9681

REPORT

of

COMMITTEE ON THESIS

THE undersigned, acting as a committee of the Graduate School, have read the accompanying thesis submitted by Gopal M. Chiplunker for the degree of Master of Arts. They approve it as a thesis meeting the requirements of the Graduate School of the University of Minnesota, and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts.

Saml Quigley
Chairman

J. S. Young

J. B. Miner

May 27 1915

A Brief survey of the Social and Economic Trend in Minnesota High Schools

A Thesis

Submitted to the Faculty of the Graduate School

of the University of Minnesota

by

Gopal M. Chiplunker

In partial fulfillment of the requirements for

the degree of

Master of Arts

1915

Bibliography

1. State High School Reports from 1896-1914
   by George B. Aiton, State High School Inspector.
2. A Modern High School - Johnston
3. A Modern High School - Hanus
4. Social Aspects of Education - Irving King
5. High School Courses of Study - Davis
6. The School and Society - Dewey
7. Democracy's High School - Lewis
8. Examples of Industrial Education - Leavitt
9. Education and Industrial Evolution - Carlton

Table of Contents

Introduction	1-3
I. The General Progress of the High Schools in Minnesota	4-10
II. The Social and Economic Trend in the Curriculum	11-36
III. The Introduction of Industrial Subjects	37-62
IV. Vocational Guidance and Prevocational Education	63-74
V. The Cooperation of Home and School	75-77
VI. Socializing the School Life of the Student	77-88
VII. The Extension Work of the High School	89-102
VIII. The School as a Social Centre	103-109
Conclusion	109-110

"A Brief Survey of the Social and Economic[1] Trend in the Minnesota High Schools."

"The school is a fundamental method of social progress." John Dewey.
"All educational activities are great social enterprises." Irving King.

Introduction

The history of the American High Schools begins with the opening of the schools in New England, which prepared students only for the ministry, law and medicine. Until the year 1814, the High Schools in America supplied the need of only a limited number of students and did not reach the general mass of people

1. The word "Economic" should be taken to mean "practical" or "utiliterian." The word is used here and elsewhere in the thesis in that sense.

by giving them industrial and agricultural education, or by recognizing any of the ordinary occupations of life as worthy of recognition in the schools. The high school in those earlier days was a college preparatory institution. Through the noble and heroic efforts of Horace Mann and other educational leaders, the public consciousness became awakened, and the introduction of industrial subjects in the curricula have inaugurated the new era of free public American High Schools, which are better adapted to the needs of the democratic institutions of this country.

The ideal American High School is generally housed in a spacious, well-lighted, well-ventilated, hygienic building. In this building are regular class rooms, gymnasium, swimming tank, physical and chemical laboratories, cooking, sewing and millinery rooms, wood-working forge and machine shop, a dining room, music room and an assembly room for special exercises and study. Minnesota has a good many of this type.

The keynote of the success and popularity of the American High School lies in making education, not only preparation for life, but life itself. The industrial subjects bring about a correlation between school and the outside world, which was sadly lacking in the old traditional schools. The American High School, which may be called "The People's University," is a great socializing force and is bound to play an important part in moulding the destiny and future of the American nation. Among secondary schools of the world the American typical High School stands quite unique and unparalled by its scientific, socializing education in industrial and prevocational subjects, free to all people of this country, without any distinction of class, creed or color.

It is our problem to study briefly the social and economic trend in the Minnesota High Schools and find whether they fulfill the ideals and aspirations entertained for the typical American High School,

of which this nation is rightly proud.

I. The general progress of the High Schools in Minnesota.

In 1847, the first public school was opened for the whites in Saint Paul through the philantropic efforts of Dr. Williams, helped by the National Educational Society. This school was assembled in a log hut. The first report of the Superintendent of Public Instruction reports four schools, and an enrollment of 250 students in the state. In 1858 Minnesota was admitted to the Union and the constitution required the uniform system of public schools. In 1878 the State High School Law was enacted, the policy of state aid for high schools begun, and a state inspector of high schools was appointed, on whose recommendation the state aid depended. In 1881 the law passed by the Legislature also helped the increase and betterment of the high schools

in fulfilling the requirements set forth by the state high school board. The state-aid to the high school was $400. In the year 1893-94, eighty-six schools qualified for the state aid. In 1899 the state aid was increased from $400 to $800. No industrial education was yet offered in the high school, except manual training and free-hand drawing, which were offered in the high schools of Duluth, St. Paul and Minneapolis.[2]

In 1903-04 commercial subjects were introduced in the high schools. In 1904-05 manual training was first started as a regular subject in many high schools. In the year 1905-06 Domestic Science was first introduced, and in 1909-10 agricultural subjects were introduced and since that time these practical subjects have greatly enhanced the popularity of the high schools. In 1909 the Putnam Law was passed giving the sum of $2500 to each school that fulfilled the state requirements in teaching agriculture, domestic science and manual training. In that year only nine schools

