

A STUDY OF ACCELERATION IN THE
NORTHWEST JUNIOR HIGH SCHOOL
KANSAS CITY, KANSAS
1923 - 1928

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MASTER OF SCIENCE

By

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July 1935

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CHAPTER I

INTRODUCTION

The principal objective of this study is to make a comparison of two homogeneous groups that entered the Northwest Junior High School of Kansas City, Kansas, the same year but finished the senior high school five and six years later respectively. By the use of the Illinois General Intelligence Test¹ compiled by Monroe and Buckingham, the intelligence quotient of each incoming seventh grader was found and the pupil was placed in the group determined by the results of the test. This study was made of the two highest groups that entered in each of the years of 1923, 1924, and 1925.

The writer throughout the study classifies the groups as the accelerate group and the control group in making the comparisons.

Table I shows the number of pupils in both groups used in this study.

¹ W. S. Monroe and B. R. Buckingham, "Illinois General Intelligence Scale," Form 2, Bloomington, Illinois: Public School Publishing Company, 1921. p. 8.

TABLE I
 NUMBER OF PUPILS IN BOTH THE ACCELERATE
 GROUP AND THE CONTROL GROUP

Years	Accelerate Group			Control Group		
	Boys	Girls	Total	Boys	Girls	Total
1923	5	21	26	8	12	20
1924	14	17	31	8	14	22
1925	10	20	30	14	19	33

Read table thus: In 1923, there were 5 boys and 21 girls in the accelerate class while in the control group there were 8 boys and 12 girls.

By permission of the parents the accelerate class was allowed to finish the junior high school in two years thereby finishing the junior and the senior high school work in five years, while the control group which consisted of pupils of about the same mental ability but the second group used the full six years to complete their junior and senior high school work.

The data necessary for the study were secured from the files of both the junior high school and senior high school. The age of each pupil, his intelligence quotient, credits, electives and other information shown in the tables throughout the study were secured from the office records. The information in the table showing the present occupation and location of each was secured by interviewing the subjects personally or calling on some one who knew of them and their whereabouts.

CHAPTER II

CLASSIFICATION OF GROUPS IN THE NORTHWEST JUNIOR HIGH SCHOOL

As Terman² points out there are two classes of gifted children; the intellectually gifted, and the specifically gifted. The intellectually gifted consists of those who are of superior mental ability as measured by some general intelligence test, and the second class consists of those whose exceptional gifts are confined to one or more special fields as music, art, etc.

As was mentioned in the introduction, the groups used in this study are the two highest ranking homogeneous groups. They would be classed as the intellectually gifted children. The writer will briefly describe the intelligence test administered to the pupils in this study, to determine the intelligent quotient and to find which ones were intellectually gifted.

The Illinois General Intelligence Scale, Form 2, was compiled by Buckingham and Monroe, published by the Public School Publishing Company of Bloomington, Illinois. Sixty minutes are needed to apply the test but only thirty-seven and one-half minutes are required in actual working time. There are seven parts in the test.

² Lewis M. Terman, "The Gifted Child." Handbook of Child Psychology, (Worcester, Massachusetts: Clark University Press, 1931), p. 568.

Test No. 1 -- Analogies

UnderSCORE one of the last four words that is related to the third word the same way that the first two words are related to each other. examples:

- 1. table -- wood:: stove -- bottle paper iron cork
- 2. eye -- see:: ear -- hear smell music head
- 3. straw -- hat:: leather -- feather cool soft shoe

Test No. 2 -- Arithmetic Problems

Write each answer after the word "answer" in each problem.

examples:

- 1. Yesterday Frank earned 12 cents and today he earned 7 cents. How much did he earn on both days? answer ().
- 2. 26 sparrows were on a lawn. 7 flew away. How many were left? answer ().

Test No. 3 -- Sentence Vocabulary

Draw a line under one of the last four words that will make the truest sentence. examples:

- 1. Scorch means to cut burn bruise turn
- 2. To curse is to buy swear bless sing
- 3. Some puddles are made of mud sand stone brick

Test No. 4 -- Substitution

Place the numbers after the signs as shown in the following



E	
L	
J	

E	7		
7	7		
E	L		

L	7	7		
L	E	7		
L	E	7		

Test No. 5 -- Verbal Ingenuity

Draw a line through the word that is not needed to make a complete sentence. examples:

1. the dog to see
2. am going yesterday today I
3. fell seen tree the

Test No. 6 -- Arithmetical Ingenuity

Cross out the one number that does not fit in the series.

examples:

- (1) 4 8 12 16 32
- (2) 2 4 6 8 10 11
- (3) 25 20 15 10 7 5

Test No. 7 -- Synonym - Antonym

Draw a line under same or opposite as the two words at the first designate. examples:

1. no -- yes. same - opposite
2. long -- short. same - opposite
3. in -- out. same - opposite

In checking the test, each part is checked separately and then totaled. In parts 1, 2, 3, 5, and 6 the number right is found. In part 4, the number right divided by 4 is the score. In part 7, the score is the number right minus the number wrong. In the test there are a possible 178 $\frac{1}{2}$ points. From the score the mental age is found, and the intelligence quotient is the mental age divided by the chronological age.

Where should the line be drawn to determine who is the gifted child? In this study of the two highest homogeneous groups, the writer will attempt to explain the system used in grouping the classes and where the line is drawn in the Northwest Junior High School. The preenrollment in the spring of the year at the sixth grade schools approximately determines the number that will enroll the next fall in the junior high school. In the years of enrollment included in this study, the homogeneous grouping was secured by the results of the Illinois test. The enrollment determined the number of groups. The scores of the test were thrown together, the range found and then separated into the number of groups decided upon by the administration. Those pupils falling into the highest group were called the accelerates, and the next highest group is designated as the control group.

The method used now in the school is somewhat changed. The Hermon-Nelson tests are administered at the present time. The intelligence quotient and achievement median are both found. The intelligence quotients are thrown together and the range determined and then tabulated into the major percentiles, beginning with 5% and at intervals of five to the 100%.

The same procedure is used with the achievement medians. Then the average of the different percentiles is found. For example, if a pupil were to fall in the 65 percentile in achievement median and the 75 percentile in intelligence quotient, the average or 70 percentile would be his rating. This would give twenty groups, and then from these twenty groups, the number of groups was found as would be needed by the enrollment. For the past few years, the school has had ten homogeneous groups in the seventh grade. To familiarize the teachers with the groups they possess, a numbering scheme is given each group. The ten seventh grade groups are numbered as follows: 7-1-1, 7-1-2, 7-1-3, 7-2-1, 7-2-2, 7-2-3, 7-2-4, 7-3-1, 7-3-2, and 7-3-3. The three highest groups or the one group as sometimes designated, are of the highest rating and do practically the same kind of work. The next four groups are known as the average group and they do the same amount and kind of work. While the three remaining groups are classed as the lowest groups which do the same work.

These three main divisions are known as X, Y, and Z. The X is the highest, the Y the middle or average division, and the Z the lowest group. The course of study in the academic subjects is made to fit the abilities of the different groups. The group system is not used in elective subjects.

For classification the following year in the eighth grade, a pupil is sometimes changed from the division in which he has been placed in the seventh grade. This change is made on the recommendation of the teacher. He may recommend that the pupil be transferred to a different group either higher or lower as the case may be.

CHAPTER III

TESTS AS A METHOD OF GROUPING

Intelligence tests are useful, not only in educational guidance of the students, but also in the grouping for recitation purposes. Dividing an entering class such as the seventh grades in this study into recitation sections according to alphabetical order might prove more satisfactory than separating them according to seats they select the first time, because the alphabetical system usually secures a better range of average abilities of the pupils. This range might be too great, as the average, the dull and the accelerated pupils will be associated in each class. It is time saving to have recitation sections composed of pupils of about the same mental capacity. Administrations of such schools as Cleveland, Ohio, Oakland and Berkley, California, and individuals that have used intelligence tests have found them to be very reliable for homogeneous groupings. In a great many cases, pupils are happier in their work and really make better progress under the grouping plan than they could have done otherwise. It tends to make instruction easier.

What is homogeneous grouping? It is the grouping of children of the same mental ability together in the same class. The one main advantage of homogeneous grouping over heterogeneous grouping is that larger classes can be handled by one teacher. It is a decided fact that children of equal or near equal ability will work much better together. The cost of education is figured per pupil cost, so the larger the classes handled tend to lower the cost of education.

The average classroom is far from homogeneous. Such variations and ranges of ability and ages in the educational set-up need a revision. Promotion is necessary and it cannot be administered accurately in the average classroom as it is arranged at present. The smaller schools are unable to secure homogeneous grouping, but the larger school, the more fortunate it is, in the fact that it can place its pupils in homogeneous groups.

It is true throughout the educational program as stated by Terman³ that the leading causes of failures are low mentality, irregular attendance and poor health. Of these three causes of failures, low mentality rates the greatest per cent. The workers in the educational field know these three causes are related to each other. Irregular attendance is often due to low mentality. Poor health and low mentality overlap to a certain extent. No matter what the combination is, the greatest number of teachers agree that most school failures are due to the fact that the child has not completed the work. In the average class room, some children are asked to work beyond their ability.

