupils' Permanent Record Card gives the nationality of the fathers or guardians. The information as recorded on these cards is not, however, exact in all cases. In some instances the birth-place is given, in other instances the nationality is recorded as Norwegian, Russian, Swede, etc. It is obvious that in this country many who are descendants of these different European nationalities continue to class themselves as such even when they are born in the United States. Hence it is possible that the number of parents who are American would be greater if exact information could be obtained.

1. Christensen, A. M. "The Characteristics of Rapid Progress Pupils." Thesis (Unpublished), June, 1923, U. of M. p. 114.

Table LXII gives the nationality of the fathers or guardians of the overage pupils and the number of fathers and percentage for each nationality.

TABLE LXII

Nationalities of Fathers or Guardians of 207 Overage Pupils in Grade VI A, Minneapolis Schools, 1922-23, 3rd Term.

Nationality	Number of Fathers or Guardians	Percentage of Fathers or Guardians
American	59	28.5
Swedish	20	9.7
Norwegian	15	7.3
German	15	7.3
Hebrew	3	1.4
Russian	6	2.9
Scotch	3	1.4
English	6	2.9
Irish	5	2.4
Danish <sup>a</sup>	4	1.9
All others	40	19.3
No record	31	15.
	<u>207</u>	<u>100.</u>

a. All others includes: French, Bohemian, Dutch, Russian, Negro, Polish, Italian, Welch, Czecho-Slovakian, Swiss, Canadian, Syrain, Finland, Hollander, Austrian and Hungarian.

The table reads: There were 59 or 28.5 percent of the parents who were American, 20 or 9.7 percent who were Swedish, etc.

It will be observed from the table that:

1. 25.5 percent of the parents are American. American parents are the most numerous of the overage group.

2. The percentages of Swedish, Norwegian and German parents are about equal.

The following table gives the nationalities of the fathers or guardians of 511 rapid progress pupils and the nationality composition of the city of Minneapolis.

TABLE LXIII

The Nationalities of Fathers or Guardian of 511 Rapid Progress Pupils and the Nationality Composition of the City of Minneapolis.<sup>a</sup> (Christensen<sup>z</sup>)

Nationality	Rapid Progress		Minneapolis	
	Number of Fathers or Guardians	Percent of Fathers or Guardians	Number of People	Percent of Total Population
American	165	32.0	228,333	75.7 <sup>b</sup>
Swedish	99	19.4	26,515	7.0
Norwegian	61	11.9	16,389	4.3
German	50	9.8	6,439	1.7
Hebrew	24	4.7	-----	-----
Russian	23	4.5	6,222	1.6
Scotch	12	2.3	1,141	.3
English	11	2.2	2,963	.8
Irish	11	2.2	2,066	.5
Danish	10	2.0	2,531	.7
All others <sup>c</sup>	46	9.0	27,582 <sup>e</sup>	7.4
Totals	511 <sup>d</sup>	100	380,582	100

- z. Christensen, Arnold Michael, "The Characteristics of Rapid Progress Pupils." Thesis, University of Minnesota, June, 1923, p.100.
- a. Percentages determined from figures given in the 1930 Census Report.
- b. Native born whites.
- c. All others include the following nationalities or races: French, Bohemian, Dutch, Rumanian, Negro, Polish, Italian, Welch, Czecho-Slovakian, Swiss, Canadian, Syrian.
- d. No record for 54 cases, which is 8.5 percent of the total (565).
- e. All others here include several more nationalities than given under c.

1. It will be observed that the percentage of American parents or guardians of the rapid progress pupils is also the greatest. And the four largest percentages are those of the American, Swedish, Norwegian and German.

2. It will also be observed that the Americans have the



largest percentage of the population, the second largest being that of the Swedes, the third that of the Norwegians and the fourth that of the Germans.

CONCLUSIONS:

1. American parents contribute the largest percentage among the nationalities of parents both of the group of overage pupils and of the group of rapid progress pupils.

2. Proportionally, however, that is comparing the percentage of overage pupils' parents who are American with the percentage of the American population of Minneapolis, the percentage of American parents of overage pupils is smaller than is the case with any other nationality.

3. It is just the reverse among other nationalities. The percentage of fathers of overage pupils who are Swedish, Norwegians, Germans, etc., is greater than are the respective percentages for these nationalities of the total population.

4. The above conclusions hold for the rapid progress pupils too, hence the foreign born parents furnish more pupils in both extremes of the school population, the overage and the rapid progress pupils than do the native born Americans.

① OCCUPATION OF PARENTS OR GUARDIANS: In connection with a study of the characteristics of school children it is of interest and value to know the occupation of the parents, to know from what classes of people the pupils come.

Table XLIV gives the classification of fathers, of 207<sup>1</sup> average pupils. The classification is that of Counts. Whenever the occupation given on the pupil's permanent record card was ambiguous or indefinite the same was classified as unknown.

TABLE XLIV

Classification of Occupation of Fathers or Guardians.

Classification of Occupation	Number of Fathers or Guardians	Percent
Proprietors	4	1.9
Building Trade	17	8.2
Commercial Service	14	6.8
Professional Service	6	2.9
Machine Trades	17	8.2
Common Laborer	72	34.8
Clerical Service	0	
Managerial Service	2	1.0
Transportation Service	15	7.2
Artisan-proprietors	21	10.1
Personall Service	8	3.9
Public Service	3	1.5
Agricultural Service	7	3.4
Occupation not given	31	10.1
Totals	207	100

The table reads: Four of the fathers were proprietors, seventeen were in the building trade, etc.