2. High school Reports by Aiton from 1896-1914.

fulfilled the state requirements, while now thirty-seven high schools are taking advantage of the Law. Seeing the popularity of this special state aid for industrial subjects, the state passed the Benson-Lee acts in 1911, giving $1000 for those high schools that fulfilled the requirements for teaching industrial subjects according to that Law. In 1913 this aid was increased from $1000 to $1800. At the beginning fifty-one schools were taking advantage of the Benson-Lee act, while now eighty two schools, i.e. 37 per cent of the total number of schools, are taking advantage of this act. Seeing the success attained by the Putnam and Benson-Lee Laws, the state legislature in 1915 has passed a new Law. This Law provided $1200 for Agriculture, $600 for Domestic Science, $600 for Manual Training and $600 for Commercial work for all schools fulfilling state requirements. This Law has abolished the old divisions, viz: Putnam and Benson-Lee Laws.

The high school curriculum during the last seventeen years has changed from the old classical to

the new industrial and commercial. The university requirements are becoming broader and broader and practically seem to admit the principle that preparation for life is also preparation for the University. The introduction of industrial subjects, the short courses, the extension work done by the Agricultural Department and many other reforms introduced in the manner and method of teaching, are all bringing about great changes in the Minnesota High Schools.[3] These healthy changes are sure to count towards enlightened citizenship of Minnesota in days to come.

The policy of giving state aid and the introduction of industrial subjects have brought about an all-round progress in the Minnesota High Schools from the year 1896 to 1914-15. It is quite interesting to note the gradual and steady progress in the number of high schools, enrollment, number of graduates, high school aid, number of high school teachers, number of daily classes and money spent for equipment, during the period of the last eighteen years, which we have

3. The data in the thesis was obtained by personal visits made to Saint Louis Park, South Saint Paul, Cokato, Faribault, East and Central High Schools, Minneapolis.

selected for study. Table I. page 10 shows the annual progress made in all State High Schools beginning with the school year 1896-97. The increase in the number of State High Schools from 99 to 216 proves the popularity they have gained and shows the willingness of the community in taxing themselves to obtain the state aid. Between the years 1900 and 1910 the percentage increase in state population was 18.5 per cent, while the percentage increase in the number of state high schools within the same period was only 80 per cent. The percentage increase in the total enrollment is 227 per cent, which proves the fact that every year more students are taking advantage of the high schools. The percentage increase in state aid is 450 per cent, which testifies to the fact that communities are taxing themselves more and more and are thus taking vital interest in schools to enable them to receive the state aid. Table I. page 10 shows an all-round progress by giving annual figures and further illustrates the fact that the high schools in Minnesota are every day be-

coming more efficient, in point of work, equipment, and their general utility to the public.

TABLE I.

A Table showing statistics of enrollment, number of graduates, state aid, etc.

Year	No. High School	Enrollment	No. Graduates	High School Aid	Teachers	Daily Classes	Outfit	State Population
1896-1897	99	11218	1257	400	403	2403	24219	
1897-1898	100	11377	1370	400	424	2544	26136	
1898-1899	99	11742	1498	400	442	2575	22590	
1899-1900	115	12802	1564	800	494	2627	30482	1751394
1900-1901	130	14170	1622	1000	555	3180	30403	
1901-1902	141	15715	1893	1000	629	3451	47738	
1903-1904	162	18622	2390	1500	704	3692	60806	
1904-1905	174	20215	2668	1500	825	4709	67055	
1905-1906	192	22106	2783	1500	870	5085	78793	
1906-1907	201	23687	3109	1500	928	5455	89895	
1907-1908	206	24530	3314	1500	992	5770	99566	
1908-1909	206	26583	3533	1500	1095	6192	127192	
1909-1910	207	28562	3907	1750	1193	6543	134746	2075708
1910-1911	207	29971	5051	1750	1342	7048	192639	
1911-1912	211	33295	4497	1750	1542	7726	216538	
1912-1913	216	34854	4854	1750	1591	7875	213109	
1913-1914	216	36703	5277	2200	1849	8665	265872	
Gain per cent	118%	227%	319%	450%	350%	260%	997%	18%

Between the years 1900 and 1910 the percentage increase in the number of schools is 80%, while the percentage increase in population in the same period is 18.5%.

The High School Report for 1902-1913 was never published, so figures are not available for that year.

II. The Social and Economic Trend in the Curriculum.

In tracing the progress in the high schools of Minnesota, one is impressed by the social and economic improvement in the old traditional and classical curriculum of the early seventies. The curciculum is very well defined as "the selective agency provided by a community to enable the members of the successive generation to promote their individual development." The curriculum is the medium, which every high school should use to make the child assimilate the sum total of the social experience useful for its future life. The curriculum to be effective must be broad in scope, flexible in administration, and socializing in its spirit. It is very interesting to see how the curriculum in the Minnesota High Schools is undergoing gradual change for the better and becoming more efficient and practical every day.