Teachers that have had experience in handling classes of pupils of similar ability recognize the fact immediately that the instruction is easier, and that the pupils work better, behave better, and accomplish more than they did under former classification with the regular grade pupils.⁴

³ Lewis M. Terman, and others, Intelligence Tests and School Reorganization (New York: World Book Company, 1923), p. 33.

⁴ Ibid., p. 34.

In the educational program where homogeneous grouping is used, these groups come under three main headings, namely, accelerate, average, and slow. In Oakland, California, in 1918 where the reorganization took place, a rule was stated.

Find the mental ability of the pupil and place him where he belongs, taking careful consideration of his age, former accomplishment in school, health, and any other condition which he is known to have a bearing upon his proper placement.⁵

In Berkeley in 1920 as in Oakland an attempt was made to define five types, accelerate, normal, opportunity, limited, and atypical. All except the normal class are also listed as special classes and are subject to a special curriculum.

The word accelerate which means to move faster also applied to the higher class of pupils, move them on to a higher grade or group at a rate more rapid than that for the normal group. As was mentioned in the introductory chapter the accelerate class in this study was limited to the highest group only and accelerated to the extent of accomplishing the junior high school work in two years instead of the normal three years. M. E. Pearson, former superintendent of school, of Kansas City, Kansas, fell into the wave at that time and in keeping his school system up to the modern trend of things, promoted the idea of homogeneous grouping in his school and the acceleration of certain one of the classes. This method was used in the years of 1923 to 1931 inclusive. Beginning with the class

⁵ Ibid., p. 35.

of 1932, the accelerate idea was discontinued. The grouping system was continued but the highest group was required to take the regular three years in the junior high school. In such a scheme the enrichment of the curriculum was the objective rather than that of skipping one grade.

Dickson⁶ in his work on the homogeneous groupings and studies gives the following summary:

The graded system with annual and semiannual promotions has failed to produce homogeneous grouping in the public school.

The misfits in the present grade groupings are due largely to improper classification by mental levels and uniform requirements in the course of study.

The needs of all classes of pupils can be more fully met at little if any additional expense by a multiple-track system adapted to pupils of superior, normal, or inferior intelligence. This system involves differences in content of course of study.

The system is more democratic than former systems because it offers to every child a freer opportunity to use his full capacity.

Limited classes keep dull pupils longer in school by giving work better suited to their needs.

Experiments carried on in the elementary, the junior high, and the senior high schools by classifying pupils according to brightness have demonstrated the feasibility of the plan.

Johnson⁷ conducted a survey regarding teachers' judgments on superior

⁶ Virgil E. Dickson and others, Intelligence Tests and School Re-organization (New York: World Book Company, 1923), p. 51.

⁷ O. J. Johnson, "Teachers judgments of qualities of gifted pupils as related to classroom activities." School and Society, 17:486-9, April, 1923.

children. A summary compiled from teachers' replies show:

1. Pupils are more inquisitive than the average.
2. Pupils are more imaginative.
3. Pupils are more courteous.
4. Pupils have keener sense of humor.
5. Pupils are more cooperative.
6. Pupils are more willing to take suggestions.
7. Pupils are more talkative.
8. Pupils express opinions more readily.
9. Pupils are not as egotistical as thought to be.
10. Pupils are not as domineering as thought to be.

He also conducted a survey as to the teachers' experiences with respect to other matters such as the general problems arising in teaching and in special methods with the superior groups.

The questions submitted to the teachers were:⁸

1. In what respects is your class strong?
2. In what respects is your class weak?
3. Is discipline easier or more difficult?
4. How much, if any, have you been able to reduce drill?
5. In what ways are your pupils easy to teach as a class?
6. In what ways is your class difficult to teach?
7. If you have felt it necessary to use different methods in teaching, state their nature.

⁸ Ibid., pp. 487-9.

8. What advantages have you found in teaching bright pupils in groups?
9. What disadvantages have you found?
10. General remarks.

A summary of the answers received by Johnson and compiled them as:

1. Class is strong and show unusual work.
2. Some bright pupils don't work up to their capacity but the class as a whole is never weak.
3. Discipline is easier but the old fashioned order is impossible.
4. Drill has been reduced as much as 50%.
5. Pupils are interested, attentive, and eager.
6. Classes are not difficult to teach.
7. Responsibility shifts from teacher to pupils....teachers' leadership to come by suggestion.
8. Not so much repetition necessary.
9. No disadvantages.
10. Segregation is the best thing possible, and grouping should be done as early as possible.

⁹ Ibid., pp. 467-9.

CHAPTER IV

SUBJECTS STUDIED BY THE GROUP

The school has recognized the fact in the past that it has neglected the problem of fixing a curriculum and providing the proper adjustment for the pupils of mental capacity above the average. Rapid advancement has been made in some cities while others have given extra work in the regular classes. In this study of the accelerate group which was allowed rapid advancement and the control group which was given extra work the writer will show how the necessary credits were earned for the graduation from the junior high school.

The minimum requirement of credits for graduation from the junior high school is thirteen. Each pupil is allowed to earn five credits in each year of the junior high school. The required credits are: English, three; Mathematics, three; History, two; Geography, one; Physical Training, one; Hygiene, one-half; Civics, one-half; and electives, four; making a total of fifteen credits.

The control group earned five each year, thereby earning the maximum of fifteen credits in the three years. The accelerate class in the seventh grade earned six credits, getting the two in history by completing the seventh grade history course and doing enough extra work which entitled them to the eighth grade history credit. In both the English and mathematics classes more of course of study was completed than regularly required. These classes completed in addition to the seventh grade require-

ments about one-half of the eighth grade requirements. The following year the accelerates enrolled in the ninth grade. They began the English and mathematics where they left off in the spring. The teacher who started the accelerate class in the seventh grade followed it through the ninth grade. This arrangement made it easier to carry on the work. At the end of the ninth grade, the English and mathematics classes had finished the remainder of the eighth grade requirements and all of the ninth; thus, they earned the extra credits needed for graduation. After the ninth grade completed the work the extra credits were then placed on the permanent records in the space provided for the eighth grade. The following table shows how the permanent record is made in giving the accelerate class the extra three credits needed to finish the junior high school within the two years time they are enrolled in the school.

TABLE II
CREDITS EARNED BY THE ACCELERATE GROUP
IN THE JUNIOR HIGH SCHOOL

Seventh Grade Credits	Eighth Grade Credits	Ninth Grade Credits
Mathematics 1	Mathematics 1	Mathematics 1
English 1	English 1	English 1
History 1	History 1	Phys. Trg. 1
Geography 1		Civics 1
Elective 1		Electives 2
Total 5	3	5

Read table thus: One credit earned in Mathematics, one in English during the seventh grade.

Table III shows the credits earned by the control groups in the three years of their junior high school.

TABLE III
CREDITS EARNED BY THE CONTROL GROUP
IN THE JUNIOR HIGH SCHOOL

Seventh Grade Credits	Eighth Grade Credits	Ninth Grade Credits
Mathematics 1	Mathematics 1	Mathematics 1
English 1	English 1	English 1
History 1	History 1	Civics 1
Geography 1	Phy. Trg. 1	Phy. Trg. 1
Electives 1	Hygiene 1	Electives 2
	Electives 1	
Total 5	5	5

Read table thus: In the seventh grade, one credit was earned in each mathematics, English, history, etc.

From the foregoing tables, it is noted that those in the accelerate group were entitled to three electives, one in the seventh grade and two in the ninth grade. In the seventh grade, they were given a choice of wood-working, music (orchestra or chorus), drawing, domestic science or domestic art. In the ninth grade in addition to the electives of the seventh grade, Latin, typewriting, ancient history, and general science are added. The following table shows the credits earned by the accelerate groups in their junior high school work in the field of electives.

TABLE IV
NUMBER OF CREDITS EARNED BY THE ACCELERATE
GROUPS IN THE DIFFERENT ELECTIVES
IN THE JUNIOR HIGH SCHOOL

Electives	1923	1924	1925	Total
Woodworking	4	12	8	24
General Science	23	20	6	49
Music	9	14	15	38
Dom. Science and Art	10	14	18	42
Latin	6	26	20	52
Drawing	2	6	5	13
Ancient History	24	1	6	31
Typewriting		1	6	7

Read table thus: In 1923, 4 credits were earned in woodworking, in 1924, 12 in woodworking, and in 1925, 8 were earned.

From the foregoing table it is noted that ancient history had quite an enrollment in 1923 as compared with the other two years. This is explained by the fact that in 1923, the junior high school building was being erected, and the school was on half-day sessions with the senior high school

using their building in the afternoons. Some of the various departments were not open to the junior high school that year, but were when the 1924 class entered the new building. At the present time, ancient history is not offered as the number enrolling in it is not sufficient to warrant a class.