From table XLIV we see that common labor group contribute the greatest number of average pupils, 34.8 percent. The five groups which contribute the greatest number of average pupils, 68.5 percent are "common labor", "artisan-proprietors", "building trades", "machine trade", and "transportation service".

1. Counts, George Sylvester, The Selective Character of American Secondary Education. Supplementary Educational Monographs, No. 19, 1922, p. 22.

Mr. Christensen found that the five occupational groups which contributed the greatest number of rapid progress pupils were "proprietors", "building trades", "commercial service", "professional service" and "machine trades". The common labor group contributed only 7.5 percent.<sup>1</sup>

#### CONCLUSIONS:

The majority of overage pupils come from the manual labor classes and among these the common labor group furnish the greatest number.

#### SCHOOL HISTORY OF PUPILS

Knowledge of school history of this group of overage pupils consists of such information as found on the permanent record card of each pupil. This information is data with respect to kindergarten attendance, summer school attendance, changing address, transfers from one school to another and attendance during the school year proper. Only the data in connection with the 94 overage pupils whose records are complete can be used.

**KINDERGARTEN ATTENDANCE:** Table XLV gives the number of pupils who attended kindergarten and the number of days attended.

1. Christensen, A. M., "The Characteristics of Rapid Progress Pupils." Thesis, U. of M., June, 1923, p. 102.

TABLE XLV

Showing Distribution of 94 Overage Pupils According to the Number of Days They Attended Kindergarten.

Days Attended	Boys	Girls	Total	Percent
None	38	29	67	71.3
1 to 49	1	2	3	3.2
50 to 99	5	4	9	9.5
100 to 149	3	1	4	4.3
150 to 187	7	3	10	10.6
Days not given	1		1	1.1
Totals	55	39	94	100

It will be seen from table XLV that:

1. There were 71.3 percent of the overage pupils, nearly three-fourths who did not attend kindergarten. Mr. Christensen found that 40 percent of the rapid progress pupils had attended kindergarten, <sup>1</sup> about eleven percent more than was the case among this overage group. He also found that 21.7 percent of them had attended kindergarten 100 days or more while in this overage group 14.9 percent had attended to that extent.

2. A slightly larger number of the boys proportionally had attended kindergarten than the girls.

3. The average number of days kindergarten pupils attended per year was 142 days which is 16.9 days less than the average annual attendance for the 94 overage pupils.

CONCLUSIONS:

1. The percentage of overage pupils who have attended kindergarten is very small.

2. Slightly fewer girls get to attend kindergarten than boys.

<sup>1</sup> Christensen, A. M. "The Characteristics of Rapid Progress Pupils." Thesis, U. of M., June, 1923, p. 103.

3. The pupils attendance is more irregular in the kindergarten than in the grades.

SUMMER SCHOOL ATTENDANCE: Very few of record cards contained any information as to summer school attendance. In many cases the school records did not even indicate to what school year the respective terms belonged. In grouping the terms by years an extra term or two occurred in connection with certain children. When such an extra term occurred which could not be accounted for during the regular school year and when the number of days attended were few as compared with the rest of the terms then such a term record was taken to be that of summer school attendance. Thus the data in connection with summer school work among this group of overage pupils is not dependable nor complete.

The following table gives the extent of summer school attendance of 94 overage pupils.

TABLE XLVI

Number of Summer School Sessions Attended by 94 Overage Pupils.

Number of Sessions	Number of Pupils Attending	Percent
None	75	79.8
1	11	11.7
2	7	7.5
3	1	1.0
Totals	94	100

It will be observed that:

1. The average number of days attended per summer school pupil is 21.4.

2. Only about one-fourth had attended summer school at all

and less than half of them had two sessions or more. Being summer school attendance is not compulsory it is natural that only those pupils among overage whose parents are ambitious to have the pupils in school would be the ones attending.

#### CONCLUSIONS:

There are very few pupils among the overage school children who attended summer schools.

CHANGE OF SCHOOL AND OF ADDRESS: Table XLVII shows the number of transfers from one school to another and table XLVIII shows how many times there was a change of address among 94 overage pupils.

TABLE XLVII

Number of Transfers From One School to Another of 55 Overage Boys and 39 Overage Girls and Percentage.

Number of Transfers From One School to Another	Number of Boys	Percent	Number of Girls	Percent
0	18	32.7	16	41.0
1	13	23.7	4	10.3
2	6	10.9	8	20.5
3	12	21.8	5	12.8
4	5	9.1	3	7.7
5	0		3	7.7
6	1	1.8	0	
Totals	55	100	39	100
Average Number of Transfers	1.6		1.6	Of Total 1.6

The table reads: There were 18 boys or 32.7 percent, who had not been transferred from one school to another, etc.

TABLE XLVIII

Changes of Address of 55 Overage Boys and 39 Overage Girls and Percentage.

Number of Changes of Address	Number of Boys	Percentage	Number of Girls	Percentage
0	12	21.9	12	30.8
1	15	27.3	3	7.7
2	8	14.5	7	17.9
3	11	20.0	4	10.3
4	4	7.3	2	5.1
5	1	1.8	6	15.4
6	1	1.8	2	5.1
7	0		2	5.1
8	1	1.8	0	
9	0		1	2.6
10	2	3.6	0	
Totals	55	100	39	100.
Average Number of Changes	2.2		2.6	Of Total 2.3

From table XLVII and XLVIII it will be observed that:

Approximately one fourth of the pupils only have not changed address and approximately one-third only have not been transferred from one school to another. Thus the great majority of the pupils change about from school to school and from one environment to another. The average number of changes of addresses per pupil is 2.3, that of transfers per pupil is 1.6.