The first noteworthy change in this direction

is that a large number of high schools in Minnesota are offering four or five curriculums instead of only one straight traditional college preparatory course. Two decades ago the high schools offered only one curriculum, that is the college preparatory and required all students to reach the university by taking this royal road of classical learning. The high schools in Minnesota have awakened to the fact that there are several industrial and technical professions in the world, which are as important as the time honored professions of law, medicine, and ministry.[4] Out of 160 high schools that answered a general questionnaire sent to them, it is found that 24 per cent of the schools are offering full curriculums, 23 per cent are offering five, 21 per cent three, 11 per cent two, 11 per cent six, 3 per cent seven curriculums, while only 13 per cent of the schools are offering but one. In the case of those schools, that are offering only one curriculum, it is worth remembering that different electives are allowed to enable the student to elect industrial or classical subjects according to his

4. A general questionnaire was sent to 216 high schools in the State of Minnesota. Out of these only 160 high schools, that is 74 per cent of the schools, reported. The data used in this thesis on the answers received. The high school reports from 1896 to 1915 prepared by Mr. George B. Aiton, the State High School Inspector, are used as a source to collect other facts and figures required in the thesis.

future plans. On account of the system of offering different curriculums, the high schools of Minnesota can adopt themselves to the needs of students, and make them take the courses according to their previous preparation and future plans.

In the state of Minnesota, students desiring to enter the business world select the commercial course, those desiring to enter technical and engineering professions, take manual training, those who wish to enter college, take the language or college preparatory course, and those who wish to become farmers take the agricultural course. The social arrangement is made possible by the system of offering different curriculums to suit the different needs of pupils. The students who are undecided are advised to take the general course. In this way the arrangement of different curriculums provides for every student and makes his secondary education prevocational and quite interesting.

The ultimate value of the curriculum depends upon the importance of various subjects in it. If they

are old and traditional and have no direct bearing on the social and economic life of the student, then the curriculum also becomes traditional, uninteresting, and impractical to the student. If, on the other hand, the subjects are thoroughly practical and have every direct bearing on the social and economic life of the student, then the curriculum becomes modern, keenly interesting, and thoroughly practical. A close study of the subjects offered in all the Minnesota High Schools for the last eighteen years reveals the fact that the traditional subjects that have no direct bearing on the social life of the student are losing in popularity every day; while the modern industrial and other subjects are gradually growing in favor and coming to the forefront in the general offering of the high schools.

This interesting problem of decrease or increase in popularity of old traditional or new practical subjects can be very well considered, first, by studying the percentage enrollment of students in all subjects offered in the high schools from the year 1896 to 1914;

second, by studying the percentage of the total number of high schools offering various subjects during the period.

A. Consideration of the problem from the standpoint of the percentage enrollment of students in all subjects offered in the Minnesota High Schools from the year 1896 to 1914.

Table II. shows the percentage enrollment of students in various subjects offered in high schools. Table III. shows the relative place of subjects in popularity according to the percentage enrollment of students in those subjects. Tables II. and III. illustrate the conclusions considered under Section A.[5]

(1) Traditional Subjects.

All subjects that have no direct social and economic bearing on the life of the student are included under this heading. In the year 1896, Greek and Latin occupied the first place and secured the largest enrollment, viz: 57.5 per cent; while in the year 1914-15, these subjects could only secure 26.2 per cent en-

5. Tables II. and III. are given on pages 22-23-24.

rollment. Greek was dropped from the high school list of studies in the year 1907 and the study of Latin is on the gradual decline. Owing to the industrial and scientific utility of the study of German, the students seem to consider it more valuable than Latin and hence the study of German has secured 34.3 per cent enrollment in 1914, while it could only secure 12.2 per cent enrollment in the year 1896. The study of French seems to have kept its own place in the years 1896 to 1914. Plain Geometry and elementary Algebra, being required by many universities as entrance requirement, are keeping up their places the years 1896 to 1914. Astronomy and Trigonometry have never been popular subjects during the period of our study and are showing signs of being dropped out. Higher Algebra and Solid Geometry are going down the scale of popularity. Senior Arithmetic is also going down and could secure only 1.7 per cent enrollment in the year 1913-14. Ancient History seems to be yet popular, because it is required as prerequisite to the study of modern history, which many students take in

their course.

(2) Practical Subjects.

All subjects having direct prevocational bearing on the life of the student are included under this heading. All science subjects can be brought to bear upon prevocational subjects if properly taught, and hence they are also included under this heading. United States History, Civics, and Economics being considered important subjects for citizenship are also included under this heading. The English language, being the national language of America, requires the enrollment of all students. In the year 1896, it occupied the third place in the scale of favorite subjects, while it now occupies the first place.