The control group by remaining in the junior high school all three years is entitled to four electives. One in each the seventh and eighth grades and two in the ninth grade. They are to choose from the same list as the accelerate class. At the present time, there are several more classes open to select their electives that were not offered when these classes were in the junior high school. In addition to those mentioned before the following courses are open at the present time: auto-mechanics, mechanical drawing, sheet metal, business training, business arithmetic, commercial art, freehand drawing and journalism.

The following table shows the number of credits earned by the control group in the different elective fields.

TABLE V

NUMBER OF CREDITS EARNED BY THE CONTROL
GROUP IN THE DIFFERENT ELECTIVES
IN THE JUNIOR HIGH SCHOOL

Electives	1923	1924	1925	Total
Woodworking	20	13	28	61
General Science	14	13	20	47
Music	15	20	26	61
Dom. Science and Art	17	19	20	56
Latin	12	8	17	37
Drawing	1	4	5	10
Ancient History	1	3	7	11
Typewriting	6	3	9	18

Head table thru: In 1923, 20 credits were earned in woodworking, in 1924, 13 credits earned, and in 1925, 28 credits were earned.

The small enrollment in the typewriting classes need a word of explanation. While enrolled in the junior high school, the pupils are told that if they intend to finish their senior high school, to wait until then to elect typewriting, but if there were a possibility that they would never finish their senior high school work, they were given an opportunity to elect typewriting in the junior high school. Since these pupils were the highest groups they were probably encouraged to finish their senior high school work, consequently not many credits were earned in typewriting. In the present system after such advice, the classes in typewriting are made up mostly of pupils in the average and slow classes.

In the senior high school, in which both the accelerate and the control groups remained all three years, the minimum number of credits that could be earned was twelve and the maximum was fifteen. The following table shows the number of pupils in each the accelerate and the control group and the number of credits earned in the senior high school.

TABLE VI

NUMBER OF CREDITS EARNED BY THE ACCELERATE AND THE CONTROL GROUPS IN THE SENIOR HIGH SCHOOL.

Credits	1923		1924		1925	
	Accelerate	Control	Accelerate	Control	Accelerate	Control
12½	1	1		2		
13	2	2	1	1	1	
13½	6	1	2	3	3	3
14	4	3	5	6	4	5
14½	7	1	8	1	6	4
15	4	4	12	3	8	9
Total	23	12	23	16	22	21

Read table thus: In 1923, one pupil in the accelerate group earned 12½ credits; one in the control group. In 1924, two in the control group earned 12½ credits.

The only subjects in the senior high school required for graduation are sophomore and junior English, constitution, sophomore and junior physical training, and American history.

The following table shows the number of credits earned in each department during the senior high school by those pupils who were accelerates in the junior high school.

TABLE VII

CREDITS EARNED BY ACCELERATE PUPILS
IN THE SENIOR HIGH SCHOOL IN
DIFFERENT DEPARTMENTS

Departments	1923	1924	1925	Total
English	55	53	54	162
Mathematics	30	34	28	92
Languages	42	41	37	120
Expression	17 $\frac{1}{2}$	12	20	49 $\frac{1}{2}$
Science	42	47 $\frac{1}{2}$	39	128 $\frac{1}{2}$
Commerce	35 $\frac{1}{2}$	42 $\frac{1}{2}$	41	119
Physical Education	21 $\frac{1}{2}$	25	28	74 $\frac{1}{2}$
History	30	30	30	90
Music	6 $\frac{1}{2}$	21	10	37 $\frac{1}{2}$
Constitution	11 $\frac{1}{2}$	11 $\frac{1}{2}$	11	34
Trades	30 $\frac{1}{2}$	17	20	67 $\frac{1}{2}$

Read table thus: In 1923, 55 credits were earned in English; in 1924, 53 credits in English; in 1925, 54 credits earned in English.

The following table shows the number of credits earned in each department during the senior high school by those pupils who were in the control group while enrolled in the junior high school.

TABLE VIII

CREDITS EARNED BY PUPILS OF THE CONTROL GROUP
IN THE SENIOR HIGH SCHOOL IN THE
DIFFERENT DEPARTMENTS

Departments	1923	1924	1925	Total
English	26	37	50	113
Mathematics	14 $\frac{1}{2}$	15	33	62 $\frac{1}{2}$
Languages	10	19	18	47
Expression	5	9 $\frac{1}{2}$	12	24 $\frac{1}{2}$
Science	21 $\frac{1}{2}$	31 $\frac{1}{2}$	43	96
Commerce	29 $\frac{1}{2}$	37	46 $\frac{1}{2}$	112
Physical Education	10 $\frac{1}{2}$	15	27	52 $\frac{1}{2}$
History	14	19	27	60
Music	4	12 $\frac{1}{2}$	14	30 $\frac{1}{2}$
Constitution	6	8	11 $\frac{1}{2}$	25 $\frac{1}{2}$
Trades	28	15 $\frac{1}{2}$	23	66 $\frac{1}{2}$

Read table thus: In 1923, 26 credits were earned in the English department; in 1924, 37 credits earned; in 1925, 50 credits in English were earned.

Table IX shows the subjects in the curriculum included in each department.

TABLE IX
 SUBJECTS OFFERED IN THE SENIOR HIGH SCHOOL
 IN EACH DEPARTMENT

Department	Subjects	Department	Subjects
Music	Band Orchestra Chorus	Languages	Spanish French Latin
History	World American	Expression	Dramatics Debate Public Speaking
English	Sophomore Junior Senior Journalism	Mathematics	Algebra Plane Geometry Trigonometry Solid Geometry
Science	Botany Biology Physics Chemistry	Commerce	Typewriting Shorthand Commercial Law Office Practice Penmanship
Trades (Girls)	Domestic Science Domestic Art	Trades (Boys)	Woodworking Auto-Mechanics Printing Mechanical Drawing

Read table thus: In the music department, the subjects included band, orchestra, and chorus.

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CHAPTER V

POINTS OF COMPARISON AMONG GROUPS

There are several questions that may be considered with respect to those pupils that are accelerated. Margaret M. Altucker¹⁰ has listed some of the outstanding questions that confront the schools. They are as follows:

1. How does he compare with his fellow student in mental ability?
2. How does he compare with his fellow student in scholarship?
3. How does he compare with his fellow student in physical development?
4. Is he a student-body leader?
5. Is he a misfit in the secondary school?
6. Is acceleration a good method of meeting the needs of the superior child?

The writer will undertake to answer the above questions in relationship to those pupils that were considered throughout this study.

MENTAL ABILITY

The pupils that were placed in each of these accelerated and control groups are above their fellow students in mental ability. The writer will class both groups together in connection with these questions as his two

¹⁰ Margaret M. Altucker, "Is the pedagogically accelerated student a misfit in the senior high school?" School Review, 32: 193, March, 1924.

groups were superior, and only one was called accelerated because it completed the three year junior high school assignment within the two year period. Mental ability in these groups were determined by the results of the Illinois General Intelligence Scale. These groups were of approximately the same mental ability, and as was stated in the introduction the highest group was accelerated by the parents' consent.

The following tables show the number of pupils in intervals of five from the range of the lowest intelligence quotient at 103 to the highest intelligence quotient of 158.

In terms of intelligence quotient the pupils in these accelerate and control groups were above those of their fellow students in the other homogeneous groups.

TABLE X
 NUMBER OF ACCELERATE PUPILS
 IN INTELLIGENCE QUOTIENT
 INTERVALS

I. Q.	1923	1924	1925	Total
155-159				
150-154				
145-149		2		2
140-144		3	1	4
135-139	1	3	2	6
130-134		6	5	11
125-129		7	5	12
120-124	4	1	9	14
115-119	4	1	5	10
110-114	6	4	2	12
105-109	7		2	9
100-104	4	2	1	7
Total	26	31	30	87

Read table thus: In the intelligence quotient interval from 135-139, there was one pupil in the 1923 class, three in the 1924 class, and 2 in the 1925 class.

TABLE XI
 NUMBER OF PUPILS IN THE CONTROL GROUP
 IN THE INTELLIGENCE QUOTIENT
 INTERVALS

I. Q.	1923	1924	1925	Total
155-159			2	2
150-154			1	1
145-149	1	1		2
140-144	1	1		2
135-139	1	1		2
130-134	2	1	1	4
125-129	2	2	3	7
120-124	3	3	10	16
115-119	3	7	6	16
110-114	4	4	6	14
105-109	2	2	3	7
100-104	1		1	2
Total	20	22	33	75

Read table thus: In the intelligence quotient interval from 130-134, there were two pupils in the 1923 class, one in the 1924 class, and one in the 1925 class.

SCHOLARSHIP

A pupil whether accelerated, average, or dull is promoted by a uniform system of marking known as the scholarship record. In the school system, where the pupils of this study received their schooling, the marking system consists of five numbers, namely, 1, 2, 3, 4, and 5. A mark of 1 stands for superior work, a mark of 2 for excellent work, 3 for average work, 4 for unsatisfactory work, and a mark of 5 stands for failure.