Mr. Christensen found just the reverse condition among the rapid progress pupils, less than one-fourth of the pupils were transferred from one school to another and less than one-third had more than one change of address and the average number of changes of address was 1.04.<sup>1</sup>

1. Christensen, A. M. "The Characteristics of Rapid Progress Pupils" Thesis, U. of M., June, 1923, p. 105.

CONCLUSIONS:

The great majority of overage pupils have had to move from one place of residence to another and have been transferred from one school to another.

ATTENDANCE DURING THE SCHOOL YEAR: Table XLIX shows the average school attendance during the school year of the overage pupils.

TABLE XLIX

Average School Attendance of 94 Overage Pupils in Grade VI A, Minneapolis Schools, 1922-23, 3rd Term, by Sex and Percentages.

Average Number of Days Attended	Number of Boys	Percent of age	Number of Girls	Percent of age	Total	Percent of age
110-114	1	1.8			1	1.1
115-119						
120-124	1	1.8	1	2.6	2	2.1
125-129			1	2.6	1	1.1
130-134	2	3.7			2	2.1
135-139	2	3.7			2	2.1
140-144	1	1.8	2	5.1	3	3.2
145-149	4	7.1	5	12.8	9	9.6
150-154	5	9.1	4	10.3	9	9.6
155-159	11	20.	8	20.5	19	20.2
160-164	6	10.9	5	12.8	11	11.7
165-169	8	14.6	5	12.8	13	13.8
170-174	8	14.6	5	12.6	13	13.8
175-179	5	9.1	3	7.7	8	8.5
180-184						
185-187	1	1.8			1	1.1
Totals	55	100	39	100	94	100
Range	100-186		120-178		100-186	

The table reads: There was one pupils, a boy, whose average number of days attended per year was between 110 and 114 days, etc.

1. The school year in Minneapolis is 187 days long. Counting in percentage column from 1st down to 175-179 group there were



89.1 percent of the boys and 92.3 percent of the girls who had lost more than 12 days of school a year, likewise that there were 74.5 percent of the girls who had lost more than 17 days and that there were 50 percent of the boys and 52.9 percent of the girls who had lost more than 27 days.

2. The average of the average daily attendance for the group is 158.9; this means that there was an annual average loss of 28.1 days per pupils, or 15 percent of the school year.

3. The boys attended somewhat better than the girls.

Mr. Christensen found that only 35.6 percent of the rapid progress pupils had lost annually more than 17 days of school. The average of the average attendance for the same group he found to be 171.5.

#### CONCLUSIONS:

1. Time lost by overage pupils is so extensive that it is a definite hindrance to the normal progress of the pupils through

1. Christensen, A. M. "The Characteristics of Rapid Progress Pupils," Thesis (unpublished) University of Minnesota, June, 1923, p107.

the grades.

2. The girls were absent from school slightly more than the boys.

## CHAPTER VIII

### INDIVIDUAL STUDY OF EXTREME CASES

The basis on which these extreme cases were chosen was the extent of repetitions or the extent of skips. All pupils who had repeated ten, nine or eight terms and all who had skipped more than one term were included. The source of information was, Pupils' Permanent Record Card, Pupils' Report and Promotion Card, the Pupils' Physical Record Card and information obtained through interviews with principals and teachers. While the source of information for individual study of extreme cases is the same as that of the study of the group, the difference is that the information is collected for each case, each pupil, in connection with individual study, but in connection with group study the information is classified. The study of individual cases is of primary importance when general knowledge of the grade situation is known.

Pupil No. 112<sup>1</sup> is a boy 16 years, 17 months old. The father is a bricklayer and has lived at the same place since the boy entered school. The boy commenced school at the age of 6 years, 3 months. He did not attend kindergarten. He attended summer school during the summer of 1920. He has had great difficulty to pass from grade to grade. He repeated I B, I A, II B and from III B he was moved back into II A and had to spend two more terms in that grade before

1. For name and school in which pupil attended see appendix B.

he could be promoted again into III B in which he also spent two terms after entering the second time. He was also enrolled as a special pupil for two terms before he was able to pass into III C.<sup>1</sup> In all he spent eight terms in school from the time he entered II A until he entered III C. He also repeated V C and V B. He attended school as regularly as the average pupil averaging 159 days a year.

The boy was a good boy in school, he did not cause the teachers any trouble as to discipline. He was large for his age. He had not had a physical examination but was apparently in good health. He was very industrious and worked hard at his lessons. He was neat in his ways. He kept at whatever he undertook to do and finished up the work he could do neatly. But he had great difficulty to learn and could not understand or grasp anything that was the least complicated. He could not remember what he learnt. His teachers are convinced that it is an impossibility for him to finish the eighth grade.

The fact is he is a boy of very low mental ability. On the Haggerty Intelligence Test Delta II he obtained a score of only 55. In the reading test<sup>2</sup> he had a score of only 71 in rate and 5 in comprehension. In the arithmetic test<sup>3</sup> he tried 15 problems and had 11 correct. In the spelling test<sup>4</sup> he scored only 10. Thus as to comprehension in reading he did poorer than the average child in grade III A,

1. During the time the pupil was repeating grade II A and III B the change was made in Minneapolis schools from the semi-annual promotion scheme to the quarter system.
2. Monroe Silent Reading Test II. This test is meant when reading test is referred to in subsequent individual pupil sketches. Whenever intelligence test is mentioned the Haggerty Intelligence Test Delta II is intended.
3. Courts Supervisory Arithmetic Test A is referred to here and in all subsequent individual pupil sketches in this chapter where arithmetic test is referred to.
4. The special spelling test prepared for use in Minneapolis schools. The same test is referred to in subsequent pupil sketches in this chapter.

in rate he was not as able as the average III B child.