Botany, Zoology, Chemistry and Physics have been taught in the high schools from the year 1896 on. These subjects, if taught properly, have direct social bearing on the life of the students. Botany is not making much progress and could secure only 10,1 per cent enrollment as compared with 12.9 per cent enrollment

in the year 1896. Zoology is holding its own and shows a slight increase. Chemistry is gradually coming to the front, while Physics is showing slight decrease. Mr. George B. Aiton, State Inspector of High School accounts for the unsatisfactory state of sciences by saying: "There is an undue proportion of theory in all our School Sciences, the present obstacles to improvement are abstract overladen texts and the academic attitude of college bred instructors."[6] The study of Chemistry is gradually coming into favor and could secure 1o.9 per cent enrollment in the year 1913-14 as compared to 8.6 per cent enrollment in the year 1896. This is largely due to the fact that in the study of Domestic Science, the study of Chemistry is made obligatory. In some high schools of Minnesota, Chemistry is taught to the best advantage by separating the sexes. The Chemistry for girls is a part of the course in Home Economics; while Chemistry for boys forms part of the Industrial course. The course in Physics is also divided in the same way as Industrial Physics for boys, and

6. State High School Report for 1913-14.

Household Physics for girls. The science of Physiology, though important to a student, is not showing as much progress as would be expected. The State High School at Cokato is an example of such an arrangement of courses as just described.

Modern history and senior American history, which forms the background of historical knowledge of the American student, is gradually coming into favor. The study of Economics, which is quite important, is showing slight increase; but the study of Civics, though unusually important in a democracy like the United States, does not show any increase.

Bookkeeping has been taught in many high schools beginning with the year 1896, but it is not showing any decided signs of increase. Other commercial subjects were introduced into the high schools in the year 1903-4, and they are gradually growing in favor. The percentage enrollment for these subjects in the year 1914, shows a decided improvement over the percentage enrollment in the year 1903-4. Manual training was

taught in some schools in the year 1896 and could then secure only 9.2 per cent enrollment; while in the year 1914 manual training has become a favorite subject and secured 20 per cent enrollment in 1914. Mechanical drawing, which forms a part of manual training, is on the decided increase and shows 12.6 per cent enrollment in the year 1914 as compared to 3.5 per cent enrollment in the year 1896. Cooking and sewing, which have a direct social bearing on the life of the girls, were introduced in the year 1905-6. From the time of the introduction, these subjects have increased every year and now 16 to 17 per cent of the students who attend high schools register for the study of this practical course. The study of agriculture was introduced into the high schools in 1909-10. This subject has a tremendous social and economic bearing on the agricultural interests of the state and from the very time of its introduction has been coming to the forefront by leaps and bounds. The fact, that a total enrollment in this subject for the last five years was 13680 students,

proves its popularity and accounts for the large amount of money spent by the state in giving state aid for the subject. In the year 1914 this subject this subject secures 11 per cent enrollment as compared with 4.6 per cent enrollment in 1910.

TABLE II.

Percentage of pupils studying various subjects between 1896 and 1914.

Subjects	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1903-04	1904-05
Greek & Latin	57.5 b	62.9	64.3	64.6	65.1	64.0	57.7	55.8
German	12.2	14.6	16.9	16.5	18.1	20.6	25.1	26.6
French	4.7	4.5	5.6	6.2	6.2	4.7	5.6	5.8
English	27.6	26.e	31.7	36.3	44.9	41.5	48.4	60.1
Elem.Algebra	37.5	39.6	39.4	41.3	43.0	40.2	41.5	39.5
High.Algebra	11.9	10.2	13.4	12.1	11.6	10.6	10.9	9.9
Plain Geometry	23.3	23.5	26.7	24.0	25.8	29.1	25.7	25.8
Solid Geometry	10.3	10.4	10.2	10.2	10.5	11.6	10.8	9.9
Bookkeeping	8.0	6.7	6.0	5.1	5.9	6.6	6.6	7.2
Ancient History	15.1		21.6	24.6	22.6	24.2	23.2	22.8
English History	4.6		11.3	10.4	11.4	12.0	9.7	7.9
Gen'l History	18.2	24.9						
Civics	11.9	11.5	10.5	10.5	8.1	11.2	10.1	10.4
Economics	2.6	3.0	2.1	2.3	2.1	1.8	1.8	
Physiography	13.6	9.0	7.0	3.1	6.2	6.0	8.1	9.5
Physiology	22.2	20.3	13.1	9.7	9.9	8.5	10.7	11.2
Geology	2.6							
Botany	12.4	11.9	13.7	12.5	13.8	11.6	11.7	11.6
Physics	14.6	17.8	16.8	16.0	15.6	15.5	14.6	15.7
Chemistry	8.6	9.4	11.2	9.4	10.4	10.0	10.4	9.8
Astronomy	3.1	2.9	3.6	2.7	1.5	.9	1.1	.4
Free H.Drawing	19.4	19.7	17.5	13.8	11.9	12.7	10.7	15.6
Mech.Drawing	3.5	8.1	8.8	6.7	7.2	7.6	8.6	7.3
Zoology	4.4	4.9	4.9	5.0	7.6	7.8	8.2	7.7
Manual Training	9.2	4.8	7.7	5.8	8.5	7.8	9.6	10.8
Trigonometry	.6	.4	.7	.3	.3	.3	.8	.5
Senior U.S.Hist.	3.7	2.8	4.2	3.4	6.1	7.0	7.1	8.7
Senior Eng.Drama	3.9	1.8	2.1	2.7	4.1	2.0	4.0	4.2
Senior Geography	9.2	.6	1.2	.6	1.3	1.1	1.8	1.3
Senior Arithmetic	2.6	2.8	3.7	2.3	2.2	3.0	4.1	5.0
Medieval History			15.9	14.6	14.9	14.7	14.8	12.3
Modern History							1.2	6.1
Commercial Law							.1	
Com'l Geography							.7	
Com'l Arithmetic							.8	
Shorthand							.02	
Typewriting							.02	
Cooking								
Sewing								
Agriculture								
German I.								
German II.								
German III.								
German IV.								
Swedish								
Norwegian								
Danish								