The teacher for his own satisfaction is allowed to use a plus and minus sign in addition to the numbers, but in figuring percentage averages and for permanent records, the plus and minus signs are disregarded. The homogeneous grouping has its drawbacks in the marking system, as a pupil in the average or slow group can earn a grade of 1 and still cannot compare with the mental ability or academic achievement of the accelerate pupil making a mark of 3.

In the study of the scholarship of these groups, no grades of 5 were ever recorded, while in the other groups, there will be found some failures. The writer in giving the scholarship record of these groups uses the average grade. Each grade was recorded and a value given each grade and an average found. A grade of 1 counts 1; a grade of 2 counts 2; a grade of 3 counts 3, etc. To explain how the grades were averaged, for example, one pupil made these grades, 3 credits in English with an average grade of 3, making 9 points, one credit in mathematics with a mark of 3, making 3 points, two credits in science with a mark of 4, making 8 points, one credit in language with a mark of 4, making 4 points, one and one-half credits in physical

training with a mark of 3, making $4\frac{1}{2}$ points, one credit in trades with a mark of 4, making 4 points, three credits in commerce with a mark of 4, making 12 points, one credit in history with a mark of 3, making 3 points, and one-half credit in constitution with a mark of 4, making 2 points. Totaling both credits and points from the above example, 14 credits totaling $49\frac{1}{2}$ points. By dividing $49\frac{1}{2}$ by 14, a result of $3\frac{15}{28}$ which is over $3\frac{1}{2}$ and an average grade of 4 was given the pupil for his work done in school.

The following tables show the number of pupils falling into each grade distribution in both the accelerate and control groups.

TABLE XII

NUMBER OF PUPILS IN ACCELERATE AND CONTROL GROUPS IN
GRADE DISTRIBUTION IN THE JUNIOR HIGH SCHOOL

Grades	1923		1924		1925	
	Accelerate	Control	Accelerate	Control	Accelerate	Control
1-	3	1	4	2	2	3
2+	3	3	2	3	4	4
2	3	4	2		4	2
2-	8	4	7	4	6	8
3+	5	2	12	5	9	5
3	1	2	1	6	2	7
3-	2	4	2	1	2	4
4+	1		1		1	
Total	26	20	31	22	30	33

Read table thus: In 1923, three in the accelerate group and one in the control group made an average grade of 1-; in 1924, four in the accelerate group and two in the control group made an average grade of 1-.

Disregarding the plus and minus signs the following table shows the total in each distribution of grades.

TABLE XIII

NUMBER OF PUPILS IN EACH GRADE DISTRIBUTION IN THE ACCELERATE AND THE CONTROL GROUPS IN THE JUNIOR HIGH SCHOOL

Grades	1923		1924		1925		Total
	Accelerate	Control	Accelerate	Control	Accelerate	Control	
1	3	1	4	2	2	3	15
2	14	11	11	8	14	14	72
3	8	8	15	12	13	16	72
4	1		1		1		3
5							
Total	26	20	31	22	30	33	162

Read table thus: In the 1923 class there were 3 in the accelerate group and one in the control group that averaged a grade of 1; in the 1924 class, four in the accelerate and two in the control group made a grade average of 1.

The grading system used as 1, 2, 3, 4 and 5 is comparable to the same standards as the grades A, B, C, C₂, and F. The normal distribution in a heterogeneous group frequently allows for 7% of a grade of A, 18% a grade of B, 50% a grade of C, 18% a grade of D, and 7% a grade of F.

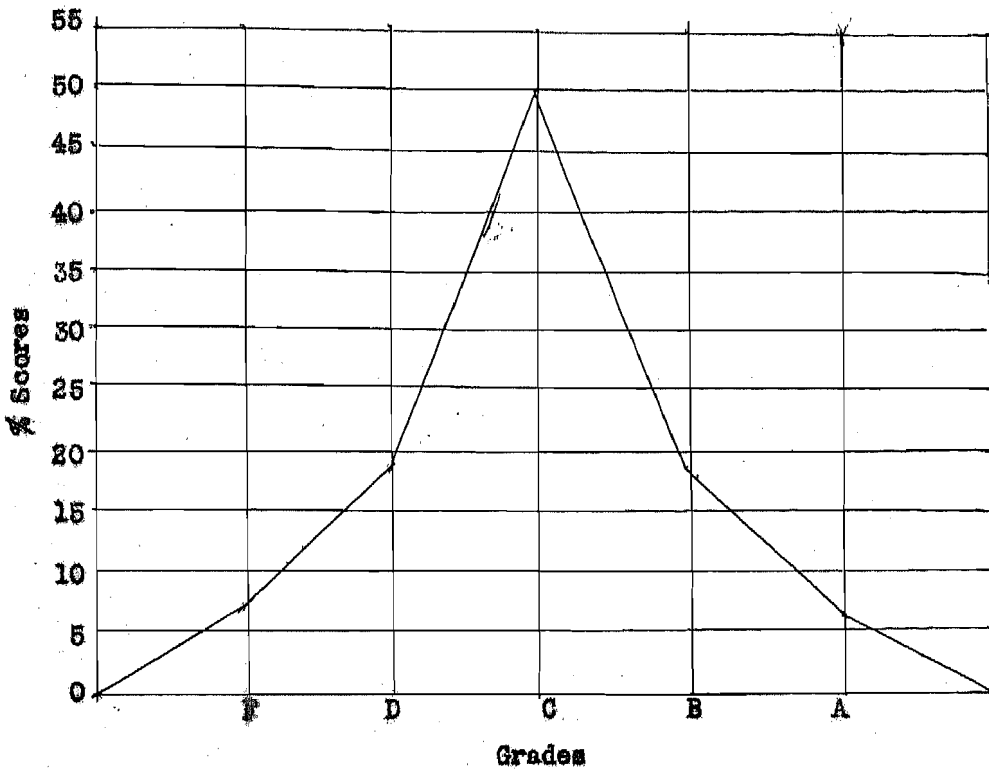


FIGURE 1

A STANDARD DISTRIBUTION OF GRADES

The following figures show the grade distribution of both the accelerate and the control groups in each of the years 1923, 1924, and 1925.