Pupil No. 142 is a Danish boy. His father is a laborer. The boy attended school in Denmark. He enrolled in Minneapolis schools in May, 1921. Since, his home address has been changed three times and he has been transferred from one school to another three times too. This boy has skipped eight terms. The reason he has been permitted to skip is not that he is exceptionally bright. He was not of a very high mentality. He obtained only 77 as an I. Q. from the intelligence test. The reason was rather that the boy was so advanced in age as compared to the rest in his grade when placed in the lower grades and that he was very willing to work as well as the fact that he had gone to school in Denmark. He got very good marks on his work at school. During the second quarter of the school year of 1922-23 he had an "A" in all subjects except language and music. His average daily attendance was very poor, 110 days. In the reading test he did not get more than 78 in rate which is the standard score for grade III B and in comprehension he was still poorer. In the arithmetic test he ranked with the children for whom some special adjustment of work must be made. He was not present when the spelling test was given. Although he was 15 years, 5 months his mental age was only 11 years and 11 months. He was one of these children who take well with the teachers and was very nice in school. Then the fact that he had had school in Denmark gave him the more prestige.

Pupil No. 143 is a girl. Her parents are Americans. She was born in Minneapolis. Her father is a foreman. She started school in January, 1915. There has been change of address only twice but she

had been transferred from school to school three times. She had repeated work as many as eight times. She seems to have had difficulty all along the course. She repeated grade I B twice. The rest of the repetitions were single. She had not attended kindergarten. There was no record of any summer school attendance. Her average daily attendance was fairly good, 168 days. She had an I. Q. of only 80. She was 14 years, 3 months old but had a mental age of 11 years, 5 months only. There were no scores for her in the reading test nor in the spelling test. In the arithmetic test she got a score that placed her in group III. In school marks she had nothing better than "C" except in music.

Pupil No. 75 was a girl. She was 13 years, 9 months. She was born in Minnesota. Her father was a Swede. He was a machinist. There had been no change in address since she commenced school. She did not attend kindergarten. She had to repeat as much as eight terms. She had difficulty in grade I B which she had to repeat twice. Her average daily attendance was good, 177 days. The reason why she had to repeat so much is undoubtedly her low mentality. She had an I. Q. of only 73. She was not able to do very well in the reading test, she did poorer than the standard for grade IV B. She obtained a score in the arithmetic test that placed her in group III. In spelling she was very poor. Her school marks were poor. She had a very nice way about her. She was a great manager. When the Women's club in the school met and some one was needed to take charge of the babies she was the ablest among the girls helping. And she was always willing to help. She was a fluent talker and nice in her ways.

Pupil No. 32 was a boy. He was 14 years, 9 months. He was born in Minneapolis. His father was a German. He worked as a janitor. The boy started school in September, 1917. Since then his address has been changed four times and he has been transferred from one school to another twice. This boy has skipped terms twice, that is, he has done up two terms work in one term in both instances. But he also repeated a term once. He had a rather low I. Q., only 78. His scores in achievement tests were fairly good. In the reading test for rate he had a score of 233 and for comprehension 21, exceptionally high scores. In the arithmetic test he tried 26 problems and had 25 right, this score put him in group I among children of standard ability. He was not present at the time the spelling test was given. His average daily attendance was 144 days per year. He is of a quiet disposition and can sit by himself all day long without causing any difficulty. He has a group of followers or playmates but he is older than those he associates with on the playground.

Pupil No. 108 is a boy born in Minneapolis. His father is an American. His occupation is insurance inspector. The boy started in kindergarten in 1913 but was promoted to grade I B that same term. This boy has had to repeat terms nine times. He had great difficulty in getting through with grade I B. He repeated this term four times. Then he repeated grade III B twice. The other repetitions were single repetitions. He attended school fairly regularly, having an average annual attendance of 174 days. But his I. Q. was low, only 78. Although he was 15 years, 9 months old his mental age was only 12 years, 3 months. He had good marks from his teachers, two "A's" and four "B's" in the nine school subjects. He did very well in two

of the achievement tests but he did very poorly in spelling. The boy behaved well in school. He came from a nice home. He was able to learn his lessons but he could not remember. He was very large for his age. He was good natured and got along nicely with his playmates. His teachers were positive that he would not be able to finish the eighth grade.

Pupil No. 4 is a Russian boy. He was born in Russia. His father was a Jew. He started in grade I B in January, 1915. He has always attended the same school but has had two different addresses. This boy has repeated 8 terms in all. He had to repeat every term of the first and second year in school and then one term out of each succeeding years. He attended summer school twice. He was faithful in attendance. His average annual attendance was 174 days. His school marks averaged "C". In the reading test he had a score of 152 in rate and 9 in comprehension. He did better in the arithmetic test where he tried 29 problems and had 28 right. He has been a very unruly boy and was looked upon for some time in school as the most unruly boy. He was up to all kinds of mischief. But he applied himself at his school work and always appeared fairly neat and clean.