TABLE II. Continued.

Subjects	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14
Greek & Latin	30.3	54.6	50.1	45.6	40.2	39.2	36.1	32.3	26.2
German	29.2	30.4	28.5	28.3	31.5	31.2	30.6	32.7	30.3
French	5.5	5.1	4.4	4.2	4.5	5.0	4.8	5.2	4.8
English	72.2	99.2	96.4	95.8	99.8	97.8	100.	100.	98.
Elem.Algebra	40.6	40.	27.1	39.1	40.4	40.0	39.2	40.9	37.5
High.Algebra	9.8	8.4	7.1	6.8	7.1	6.0	5.5	5.7	4.6
Plain Geometry	27.2	24.4	24.0	21.4	23.4	23.4	23.0	24.3	23.1
Solid Geometry	7.6	7.6	6.3	5.9	5.6	4.8	4.7	3.9	3.6
Bookkeeping	9.5	7.0	8.2	7.0	7.4	6.6	7.9	9.6	7.5
Ancient History	27.5	28.7	25.4	24.5	27.6	23.0	23.0	22.4	19.8
English History	5.7	5.6	5.0	4.6	4.9	5.4	5.5	5.4	4.2
Gen'l History									
Civics	10.0	12.9	11.1	10.8	11.5	10.2	9.2	9.7	9.2
Economics					2.5	2.4	2.3	2.3	2.9
Physiography	10.2	12.8	13.0	12.3	12.0	10.3	11.3	10.9	9.6
Physiology	13.6	13.6	16.3	14.0	11.8	11.1	9.5	10.6	8.5
Geology									
Botany	11.4	11.1	11.3	11.2	10.7	12.0	11.8	11.9	10.0
Physics	14.3	15.8	14.1	13.4	13.2	13.0	12.4	11.1	10.3
Chemistry	11.4	11.2	11.8	10.3	11.8	10.8	11.1	10.8	10.9
Astronomy	.7	.5	.2	.3	.4	.1	.1	.2	.2
Free H.Drawing	12.5	14.1	12.4	9.8	9.8	11.5	8.9	8.3	8.0
Mech.Drawing	8.5	8.8	9.2	11.0	13.5	13.9	13.8	12.6	12.6
Zoology	9.8	11.2	13.2	10.0	9.5	8.1	8.0	6.4	6.0
Manual Training	10.8	11.2	13.0	15.9	16.7	18.9	20.6	20.2	20.0
Trigonometry	.5	.6	.5	.4	.4	.6	.3	.3	.3
Senior U.S.History	7.6	9.3	8.3	8.9	8.6	9.0	8.0	3.6	.7
Senior Eng.Drama	1.7	5.0	3.1	6.4	6.2	6.8	6.5	4.1	.2
Senior Geography	1.1	.9	.9	1.0	1.3	1.5	1.3	1.0	.1
Senior Arithmetic	3.7	3.3	3.9	3.1	3.3	2.9	2.6	3.0	1.7
Medieval History									
Modern History	12.9	12.9	13.3	14.5	12.2	13.1	11.2	12.3	11.4
Com'l Law	.6	.7	.6	.7	1.0	2.1	1.8	2.4	2.4
Com'l Geography	4.4	4.5	6.1	5.8	5.4	5.9	5.1	4.9	7.5
Com'l Arithmetic	3.8	5.6	6.7	5.6	6.9	7.3	8.0	7.9	7.5
Shorthand	1.1	1.9	2.0	2.1	2.3	3.5	4.0	4.4	5.3
Typewriting	1.6	2.0	2.4	3.6	3.3	4.4	5.0	5.8	5.8
Cooking	.7	1.5	1.6	2.3	4.4	6.9	10.9	13.7	15.7
Sewing		2.0	2.4	3.7	5.6	9.8	13.0	16.1	18.2
Agriculture					4.6	5.6	8.8	10.0	11.0
German I.		10.0	10.6	10.6	13.4	11.0	11.7	13.8	12.4
German II			9.6	10.1	11.5	10.9	9.5	11.4	9.8
German III.			5.7	5.4	5.0	6.0	6.3	5.2	5.9
German IV.			3.1	2.5	2.7	3.0	3.0	2.2	2.1
Swedish								1.1	1.1
Norwegian								.3	1.7
Danish								.0005	

TABLE III.