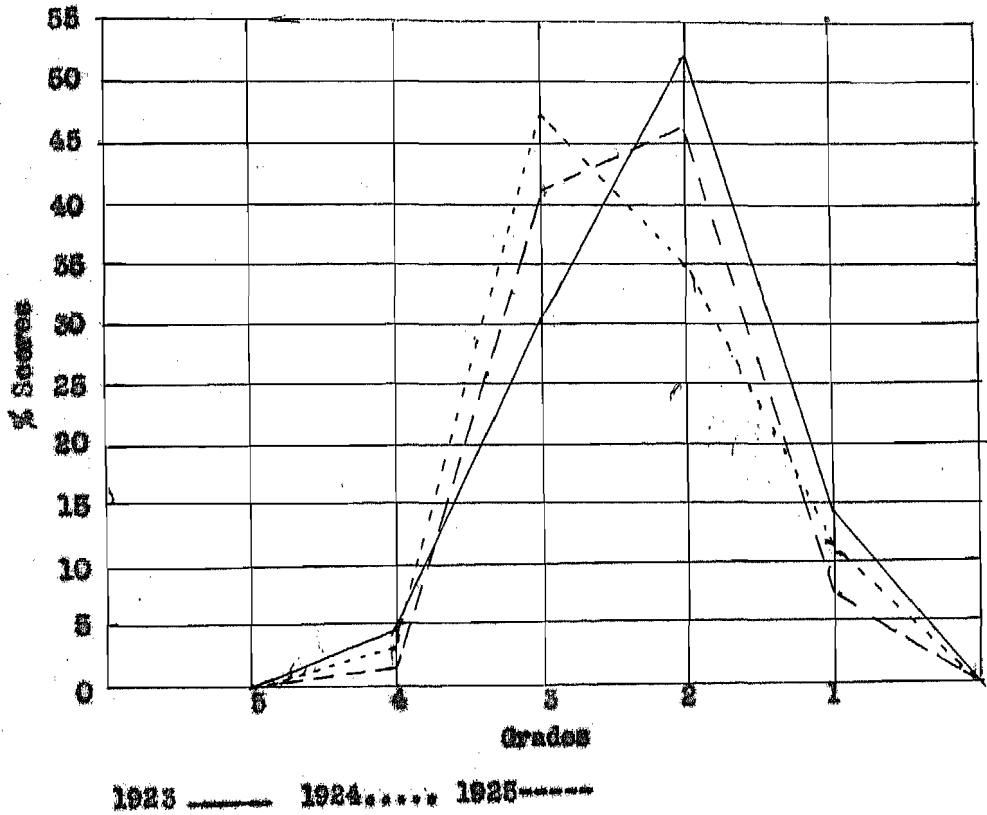


FIGURE 2

THE ACCELERATE GROUPS OF 1923, 1924, AND 1925
 DISTRIBUTION OF GRADES IN THE
 JUNIOR HIGH SCHOOL

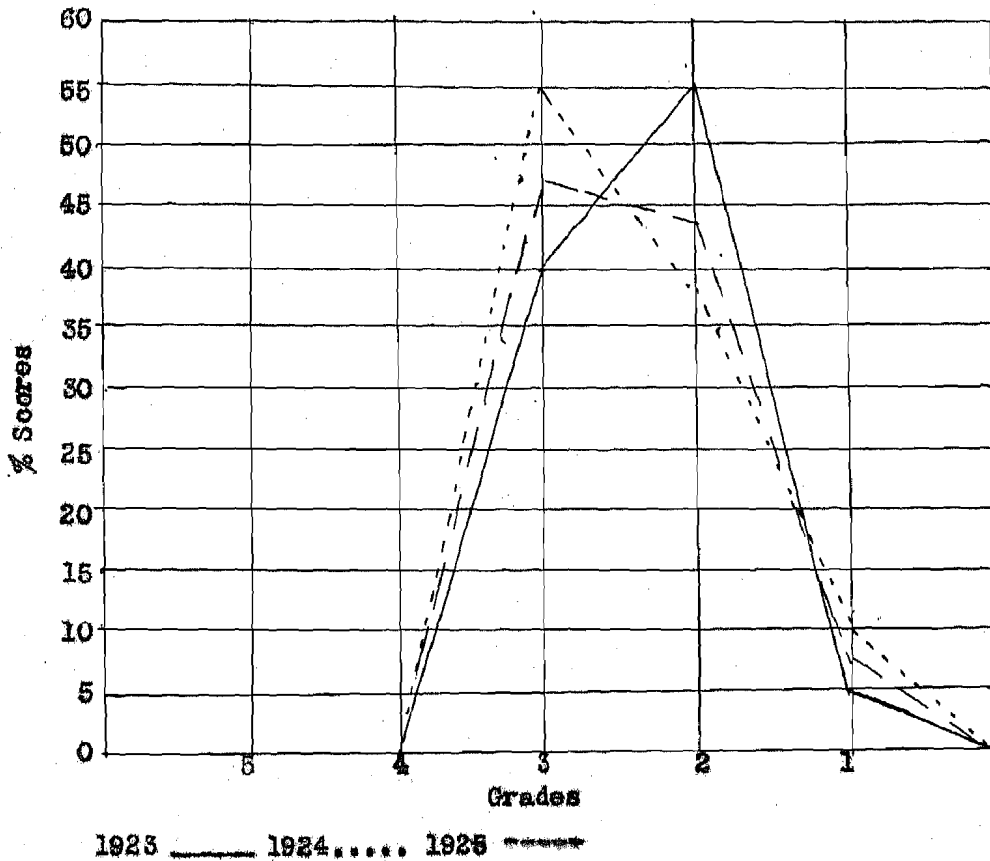


FIGURE 3

THE CONTROL GROUPS OF 1923, 1924, AND 1925
DISTRIBUTION OF GRADES IN THE
JUNIOR HIGH SCHOOL

It might be said that in the junior high school the grades of the control groups averaged higher than those of the accelerate groups, but when compared with the normal distribution both groups ranked high. These results were to be expected.

All these pupils in this study finished the junior high school, and approximately seventy-five percent of them finished the local senior high school. There is a possibility that some of them that the writer was unable to locate could have moved to some other school and finished their secondary education. The following table shows a comparison of the number in each group finishing the junior and the senior high school.

TABLE XIV

NUMBERS GRADUATING IN EACH GROUP FROM THE
JUNIOR AND THE SENIOR HIGH SCHOOLS

	1923		1924		1925	
	Jr. High	Sr. High	Jr. High	Sr. High	Jr. High	Sr. High
Accelerate	26	23	30	23	27	22
Control	20	12	22	16	33	21
Total	46	35	52	39	60	43

Read table thus: In the 1923 accelerate class, 26 graduated from the junior high and 23 from the senior high; in the 1924 accelerate class, 30 graduated from the junior high and 23 from the senior high.

In the senior high school work, most of the subjects of the course of study were elected by the students in the fields in which they were interested, consequently the scholarship record for the students is above the average. In all the senior high school records, only one pupil of the accelerate junior high group remained in the senior high school for four years in order to complete the requirements for graduation.

The same system was used in finding the average grades in the senior high school that was used in finding the average grades in the junior high

school. The following tables show the number of pupils in both groups falling into each grade distribution.

TABLE XV
NUMBER OF PUPILS IN THE ACCELERATE AND THE
CONTROL GROUPS IN THE GRADE DISTRIBUTION
IN THE SENIOR HIGH SCHOOL

Grades	1923		1924		1925		Total
	Accelerate	Control	Accelerate	Control	Accelerate	Control	
1-	5	1	2	3	4	4	19
2+	3	3	9	1	4		20
2		1	3	2	2	3	11
2-	7	3	2	3	3	4	22
3+	5	2	1	3	4	5	20
3	3	1	4	3	4	3	18
3-		1	2	1		2	6
4+					1		1
Total	23	12	23	16	22	21	117

Read table thus: In the 1923 class, 5 of the accelerate group and one of the control group averaged a grade of 1-; in the 1924 class, 2 of the accelerate group and 3 of the control group averaged a grade of 1-.

Disregarding the plus and minus signs the following table shows the total number of pupils in each grade distribution.

TABLE XVI

NUMBER OF PUPILS IN EACH GRADE DISTRIBUTION IN THE
ACCELERATE AND THE CONTROL GROUPS IN THE
SENIOR HIGH SCHOOL

Grades	1923		1924		1925		Total
	Accelerate	Control	Accelerate	Control	Accelerate	Control	
1	5	1	2	3	4	4	19
2	10	7	14	6	9	7	53
3	8	4	7	7	8	10	44
4					1		1
5							
Total	23	12	23	16	22	21	117

Read table thus: In the 1923 class, five of the accelerate group and one in the control group averaged a grade of 1; in the 1924 class, two of the accelerate and three in the control group averaged a grade of 1.

The following figures show the percentage of grades earned by the control group and the accelerate group in work completed in the senior high school.

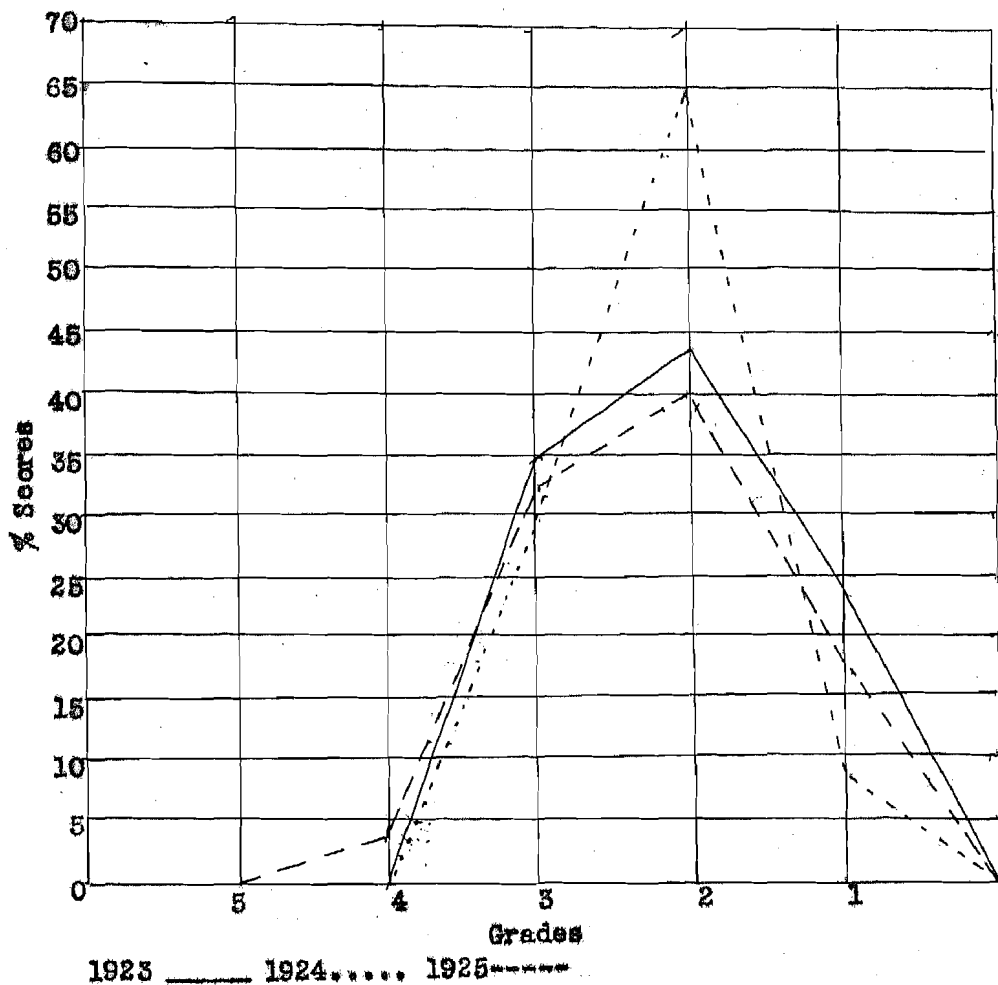


FIGURE 4

THE ACCELERATE GROUPS OF 1923, 1924, AND 1925
 DISTRIBUTION OF GRADES IN THE
 SENIOR HIGH SCHOOL

It might be said and proved by the findings of this study that these pupils in these two groups are able to hold scholastic standing above the average.