Pupil No. 48 is a boy of Swedish nationality. His father was a truck driver. He started school in grade I B in August, 1914. But he had to repeat grade I B twice and then I A, II B and II A once. In all he had to repeat 8 terms. The boy did not change schools but his address was changed three times. He never attended summer school. His average annual attendance was 163 days. His school marks averaged "C". His I. Q. was 73. In the reading test he had a score of 154 in rate and 7 in comprehension. In the arithmetic test he tried 24 problems and had 17 right.



The boy was industrious and put forth a good deal of effort on his work. He was very anxious to finish the eighth grade. In manual training and drawing he did very well. In other school subjects he learned very slowly and had great difficulty to remember. He really never got his lessons well enough to deserve to be promoted but was given a "D" in order to pass because of his effort and willingness to work. He stammers. He is quite large for his age. He behaves very well in school.

Pupil No. 57 is another boy, He is born in Minneapolis. The nationality of the father is not given. He started in kindergarten in 1913 and attended a whole year. In the grades he repeated 8 terms in all. The repetitions are all single repetitions except in grade IV B. This grade he repeated three times. He had an average annual attendance of 167 days. His marks in school were poor. He was not present when either of the achievement tests were given. His I. Q. was 76. He was a large heavy set boy and careless about his clothes and appearance. He is cross-eyed. He is naturally careless about his studying and does not apply himself. He keeps company with only a couple of the boys. He is very fond of dogs.

Pupil No. 176 is a girl. She is born in Sweden. Her father is a tailor. She started school in December, 1920. She has skipped 7 times in all. She had attended school since averaging 157 days a year. She had very good school marks and did exceptionally well in all three achievement tests. She had an I. Q. of 96. She had attended school in Sweden so it was merely a matter of getting the English language. She came from a bright, intelligent home. She was very industrious and willing to work.

Pupil No. 118 is a boy. His father is an American. His occupation is laborer. The boy started in kindergarten in February 1913. Since then he has been transferred from one to school to another three times and has changed addresses four times. This boy had a great deal of trouble in the early grades. He repeated I B two times and I A and II B and III B once. He also repeated IV C, VI C and VI A. He attended summer school during the summer of 1919. His average annual attendance was 169 days. He did well in the spelling test but was not present when the reading and arithmetic tests were given. His I. Q. was 79. He is from a family that is poor and has to sacrifice a great deal in order to keep him in school. He is very talkative but it is impossible for him to stick to his subject. He is inclined to play and kill time at trifling things. He could sit for hours and play away his time. He is fairly good at manual training and singing.

Pupil No. 193 is a girl. Her mother is Norwegian. This girl started school in September 1913. She did not attend kindergarten. Since she started school she has had seven different addresses and has been transferred from one school to another five times. She repeated as many as ten terms. In grade I B she had great difficulty, and repeated that grade three times. Grade II A she repeated twice. The rest of the repetitions were single repetitions. She has not attended summer school. Her average annual attendance was 160 days. She averaged "C", in her scholarship marks. In the arithmetic test she tried 20 problems and had 19 right. In the spelling test she had a score of 95. She was not present when the test in reading was given. Her I. Q. was 88. She was very large for her age. She did not seem to have any ambition and was contented even if she did not get passing marks.

CHAPTER IX  
SUMMARY AND RECOMMENDATIONS

Certain characteristics of the group of pupils who were more than a year overage in grade VI A, Minneapolis schools, 1922-23, 3rd term, were found to be as follows:

Approximately one-third of the pupils in the grade are overage, one-third normal age and one-third underage, but considerably less than one-half of the underage pupils are more than six months underage and considerably more than one-half of the overage pupils are more than six months overage.

The number of overage pupils in grade VI A has decreased year by year of late and the number of normal age pupils have increased.

The extent of overageness, both with respect to years and number of pupils, is less in the grade VI A in Minneapolis than in the same grade in either St. Paul or New York City.

Among the pupils in the grade who are more than a year overage there are a comparatively small number of mentally superior children but approximately fifty percent are below normal in mentality. There is a larger percentage of the girls who are of normal mentality than boys.

The average number of years lost per slow progress boy is two years, per girl, 1.71 years.

The percentage of boys who made very slow progress, that is,

became retarded two, three or four years, is much greater than that of the girls, while the percentage of girls who became retarded a year, or less than a year, is twice as great as that of the boys.

The average number of terms repeated per boy is 4.78, for the girls, 4.08. Proportionally there were more girls who did not repeat than boys. The big bulk of repetitions are single repetitions. Only one-fifth of the repetitions are double repetitions and seven pupils only among the 94 repeated the same grade more than twice in succession.

The average number of terms skipped per boy is .44 of a term, per girl, .38 or a term.

Proportionally there were more girls who did not repeat than boys. The same is also true with respect to skips.

All the skips, with the exception of one, were made after the quarter system school year plan was adopted by the schools.

Less than ten percent of the pupils were demoted. The percentage was about the same among the boys and among the girls, likewise as to the percentage of demotions taking place before and after the adoption of the quarter system school year plan.

The grade most difficult for the average pupil is the first term in school.

Judging from the scholarship marks given by teachers average pupils who have had all their training in Minneapolis schools did not do on the average as good work as the average pupils in the same class who had had part of their training elsewhere.

The girls had better scholarship marks than the boys.

The arithmetic ability of average pupils in the grade was inferior to that of the average V B grade pupil.

The median both for rate and comprehension is lower for the average pupils in grade VI A than the standard median for that grade.

The average pupils in the grade are less able in spelling than the class as a whole.