A Comparative Table showing the relative place of subjects according to the enrollment for the two years 1896 and 1914.

Subjects	1896-97	Subjects	1913-14
Greek & Latin	57.5	English	98.
Elem. Algebra	37.5	Elem.Algebra	37.5
English	27.6	German	30.3
Plain Geometry	23.3	Greek & Latin	26.2
Physiology	22.2	Plain Geometry	23.1
Free H.Drawing	19.4	Manual Training	20.1
Gen'l History	18.2	Ancient History	19.8
Ancient History	15.1	Sewing	18.2
Physics	14.6	Cooking	15.7
Physiography	13.6	Mech. Drawing	12.6
German	12.2	Modern History	11.4
Botany	12.4	Agriculture	11.0
Civics	11.9	Chemistry	10.9
Higher Algebra	11.9	Physics	10.3
Solid Geometry	10.3	Botany	10.1
Manual Training	9.2	Physiography	9.6
Senior Geog.	9.2	Civics	9.2
Bookkeeping	8.2	German II.	9.8
Chemistry	8.6	Physiology	8.5
French	4.7	Free H.Drawing	8.0
English History	4.6	Bookkeeping	7.5
Zoology	4.4	Com'l Geography	7.5
Senior Eng.Drama	3.9	Com'l Arithmetic	7.5
Senior U.S.History	3.7	Zoology	6.0
Mech. Drawing	3.5	Typewriting	5.8
Astronomy	3.1	Shorthand	5.3
Economics	2.6	German III	5.7
Geology	2.6	French	4.8
Senior Arithmetic	2.6	Higher Algebra	4.6
Trigonometry	.6	English History	4.2
		Solid Geometry	3.6
		Economics	2.9
		Com'l Law	2.4
		German IV.	2.1
		Norwegian	1.7
		Swedish	1.1
		Senior Arithmetic	1.7
		Senior U.S. History	1.7
		Trigonometry	.3
		Senior Eng.Drama	.2
		Astronomy	.1
		Senior Geography	.1
		Danish	

B. Consideration of the Subject from the standpoint of the total number of High Schools as to the percentage in the various subjects.[7]

(1) Traditional Subjects.

In the year 1896, almost all schools offered the study of Latin, but in the year 1914 only 85 per cent of the schools offered that subject. In the year 1896, only 21 per cent offered the study of Greek, which was ultimately dropped by all schools in the year 1907. The study of German is, however, on the increase. The study of French is showing decided signs of decrease. Only 6.9 per cent of the schools offer it in 1914 as compared with 12 per cent of schools offering it in the year 1896.

Plain Geometry and Elementary Algebra, being largely considered as college preparatory subjects, have kept up their place, though they show a slight decrease in the year 1913-14. The subjects like Higher Algebra, Solid Geometry, Senior Arithm etic, Astronomy, Trigonom-

7. Tables IV. and V. illustrate the conclusions stated in this section. They are on pages 30-31-32.

etry are showing decided signs of decrease during the period of eighteen years. Ancient History is showing signs of increase, as many students are required to take it in their junior years, as a preparatory study for Modern history.

(2) Practical Subjects.

English now occupies first rank in the scale of popularity. The study of English is systematized and made compulsory in the high schools of Minnesota.

The study of Botany is on the decrease, while that of Zoology is on the increase. The study of Chemistry is growing in favor and now 76.4 per cent of schools are offering Chemistry, while in the year 1906-7 65 per cent offered this subject. The study of Physics and Physiology is on the decrease. The study of Botany, is made an agricultural subject, and is sure to grow in favor. Some schools are offering it as an agricultural subject and this shows an effort in the right direction. The popularity of Chemistry seems to have some influence on the decrease of physics.[8]

8. The general state of sciences in the State High Schools of Minnesota is already accounted for in Section A.

The study of Modern History and senior American History is on the increase and is now offered by 70 per cent of the schools in the year 1914. The study of Economics and Physics is growing in favor every year. In the year 1914, 26 per cent of schools offered the study of Economics as compared with 18 per cent of schools offering that subject in the year of 1896. In the same way, the study of Civics is now offered by 79 per cent of the schools as compared with 68 per cent of schools offering the subject in the year 1896-97.