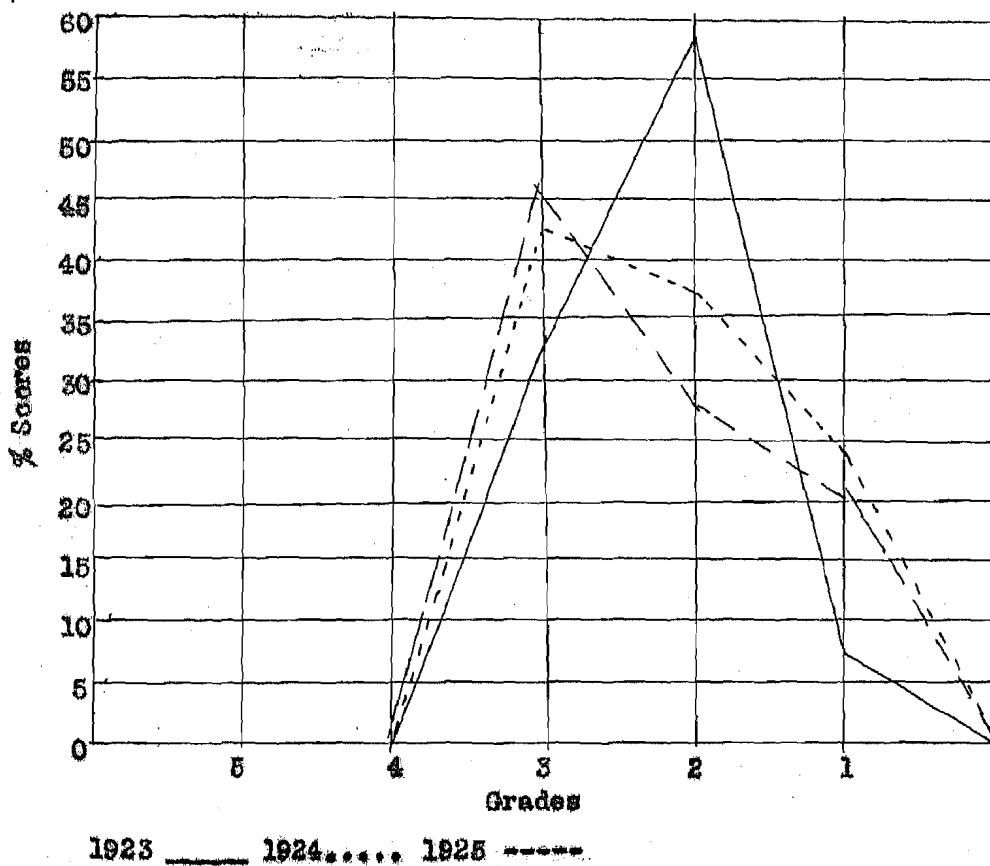


FIGURE 8

THE CONTROL GROUPS OF 1923, 1924, AND 1925
 DISTRIBUTION OF GRADES IN THE
 SENIOR HIGH SCHOOL

As a reward for superior scholarship and leadership in the senior high school, a certain number of the upper percent of the senior classes are elected to the National Honor Society,

The following table shows how many of each of these groups were elected to the National Honor Society.

TABLE XVII

NUMBER IN THE ACCELERATE AND
CONTROL GROUPS ELECTED TO
NATIONAL HONOR SOCIETY

	Number graduating from each group		Number elected to National Honor Society	
	Accelerate	Control	Accelerate	Control
1923	23	12	4	2
1924	23	16	7	2
1925	22	21	5	1
Total	68	49	16	5

Read table thus: In the 1923 class, 23 were enrolled in the accelerate group and 12 in the control group while 4 of the 23, and 2 of the 12 were elected to National Honor Society.

Approximately 18% of these groups were elected to the National Honor Society, while 15% of the total elected to the National Honor Society came from these accelerate and control groups.

Homogeneous grouping tends for less retardation. These pupils are achieving higher scholastic records under homogeneous grouping than they would have under heterogeneous grouping. A very extensive study of such findings was made by J. T. Worlton,¹¹ assistant Superintendent of Schools,

¹¹ J. T. Worlton, "The Effect of Homogeneous Classification on the Scholastic Achievements of Bright Pupils." Elementary School Journal, 28: 336-345, January, 1928.

Salt Lake City, Utah, in 1926 and 1927. Tests were submitted to their pupils in heterogeneous groups, then the homogeneous groups were established. Two years later the same tests were given and an average found. The findings were that pupils representing the intelligence level of 120-129 and taught in homogeneous classes made a much higher average achievement score than pupils of the same intelligence level and taught in heterogeneous classes. Practically the same results were found in other homogeneous groups, whose intelligence quotients were of a lower range than 120. The studies in this report were made of the pupils of intelligence quotients of 90 and above.

Vernon A. Jones¹² in his study of dealings with bright children and the comparison of grades, finds that the pupils of the accelerate group have been more successful in passing their courses in elementary, junior high, and senior high school than the average pupils of these schools. With the exception of foreign language, he found the pupils from the accelerated groups received higher percentage grades in the secondary school than pupils of the schools as a whole received. The explanation that Jones gives for the foreign language exception is the fact that the majority of those from the accelerated group who took foreign languages in the senior high school did not have an opportunity to take the introductory courses in the junior high schools.

¹² Vernon A. Jones and William A. McCall, "Dealing with bright children." Teachers College Record, 27: 832-35, May, 1926.

Worlton¹³ submits these conclusions to his findings:

1. The great majority of pupils in the grammar grades--those scoring 90 and above in native ability--are achieving significantly better scholastic results in the subjects tested than were the corresponding pupils in 1924. This improvement is probably a result of the improved classification of pupils and the more effective methods of teaching accompanying the better classification.

2. Homogeneous classification of pupils offers superior advantages over heterogeneous classification for the scholastic achievement of pupils of normal ability, and of more than normal ability.

3. The improvement made since January 1924 in the scholarship of pupils of high native ability indicates that, with proper classification and instruction, these pupils may be expected to achieve scholastic results commensurate with their abilities.

4. Measures of the distribution of scores around the means show that the percentage of pupils achieving scholastic results commensurate with their abilities is larger when the pupils are taught in homogeneous classes than when they are taught in heterogeneous classes.

PHYSICAL DEVELOPMENT

A very small percent of the pupils in this study is known personally by the writer, so most of the data gathered concerning their physical makeup were secured from friends and former teachers. Of the entire classes only two are deceased. One girl was fatally injured in an automobile accident and the other girl was most of her life physically weak. There is no exact evidence or data concerning the measurements of these pupils but from observation and learning of their early childhood from others,

¹³ J. T. Worlton, op. cit., p. 345.

the writer can say of these groups as Terman¹⁴ found in his studies of gifted children that they are superior to the average child in height, weight, strength and other physical traits.

There were several of these boys and girls that took part in athletic intramural sports but only four boys were outstanding lettermen in football and basketball. Not an extensive study of this part of their activities was made, but from what was found the writer can briefly state that in physical development, they are equal to or above the average child.

Hollingsworth¹⁵ in her studies of the gifted children says that they tend to be tall and heavy, and maintain a high ratio between weight and height. This height-weight ratio indicates nutrition, they are very well nourished as a group. Educators have to guard against the illusion that the gifted child is small. The gifted child is usually small for his grade, but he is usually large for his age.

In the studies of superior children in the high schools, J. C. and J. L. Almack¹⁶ have this to say, "Physical superiority was as apparent as mental superiority."

¹⁴ Lewis M. Terman, "The Gifted Child" in Handbook of Child Psychology, edited by Carl Murchison. (Worcester, Massachusetts: Clark University Press, 1931), p. 573.

¹⁵ Leta S. Hollingsworth, Gifted Children Their Nature and Nurture. (New York: The Macmillan Company, 1927), p. 110.

¹⁶ John C. and J. L. Almack, "Superior types in the high school." Education, 42: 352-8, February, 1922.

LEADERSHIP

Leadership accompanies unusual ability in other respects.¹⁷ There were no tests or records made showing the leadership of these groups. So to learn of their participation in other lines other than scholastic achievement, the writer again had to resort to the ratings of friends and former teachers. Participation in extra-curricular activities would appear to be an indication of a pupil's social adaptation. Of this group approximately twenty-five percent participated in student activities to the extent that they were very prominent in their different fields. There probably was a much larger percent participated in these activities but didn't become outstanding in the activity. The four major fields of extra-curricular activities of these groups were dramatics, debate, athletics and music. Election to a student office or to serve on a committee are both indications of a student's social adaptation. There were no definite records kept of anything of this sort, but probably they received their share of class offices. It is known that one boy of the 1924 accelerate group was chosen as commencement speaker of his graduation class from the senior high school.