There is practically no difference in the total scores received in the three achievement tests, arithmetic, reading and spelling, by the group of pupils in the class who have had all their training in Minneapolis schools and those received by the group of pupils who had part of their training elsewhere.

The girls in the grade did better in each of the three achievement tests than the boys.

Comparatively few of the average pupils in grade VI A in Minneapolis schools were born in Minneapolis.

Foreign born children make up approximately one-fourth of the average pupils.

The prevailing physical defects among children is more common among the boys than among the girls in this group of average pupils.

About one-fourth of the average pupils have American parents.

The majority of average pupils come from the manual labor classes.

There were very few of the average pupils who have attended kindergarten and the attendance of those who did was very irregular.

The great majority of average pupils have moved from one place to another at least once.

The annual average loss of time per average pupil was 28.1 days. The absence from school was extensive enough to be a cause of slow progress through the grades.

#### RECOMMENDATIONS

The following recommendations with respect to the average pupil problem in Minneapolis schools are based on the findings of this investigation.

1. In order to facilitate research work, introduce a certain uniform system to keep on file for each pupil the name, score, and date of standard tests taken from time to time.

2. In order to continue to reduce the percentage of average pupils in the different grades from year to year,

a. Locate the pupils of low mentality at least by the age of twelve. In order to do this make use of one or two intelligence tests, two or three achievement tests, teacher's estimations of pupil's work, and teacher's recommendations.

b. Give vocational guidance to every pupil in the grades who is not mentally equipped to pursue the regular school course.

3. Make special efforts to help all pupils to get the right start the first term of school by,

a. Providing for specially trained teachers for beginners.

b. Introducing a flexible course of study for beginners so that the maximum course would provide suf-

ficient material for the ablest of the pupils to be kept busy and that the minimum amount of material to be learnt would be sufficiently small so as to enable the pupil with a low I. Q. to make normal progress during the first and second year in school.

APPENDIX A

RECORD FORMS



The "Old Type" of Permanent Yellow Record Card

PUPIL'S PERMANENT RECORD

Minneapolis Public Schools

Name	First Name	Middle Name	Sex	Race
Birth Place	Address			
Date of Birth				
Date of Enrollment				
Place of Enrollment	School			
Parent or Guardian	Address			
Parent's Occupation				
Parent's Nationality				
No. and Date of Semester	Class and Att:	Where Admitted:	Where Rec'd:	Left
	Gr: Cl: Days:	Schools	School	Reasons
I	:	:	:	:
II	:	:	:	:
I	:	:	:	:
II	:	:	:	:
I	:	:	:	:
II	:	:	:	:
I	:	:	:	:
II	:	:	:	:

Form 29 15M-8-14

Front

No. and Date of Semester	Class and Att:	Where Admitted:	Where Rec'd:	Left
	Gr: Cl: Days:	Schools	School	Reasons
I	:	:	:	:
II	:	:	:	:
I	:	:	:	:
II	:	:	:	:
I	:	:	:	:
II	:	:	:	:
I	:	:	:	:
II	:	:	:	:
I	:	:	:	:
II	:	:	:	:
I	:	:	:	:
II	:	:	:	:
I	:	:	:	:
II	:	:	:	:

Reverse

The "New Type" of Permanent Yellow Record Card.

PUPIL'S PERMANENT RECORD

Minneapolis Public Schools

Surname		First Name		Middle Name	Sex	Race
Birthplace			Date of Birth			
Parent or Guardian						
Parent's Birthplace			Occupation			
Date of Enrollment			Place of Enrollment		School	
School Last Attended:		City	State			
Address	Telephone No.			Date		
Address	Telephone No.			Date		
Address	Telephone No.			Date		
Address	Telephone No.			Date		
Address	Telephone No.			Date		
Address	Telephone No.			Date		
Address	Telephone No.			Date		
Address	Telephone No.			Date		
Address	Telephone No.			Date		
Withdrawn: Date	Reason					
Withdrawn: Date	Reason					
Withdrawn: Date	Reason					

14 (10M 7-22)

Front

Quar- ter	School Year	Class Gr.	and Cl.	Att Days	School	Quar- ter	School Year	Class Gr.	and Cl.	Att Day	School
I	:	:	:	:	:	:	:	:	:	:	:
II	:	:	:	:	:	:	:	:	:	:	:
III	:	:	:	:	:	:	:	:	:	:	:
I	:	:	:	:	:	:	:	:	:	:	:
II	:	:	:	:	:	:	:	:	:	:	:
III	:	:	:	:	:	:	:	:	:	:	:
I	:	:	:	:	:	:	:	:	:	:	:
II	:	:	:	:	:	:	:	:	:	:	:
III	:	:	:	:	:	:	:	:	:	:	:
I	:	:	:	:	:	:	:	:	:	:	:
II	:	:	:	:	:	:	:	:	:	:	:
III	:	:	:	:	:	:	:	:	:	:	:
I	:	:	:	:	:	:	:	:	:	:	:
II	:	:	:	:	:	:	:	:	:	:	:
III	:	:	:	:	:	:	:	:	:	:	:
I	:	:	:	:	:	:	:	:	:	:	:
II	:	:	:	:	:	:	:	:	:	:	:
III	:	:	:	:	:	:	:	:	:	:	:
I	:	:	:	:	:	:	:	:	:	:	:
II	:	:	:	:	:	:	:	:	:	:	:
III	:	:	:	:	:	:	:	:	:	:	:

Reverse



4 110

# PUPIL'S PHYSICAL RECORD

MINNEAPOLIS PUBLIC SCHOOLS

Name.....