Bookkeeping is not showing any sign of increase, while a decided improvement is seen by the increased number of schools offering that subject. Manual training is gradually coming into favor and now 85.6 per cent of schools offer this subject. Mechanical drawing, which forms a part of manual training, is on the increase and in the year 1914, 58.3 per cent of schools offered that subject with 14 per cent offering it in the year 1896. Beginning in 1905-06 more schools every year are introducing the study of household sciences.

In the year 1914, 82 per cent offered sewing and 76.4 per cent cooking. The subject of agriculture introduced in the year 1909-10, is rapidly increasing in popularity, and the year 1913-14 was given 62 per cent of the schools.

The introduction of industrial subjects in the high schools of Minnesota has brought about a decided social and economic change and has made the schools bread in scope, social in spirit, and thoroughly practical in dealing with the plastic student material. The practical subjects have reclaimed the high school from its time honored traditional place and has given it a new social position in the industrial and practical world. In the year 1896-97 only thirty subjects were offered while in the year 1914 some forty subjects were offered.

Different high schools throughout the state offer a variety of other subjects not listed in the table. A business course in English, correspondence, penmanship, and spelling is offered in many high schools.

Instruction in the art of debating, public speaking, and expression is becoming more general. Industrial history is offered in a half-dozen schools. A course in book-binding is offered at Winthrop. Salesmanship at Faribault. Sociology at Moorhead. Sanitation at Granite Falls, Wyzata. The Hibbing students maintain a printing office and do printing work needed by the school board and the public. These examples only show the present tendencies, other high schools are sure to follow them in one way or another.

TABLE IV.

Percentage of the total number of High Schools teaching subjects.

Subjects	1896-97	1897-98	1898-99	1899-1900	1900-01	1901-02	1903-4	1904-5
German	49.4	50.0	46.0	43.0	51.0	59.0	67.5	77.0
French	12.0	9.0	9.0	8.7	7.2	6.3	6.1	6.3
English				76.5	99.2			97.0
Latin	100.	100.	100.	100.		99.5	98.0	99.0
Swedish								
Norwegian								
Danish								
Elem.Algebra	100.	100.	100.	99.0	99.0	100.	98.0	100.
Plain Geometry	100.	97.0	100.	96.0	97.0	97.0	97.5	100.
Higher Algebra	74.0	68.0	80.0	68.0	73.0	67.0	82.0	74.0
Solid Geometry	80.0	76.0	83.0	75.0	82.0	83.0	87.0	77.0
Ancient History	57.0		65.0	90.0	75.3	80.0	82.0	88.4
Modern History							8.2	24.0
English History	43.0		59.0	5710	59.0	65.0	58.0	41.4
Civics	68.0	52.0	56.0	57.0	56.0	65.0	71.2	71.2
Economics	18.0	17.0	15.0	16.0	14.0	13.4	18.0	
Physiology	77.0	67.0	47.0	51.0	53.0	40.0	52.0	60.0
Physiography	49.0	30.0	28.0	30.0	38.0	43.0	41.8	60.0
Botany	75.0	51.0	56.0	50.0	57.0	72.0	53.7	49.0
Zoology	15.0	22.0	21.0	20.0	31.0	36.0	37.0	37.0
Physics	83.0	85.0	69.0	77.0	73.0	67.0	61.0	71.0
Astronomy	23.0	19.0	20.0	12.0	13.0	8.0	7.0	4.0
Trigonometry	4.0	3.0	4.0	2.0	2.0	1.3	5.0	3.0
Chemistry	67.0	60.0	72.0	62.0	63.8	66.0	70.0	58.0
Senior U.S.Hist	21.0	17.0	24.0	25.0	31.0	30.5	51.0	55.0
Senior Eng.Drama	25.0	20.0	24.0	16.6	24.5	17.0	26.5	26.0
Senoir Geog.	12.0	8.0	10.0	9.0	13.0	8.0	17.0	12.6
Senior Arith.	34.0	22.0	25.0	19.0	21.0	21.0	30.0	39.0
Com'l Law							1.2	
Com'l Geog.							2.4	
Com'l Arith.							1.2	
Bookkeeping	49.0	41.0	35.0	30.0	36.0	30.0	40.0	33.0
Shorthand								
Typewriting							.6	
Free H.Draw.	31.0	34.0	21.0	15.5	14.6	17.0	12.0	14.4
Mech.Draw.	14.0	15.0	12.0	13.0	10.0	13.0	7.2	12.6
Manual Training			8.0	6.3	.05	7.0	5.0	9.7
Cooking								
Sewing								
Agriculture								
Greek	21.0	17.0	13.0	10.0	.9	.06	1.5	1.1

TABLE IV. Continued.