Alltucker¹⁸ finds that the accelerated students as a group are very superior mentally and that they excel in scholarship. She says that it is possible that their feelings of successful competition in the classroom

¹⁷ Ibid., p. 367.

¹⁸ Margaret M. Alltucker, "Is the pedagogically accelerated student a misfit in the senior high school?" School Review, 32: 193-202, March, 1924.

may color their judgment as to their general social adaptability. By using students' opinion as a criterion, she found in 62% of the cases she studied that there were no ways in which the student was not in harmony with the school group and showed that he himself was happy in his environment.

COLLEGIATE EDUCATIONAL ADVANCEMENT

This study showed that approximately twenty-five percent of those graduated from the secondary school finished a four year college course, and twenty percent finished the local junior college. The percent of attendance in the junior college at the present would probably be higher, for at the time that these groups were ready for college, there were more opportunities for them to find employment.

The following tables show the number from these groups furthering their education above the secondary level.

TABLE XVIII

COMPARISON OF NUMBERS GRADUATING FROM
SENIOR HIGH SCHOOL AND FROM A
FOUR YEAR COLLEGE

Years	Number graduating from High School		Number finishing a 4 year college	
	Accelerate	Control	Accelerate	Control
1923	23	12	5	1
1924	23	16	9	5
1925	22	21	4	3
Total	68	49	18	9

Read table thus: In 1923, out of the accelerate group of 23 and control group of 12, 5 accelerates and 1 in the control group finished a college course.

TABLE XIX

COMPARISON OF NUMBERS GRADUATING FROM
SENIOR HIGH SCHOOL AND FROM
THE LOCAL JUNIOR COLLEGE

Years	Number graduating from High School		Number finishing local junior college	
	Accelerate	Control	Accelerate	Control
1923	23	12	4	1
1924	23	16	3	1
1925	22	21	6	4
Total	68	49	13	6

Read table thus: In 1923, out of the accelerate group of 23, and control group of 12, 4 accelerates and 1 in the control finished the local junior college.

The colleges attended by the pupils from this study include: Kansas University, Lawrence, Kansas; Kansas State Teachers College, Emporia, Kansas; Stephens College, Columbia, Missouri; Baker University, Baldwin, Kansas; Ottawa University, Ottawa, Kansas; Park College, Parkville, Missouri; Kansas State College, Manhattan, Kansas; University of Chicago, Chicago, Illinois; and University of Alabama, University, Alabama.

Approximately twenty-five percent of these groups graduated from college. This seems small but it is high as compared to about 18 percent of those graduating from high school finished their college course in the United States in 1930.¹⁹

PRESENT OCCUPATIONAL STATUS

These groups finished their secondary education in 1928, 1929, and 1930 and these finished college in 1932, 1933, and 1934. Present conditions enter into the set-up of these pupils. It is almost impossible for the younger people to secure positions at the present time. But under normal conditions the writer can safely say that these pupils would rank above the average in this phase of their life as they have in mental ability, scholarship, physical development, and leadership.

The following table shows the number of pupils in these groups engaged in various occupations today.

¹⁹ Statistical Summary of Education 1931-32, (Washington, D. C.: United States Government Printing Office, 1934), p. 7.

TABLE XX
PRESENT OCCUPATIONAL STATUS

Occupation	1923		1924		1925		Total
	Accelerate	Control	Accelerate	Control	Accelerate	Control	
Beauty Operator			1	1	1		3
Stenographer	3	1	3	1	4	2	14
Clerk in store	1	3	2	1	3	2	12
Day laborer	1	4	11	1	5	10	32
Teacher	4	1	5	1	1	3	15
Housewife	11	5	3	7	7	6	39
Minister		1	1	2			4
Musician			1	1			3
News Reporter						1	1
Lawyer						1	1
Diagnostician					1		1
Printer				1			1
Realter				1			1
Cleaner				1			1
Physician			1				1
Unemployed	2	2	1	3	1	3	12
Unable to locate	4	3	1	1	3	3	15

Read table thus: Out of the 1924 class, 1 of the accelerate group and 1 of the control group are beauty operators at present time.

CHAPTER VI

ACCELERATION AS COMPARED WITH AN ENRICHED CURRICULUM AS A METHOD OF MEETING THE NEEDS OF THE SUPERIOR CHILD

The school is criticized for its neglect of the superior child. In many places the educational pace has been set for the average, but in some of the larger school systems, provisions are and have been made for the child of superior intelligence. Interest has been shown for years for the retarded child, retardation is a problem which has confronted the educators, and as was pointed out in an earlier chapter the educational retardation has been caused by low mentality. The development of psychological tests has played a large part in finding and locating these superior children. These superior children are segregated from the average. For these groups the methods of instruction are changed, and provision for them is made by two different methods: the enrichment of the course of study, and acceleration or more rapid promotion.

It is admitted that there are three distinct groups of children; namely, the slow, and the largest number or average and a small number designated as the superior children. At last something must be done for them different from the other two sections. The first and simplest method would be to re-arrange the course of study on a time basis, doing two years regular in a single year's course. But in the school system containing the pupils of this study, the three years of the junior high school was arranged so that the work could be completed in the course of two years. The edu-

ators are at a loss to know if this method is satisfactory. It shortens their school careers, speeds up their work and places them in society at a less mature age. The writer agrees with Clara H. Town²⁰ when she said, "Not speed but quality of work should be the goal."

When a child accelerates he is in a group of children of different chronological ages. Children almost invariably select their associates and playmates on the basis of chronological age. It has to be admitted that a child say twelve years of age is not at home with the freshmen in the high school, who really are about two years older, although they all may be of the same mental capacity.

School systems such as Batavia, Pueblo, Santa Barbara and North Denver²¹ leave their superior children in regular classes and allow them to advance at their own pace. Special teachers are detailed to assist them. By the aid of such special teaching it is found possible to enrich their program as well as to increase the speed of work.

In the acceleration, the number of pupils pass too rapidly through their school career arriving at the adult stage too soon. Is it the best thing for these boys and girls to shorten the period of youth? The writer argues it is not the best thing. A superior child should be provided with opportunities which will challenge his superior capacity and should be expected and required to give his greatest effort.²² Such is not possible

²⁰ Clara H. Town, "The superior child in our schools." Educational Review, 65: 17, January, 1923.

²¹ Ibid., p. 21.

²² Ira A. Flinner, "A special program for intellectually superior children." Education, 43: 475-80, April, 1923.

in accelerated classes. It is inadvisable for rapid advancement from the viewpoint of the best moral and social development of the pupil. There is too great a tendency to think that superior pupils can look after themselves. At the adolescent age this is not true, it is up to the educators to do something as Dr. Frankwood Williams pointed out in an address that a high I. Q. is a danger to the individual and the community if its possessor is allowed to wander undirected in a society full of emotional hazards. Such conditions exist where acceleration is allowed, as the child is not able to meet and make his social adjustment.²³

Instead of pushing these children at a rapid pace, another and better method is to let them reap the benefits of their superiority by the acquisition of a broader and richer culture.²⁴ A plan of enrichment provides and makes it possible for boys and girls of the same ages to associate in social and physical activities and receive different treatment in their mental work. When the superior children are grouped and subjected to about the same environment, the personality adjustment is better as pointed out by Caroline B. Zachry.²⁵

1. Environment must give the child an opportunity to make proper use of his superior abilities and to attain a satisfaction through using them.

2. It must give him the opportunity to see and respect the abilities of people whose endowments run along quite different lines

²³ "Intelligence isn't everything." Survey, 63: 693, March 15, 1930.

²⁴ Clara H. Town, loc. cit.

²⁵ Caroline B. Zachry, "Personality adjustment of the superior child." National Education Association Journal, 21: 89, March, 1932.

from his own. He must have an opportunity to see that individuals with types of ability different from his have a definite part to play in the scheme of things and that the completion of any worthwhile endeavor involves the use of varied skill and talents.

3. The atmosphere of the group endeavor should provide him with a feeling of security so that he will not build up snobbishness around his abilities as a defense mechanism against some of his shortcomings. The secure individual who attains satisfaction from his own endeavors, at the same time respecting the contributions made by other people, will not become a snob.

It is better to have an enriched curriculum and submit to these superior children the chance to familiarize themselves with the things that the average child does not meet. Instead of sending them out on society a few years earlier with the knowledge of the average, but send them forward with the greater knowledge and experience which their superior intelligence entitles them to have.

Ira A. Fliner²⁶ suggests an enriched curriculum for these superior children. The writer will briefly review Fliner's suggestions. The customary English courses can be used but an extensive reading of the best literature can be given in addition. In languages the superior child will want to acquire the ability to converse as well as read it. Superior children do not need to take a large amount of drill that is given to the average child to fix vocabulary and verb forms.