Address.....

School..... Room.....

Sex..... Date of Birth..... Birthplace.....

Name of person responsible..... Relationship.....

Number of children in family..... History of Measles, Scarlet Fever, Diphtheria,  
Mumps, Pertussis, Tonsillitis, Variola, Varicella, Pneumonia.

(Indicate which by checking.)

Other.....

Successful vaccination..... When.....

Notice sent..... Result..... Final disposal.....

SCHOOL.....

DATE OF EXAMINATION.....

GRADE.....

Number years in school				
Times excluded				
Conduct				
Effort				
Proficiency				
Retardation				
Height				
Weight				
Chest Measure				
Chest Expansion				
Posture				
Gait				
Speech				
Mouth Breathing				
Habit tic				
Vision (right)				
Vision (left)				
Hearing (right)				
Hearing (left)				
Skin				
Mucous Membrane				
Ear diseases				
Eye diseases				
Adenopathy				
Respiratory				
Recurrent headache				
Cardiac				
Throat				
Tonsil Hypert.				
Adenoid				
Teeth				
Thyroid				
Nutrition				
Nervous				
Orthopedic				
Additional				
Notice sent				
Final disposal				

Treatment advised check (✓)



APPENDIX B

NUMBER AND NAME OF PUPILS

APPENDIX B

NUMBER AND NAME OF PUPILS

KEY TO TABLE NUMBER XII GIVING NUMBER OF EACH PUPIL

1922-23	3rd Term	6C:80. 6A:21.
	2nd "	2C:3. 6B:77, 135, 209.
	1st "	5A:136. 6C:11, 28, 49, 69, 153, 203, 79, 208, 150, 89, 162, 141. 6A:33.
1921-22	3rd Term	5B:76. 6C:151.
	2nd "	5B:172. 6B:182.
	1st "	5C:60, 63, 124. 5B:16, 47, 59, 157. 5A:52. 6C:173. 6B:196.
1920-21	3rd Term	1C:142. 1A:186, 187. 4A:8, 184.
	2nd "	4B:189.
	1st "	1C:176. 4C:9, 78, 133, 202, 206. 4B:169, 190. 4A:62.
1919-20	3rd Term	3C:40. 3A:6, 87, 20. 4C:58, 88, 163. 5B:119.
	2nd "	4B:199.
	1st "	1A:31, 2B:144. 2A:22. 3C:15, 35, 65, 149. 3B:127. 4C:204, 29. 4B:24.
1918-19	2nd Term	3B:39, 125.
	1st "	1B:68. 2B:30, 146, 181. 2A:182. 3B:46, 168, 185. 3A:207.
1917-18	2nd Term	1B:160. 1A:164, 170. 3B:74, 188.
	1st "	1B:2, 23, 32, 123. 1A:38.
1916-17	2nd Term	1B:20, 67, 165, 198. 1A:83.
	1st "	1B:43, 44, 45, 51, 56, 64, 85, 90, 103, 113, 121, 126, 131, 132, 137, 145, 156, 169, 174, 194, 195. 1A:155, 2B:92.
1915-16	2nd Term	1B:37, 42, 61, 84, 91, 94, 95, 109, 183, 12, 19.
	1st "	1B:34, 36, 50, 53, 54, 55, 70, 71, 72, 73, 81, 82, 86, 93, 96, 97, 98, 104, 106, 106, 111, 115, 116, 123, 128, 138, 140, 146, 147, 152, 171, 175, 177, 179, 180, 191, 197, 201, 205, 1, 5, 7, 13, 14, 18, 26, 27. 1A: 114.
1914-15	2nd Term	1B:4, 99, 100, 107, 110, 143, 117, 129, 134, 139, 154, 158, 161, 178.
	1st "	1B:10, 17, 25, 41, 48, 57, 66, 75, 101, 102, 120,

1914-15 1st Term 1B Continued:  
130, 166, 167.  
1913-14 2nd Term 1B:118.  
1st " 1B:108, 193.  
1913-13 2nd Term 0  
1st " 1B:112.

NAME OF PUPILS AND SCHOOL

Adams

1. Blake, Winfred Elizabeth
2. Eastmay, Lorena Evangeline
3. Goodman, Rudolf
4. Miller, Joe
5. Asgard, Hazel Jane

Bancroft

6. Baumgartener, Norman
7. Constance, Stanley
8. Larsen, Valborg Sarah
9. Lewis, Melvin
10. Olson, Larorence

Blaine

11. Bazenat, Anthony
12. Dickens, Hattie
13. Donahue, Leonce
14. Loken, Arthur
15. Meka, Mary
16. Parmie, Angelina

Bromer

17. Barbeau, Wallace
18. Crowley, Lowell
19. Nell, Joseph
20. Miller, Gerald
21. Smith, Ethel
22. Vich, Harriet

Bryant

23. Conover, Margaret
24. Guarman, Buddy

Calhoun

25. Hunt, Millian Hamlin
26. Smith, Allan
27. Young, Katherine



- Clinton  
28. Stringteff, Harry
- Corcoran  
29. Douglas, Robert Lorance
- Douglas  
30. Russell, Katherine  
31. Schmeling, Edwin Paul  
32. Schmeling, Milne Arden  
33. Shea, Clara
- Emerson  
34. Demming, Wallace  
35. Jeringan, Hazel  
36. Jorgensen, George  
37. Overback, Nelson  
38. Reed, Francis  
39. Sabin, Mary
- John Ericsson  
40. Hage, Miles  
41. McCornell, John
- Field  
42. Clefton, Elain  
43. Graffan, Lillie  
44. Jacobson, Berth  
45. Peterson, Edward
- Fuller  
46. Brantner, Mary
- Fulton  
47. Smith, Frank
- Garfield  
48. Backdahl, John  
49. Fontaine, Harold Edward
- Grant  
50. Biorn, Fred  
51. Dean, Mabel Gertrude  
52. Fure, Joseph  
53. Gifil, Arthur  
54. Geldert, Robert  
55. Gardon, Mollie
- Greeley  
56. Evenson, Bernie  
57. Norquist, Lory
- Hamilton  
58. Bergeson, Lota  
59. Sosnoweis, Albin  
60. Spooner, Margaret  
61. Whitney, Richard