In mathematics, the superior child will be given the usual work, but in addition can be given a course which combines the various fields and makes direct applications of all branches of mathematics within the range of the

²⁶ Ira A. Fliner, "A special program for intellectually superior children." Education, 43: 477-9, April, 1923.

individual student's knowledge. The best student sometimes fails to grasp an algebra problem when it appears in another branch of the field.

In the field of history, the pupil has a limited knowledge but no general historical knowledge. The superior children could be given at first a course to build up a background for advanced work in history. A general survey from the earlier times beginning with Ancient History, followed by European History and then United States History. Flinner²⁷ suggests a follow up course called "The Problems of Modern Civilization as They Concern the United States."

In the science field an introductory course which will open up a general field of science and then after the background is obtained through the general science work, an intensive course in Physics and Chemistry would be offered.

The elective subjects or non-solids such as courses in Art and Music offer great opportunities for these superior children. They will be able to participate in activities which will make for a more rounded leisure program.

Outside of the regular classroom, the superior children will find interest in visiting museums, art galleries, factories, and other places of interest which will greatly add to their educational experience. Such contacts outside of the school room will aid them in making the classroom work more real.

The writer agrees with Flinner in that the foregoing program would be very suitable for superior children, of course teachers of such classes

²⁷ Ibid., p. 479.

should also be trained. The need of special training for teachers of classes for superior children and the need of more scientific evidence with regard to the type of personality and to the character training most desirable for a teacher intrusted with this kind of work says Lee²⁸ as found in experimental work of Whipple.

The decision must be made. Should the educational set up be to offer richer courses and help the superior children to acquire a richer mental knowledge or to allow the superior children to do the regular class work in a shorter time and help them to acquire the average mental knowledge at an earlier date?

The writer believes that the educational program for these superior children should be to offer richer courses and to help them to acquire a richer mental knowledge.

"Educate better rather than to educate quickly."²⁹

²⁸ A. Scott Lee, "Selection of bright children for special classes." Elementary School Journal, 26: 190-8, November, 1925.

²⁹ Clara H. Town, op. cit., p. 20.

CHAPTER VII

SUMMARY AND CONCLUSION

This study had as its main objective the comparison of two groups of superior children. These groups are the accelerate group and the control group. These homogeneous groups of the Northwest Junior High School of Kansas City, Kansas, were selected on the basis of the intelligence quotient as determined by the results of the Illinois General Intelligence Scale.

The data secured consisted of the marks, credits, subjects both those required and those chosen as electives, advanced educational work and present occupations of the groups.

The writer in this study as well as in the readings, has found that it is better to enrich the curriculum and help the superior children acquire a broader knowledge than to accelerate them and turn them out at an earlier age with only the knowledge and training of the average children.

Reasons favoring an enriched curriculum.

1. It provides for boys and girls of the same chronological ages to associate in social and physical activities.
2. It provides a different and better treatment of their mental work.
3. It provides a broader knowledge of the subject matter of the different fields of the course of study.
4. It provides for a better moral character.

5. It provides them with the ability to be better equipped to meet the needs of society at a proper chronological age.

It may also be stated that the findings of this study show that the children of superior intelligence are also superior in other qualities; as leadership, scholarship, physical development, etc.

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APPENDIX

**WORK SHEET USED FOR COLLECTING DATA FROM THE PERMANENT RECORDS
OF THE NORTHWEST JUNIOR HIGH SCHOOL**

Name of pupil	Intelligence Quotient	Age	Credits	English	Mathematics	History	Phy. Ed.	Woodworking	General Science	Geography	Music	Domestic Science	Drawing	Civics	Latin
				C-M	C-M	C-M	C-M	C-M	C-M	C-M	C-M	C-M	C-M	C-M	C-M
John Jones	135	10-5	13	3-2	3-2	3-2	1-3		1-3	1-3	1-1				
Mary Smith	120	11-5	13	3-2	3-1	3-2	1-2		1-2	1-1	1-1				
Tom Brown	122	11-4	15	3-1	3-1	2-1	1-3		1-1	1-1		2-1	1-3		1-1

Read work sheet thus: John Doe intelligent quotient of 135, entered junior high school at the age of 10 years 5 months, earned 13 credits, making 3 credits in English with an average mark of 2 for the junior high school work, etc.

**WORK SHEET USED FOR COLLECTING DATA FROM THE PERMANENT RECORDS
OF THE WYANDOTTE HIGH SCHOOL.**

Name of pupil	Credits	English	Mathematics	Science	Trades	Phy. Ed.	History	Music	Commerce	Expression	Language	National Honor Society
	C-M	C-M	C-M	C-M	C-M	C-M	C-M	C-M	C-M	C-M		
John Jones	14 $\frac{1}{2}$	2-2	2-2	1-3		1-3	1 $\frac{1}{2}$ -2		1-3	3-3	3-3	
Mary Smith	14 $\frac{1}{2}$	3-1	2-1	2-1	2-2	1 $\frac{1}{2}$ -3	1 $\frac{1}{2}$ -1		1 $\frac{1}{2}$ -1	1-1	1-3	V
Tom Brown	15	3-1	2-1	1-1	3-1	1-2	1 $\frac{1}{2}$ -1		1 $\frac{1}{2}$ -1	1-1	1-2	V

Read work sheet thus: Mary Doe earned 14 $\frac{1}{2}$ credits in the senior high school, 2 credits in English with an average mark of 2, etc.

V in the last column shows elected to the National Honor Society.

NAMES OF THE PUPILS USED IN THIS STUDY

Angler, Aubrey	Bunday, Mark
Aulgur, Cecil	Bruce, Ralph
Adams, Helen	Bruce, Helen
Ahlgren, Helen	Craskey, Vera
Benson, Roy	Collins, Francis
Bloomquist, Charles	Cabaniss, Karl
Bakker, Virginia	Carlson, Dorothy
Beggs, Loretta	Cobb, Reba
Bodenheimer, Sara	Carson, Evelyn
Braley, Ernestine	Crawford, Margaret
Brown, Russell	Chastain, Glover
Bishop, Doris	Crazier, Billy
Baird, Justus	Cole, Annetta
Burtner, Orville	Calhoun, Ernest
Bridges, Madelyn	Crawford, Paul
Burchum, Doris	Grandall, Helen
Backland, Loyal	Ditzen, Lowell
Benskin, Frances	Dear, Richard
Baker, Lucille	Drennon, Helen
Bennett, Mary E.	Duncan, Edith
Bradley, Helen	Daniels, Madalene

Edmondson, Charles
Ellis, Roscoe
Evans, Albert
Edmondson, Cornelia
Fischer, Chester
Fox, Henry
Gorman, Wanda
Gibson, Helen
Gallivan, Gladys
Garlet, Harvey
Hasch, Robert
Hazen, Katherine
Hasch, Alvin
Heuser, Evelyn
Hentschel, Thelma
Harrell, Charles
Horseman, Dorothy
Helm, Vincient
Halt, Twila
Haren, Edward
Hardinger, William
Hasch, Walter
Hansell, Margaret

Hedman, Berniece
Hunt, Dorothy
Ireland, Millard
Jackson, Burl
Jobe, Dorothea
Jensen, Edith
Kessler, Fred
Klock, Henry
Kanal, Mark
Kerr, James
Keiser, Mary Mae
Kandall, Ruth
Kennedy, Josephine
Kearney, Ruth
Lee, Evelyn
Long, Jean
Lwesay, Frances
Lohman, Berniece
Lucas, Marion
Leaverton, Ira
Lane, Horace
Lee, Forest
Lundy, Elizabeth

Leinkuhler, Hazel
McDermott, Frances
McGuire, Ione
Maxson, Nila
McKinnis, Agnes
Major, Francis
Mercier, Arthur
Mills, Margaret
Minner, Helene
McCoy, Luella
McCoin, Helen
McQuire, Robert
Martin, Morris
McKinney, Anna
Miller, Helen
McKnight, Wanda
Mayer, Tellie
Maxfield, Carroll
Mangun, Dorothy
Markin, Alma
Obee, Donald
Oberlag, Viola
Osborn, Dorothy

Ochs, Evelyn
Palley, Basil
Phillips, Virginia
Peterson, Dora
Peterson, Helen
Palmer, Mary
Palmer, Wilmont
Piersol, Joe
Reese, Harriett
Regnair, Gwendolyn
Rogers, Gilbert
Rogers, Florence
Strid, Edwin
Stanley, Rose
Smith, Antoinette
Stevens, Virgie
Stilwell, Winifred
Sprague, Elda
Stack, Thelma
Sarter, Annette
Shaw, Darrell
Smith, Josephine
Surber, Charles

Stiles, Ruth

Stahl, Marie

Sears, Christina

Taylor, Adalain

Tipton, Marjorie

Titt, Alice

Turner, Wilma

Taylor, Ethel

Tipton, James

Taylor, Gertrude

Vinson, Ruby

Williams, Florence

Williams, Judith

Wilkinson, Mabel

Wyatt, Roy

Welty, Ed

Worline, Bonnie

Wingett, Marjorie

Winn, Edwina

Williamson, Roland

Young, William

Zimmerman, Dorothy