Harrison

62. Blanchette, Hughy Robert  
63. Donlap, Margaret  
4 64. Ekroth, Theodore Emil  
65. Golob, Sidney  
66. Kalmer, Ely  
67. Kennedy, Donald David  
68. Smith, Lillian M.

Hawthorne

69. Herzog, Margaret

Hiawatha

70. Hanson, Henry  
71. Moe, Helmer  
72. Aas, Harold Olaf  
73. Peck, Orin Howard  
74. Smith, Dorothy

Holland

75. Anderson, Alice  
76. Cacek, Anna

Holmes

77. Beach, Zola Ethel  
78. Cottrell, Annabelle  
79. Olson, Effe  
80. Nelson, Kermith

Irving

81. Benson, Arthur  
82. Ruud, Kenneth Berger Eugene

Jackson

83. Brownson, Alice  
84. Dahlberg, Bernice G.  
85. Olson, Raymong

Johnson

86. Bunes, Clifford  
87. Early, Helen  
88. Grothe, Palmer

Kenwood

89. Akin, Ben

Harriet

90. Brenzen, Grant  
91. Stevenson, Gorden Aurthur

Logan

92. Schroeder, Arden  
93. Sepple, Edith Frances

Longfellow

- 94. Chavie, Cecelia May
- 95. Heybloom, Mareanna El.

Lowell

- 96. Swanson, Gladys

Lowry

- 97. George Simon
- 98. Gervais, Clarence

Lynnhurst

- 99. Walters, Leonard David

McKinley

- 100. Schmidt, Lydia Edira

Madison

- 101. Brooks, Harold
- 102. Carlish, Earl
- 103. Lans, Virginia
- 104. McKean, Claude
- 105. Okerlund, Walter.
- 106. Servia, Arthur John

Hann

- 107. Allison, Florence Tone
- 108. Blandin, Edwins
- 109. Bork, Florence
- 110. Johnson, Gladys Ohlin
- 111. Nelson, Douglas A.
- 112. Peterson, Melvin
- 113. Reley, Margaret Clure

Minnehaha

- 117. Gilland, Ralph
- 118. Henderson, Chancellor
- 119. Hoaglund, Ruth Viola
- 120. Swenson, Harold

Monroe

- 121. Jensen, Arthur Julius
- 122. Kovacid, Emil
- 123. Krizan, Andrew
- 124. Pederson, Leon
- 125. Taylor, Celia

Motley

- 126. Zeman, Helen

Penn

- 127. Caswell, Claude
- 128. Frantz, Dorothy
- 129. Nepstad, Glen
- 130. Rose, Harold
- 131. Vandell, Florence

Pierce

- 132. Delmonico, Domenich
- 133. Goodwin, Josephine
- 134. Villella, Jenny
- 135. Wisnewske, Bernard
- 136. Worwa, Helen

Pillsbury

- 137. Garick, Margaret
- 138. Johnson, Henry

Pratt

1

- 139. Budd, Arnold Henry
- 140. Nyborg, Vernon
- 141. Pruhl, Douglas

Prescott

- 142. Christenson, Axel
- 143. Gervais, Edna
- 144. Gustafson, Erickson

Rosedale

- 145. Crockett, Ethel
- 146. Gates, Donald

Schiller

- 147. Baner, Louise
- 148. Borris, Joe
- 149. Doncaster, Susie
- 150. Faye, Blair
- 151. Kaliher, Eunice
- 152. Legenchen, Mary
- 153. Lesniak, Frank
- 154. Laberacki, Joseph
- 155. Miterko, Stephen
- 156. Petroff, Mary
- 157. Stanowska, Sophia
- 158. Urista, Mary
- 159. Zojaros, Julia
- 160. Zurbey, Joe

Seward

- 161. Larson, Kenneth
- 162. Probosh, Clarence
- 163. Reich, Rudolph
- 164. Sundquist, Gladys

Sheridan

- 165. Bozykowski, Joseph
- 166. Custer, Agnes
- 167. Gilbertson, Adolph
- 168. Goff, Margaret
- 169. Masielwski, Martha
- 170. Newman, Raymong
- 171. Nicholson, Kenneth
- 172. Nevak, Frances
- 173. Palffy, Frank

Simmons

- 174. Bramwell, Raymond
- 175. Carlson, Bernard
- 176. Edin, Astrud
- 177. Macy, William
- 178. Murphy, James

Standish

- 179. Carlson, Grant
- 180. (This student in VI B.

Sumner

- 181. Davis, Helen Lilly
- 182. Gidens, Walter
- 183. Heath, Learl Marie
- 184. Miller, Marie
- 185. Parness, Marian Lilly
- 186. Sedransky, Bessie
- 187. Sedransky, Juliet
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