Subjects	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14
German	70.0	81.0	81.0	85.0	89.3	90.8	94.3	94.8	94.9
French	4.5	4.0	4.3	4.3	3.9	4.3	4.7	4.6	6.9
English	97.0	100.	100.	100.	100.	100.	100.	100.	100.
Latin	100.	99.0	96.0	99.	96.1	94.7	95.0	88.4	85.1
Swedish								3.2	4.6
Norwegian								5.1	7.8
Danish								.005	
Elem.Algebra	99.0	100.	99.0	100.	98.6	100.	98.6	100.	98.1
Plain Geometry	99.0	98.0	99.0	100.	98.0	98.6	98.6	98.9	99.0
Higher Algebra	61.4	62.4	63.0	68.0	70.0	63.3	61.6	61.6	56.0
Solid Geometry	60.0	63.0	66.0	60.0	62.0	55.1	65.6	50.5	54.6
Ancient History	80.0	88.	86.	85.	86.	83.4	84.4	84.6	87.0
Modern History	60.0	62.0	70.	73.	70.	71.5	73.9	71.8	71.0
English History	34.0	25.0	28.0	23.0	24.0	25.6	22.2	22.2	18.9
Civics	66.0	74.0	80.0	80.0	79.	82.0	.1	75.4	79.6
Economics					20.2	22.3	21.3	23.1	26.4
Physiology	61.4	66.4	68.2	80.0	67.0	66.6	58.9	64.8	60.0
Physiography	55.3	57.0	58.0	64.0	56.0	62.2	55.0	50.	55.
Botany	53.0	50.0	59.0	60.0	56.6	64.3	65.9	67.1	65.7
Geology	43.0	39.0	45.0	42.0	49.3	47.8	47.3	41.7	43.9
Physics	67.0	73.0	70.0	70.0	73.4	72.3	71.1	73.5	72.6
Astronomy	5.3	4.0	2.4	2.4	2.4	1.9	1.8	1.3	1.8
Trigonometry	2.0	3.0	4.0	2.4	1.9	2.2	3.3	2.3	3.2
Chemistry	64.0	59.0	71.0	68.	68.	18.6	73.4	72.7	76.4
Senior U.S.Hist.	55.3	56.1	62.0	70.0	64.0	72.5	67.3	69.9	70.8
Senior Eng.Drama	34.0	22.0	25.0	28.6	31.4	32.8	26.1	27.3	23.1
Senior Geography	.9	7.0	6.8	10.8	13.0	14.3	15.6	11.1	16.6
Senior Arithmetic	31.2	28.0	29.0	30.0	31.4	30.4	28.0	23.1	24.5
Com'l Law	6.0	6.0	7.7	7.7	9.2	22.7	19.4	20.4	23.1
Com'l Geography	18.0	22.0	28.0	28.0	31.8	34.3	31.7	27.3	33.8
Com'l Arithmetic	15.0	20.0	20.4	27.0	27.5	34.3	33.6	32.8	29.1
Bookkeeping	40.0	39.0	38.0	40.0	47.0	42.9	44.1	47.7	42.5
Shorthand	7.0	19.0	10.0	13.6	13.5	16.8	20.4	19.4	25.9
Typewriting	10.6	12.0	13.0	14.5	19.0	23.7	25.1	23.3	31.0
Free H.Drawing	14.0	14.0	13.0	12.6	13.5	16.9	16.1	17.1	14.3
Mech.Drawing	11.4	14.0	19.0	26.0	26.0	42.9	51.2	52.7	58.3
Manual Training	10.6	16.0	30.6	40.8	38.9	71.3	79.6	83.3	85.6
Cooking	1.5	3.0	5.0	8.7	15.5	28.5	47.6	60.1	76.4
Sewing	5.3	6.0	10.0	19.9	29.5	44.9	69.4	71.3	82.8
Agriculture				19.9	23.1	35.3	55.0	56.9	62.0
Greek	1.6	.005							

TABLE V.

A Comparative Table showing the relative place of subjects according to the percentage of High Schools offering these subjects for the years 1896 and 1914.

Subjects	1896-97	Subjects	1913-14
Latin	100.	English	100.
Elem.Algebra	100.	Plain Geometry	99.
Plain Geometry	100.	Elem. Algebra	98.11
Physics	83.	German	94.1
Solid Geometry	80.	Ancient History	87.0
Physiology	77.	Manual Training	85.6
Botany	75.	Latin	85.1
Higher Algebra	74.	Sewing	82.0
Civics	68.	Civics	79.6
Chemistry	67.	Cooking	76.4
Ancient History	57.	Chemistry	76.4
German	49.	Physics	72.6
Phyisography	49.	Modern History	71.0
Bookkeeping	49.	Senior U.S.History	70.8
English History	43.	Botany	65.0
Senior Arithmetic	34.	Agriculture	62.0
Frr H.Drawing	31.	Physiology	60.6
Senior Eng.Drama	25.	Mech.Drawing	58.3
Astronomy	23.	Higher Algebra	56.0
Senior U.S.History	21.	Physiography	55.0
Greek	21.	Solid Geometry	54.0
Economics	18.	Zoology	43.9
Zoology	15.	Bookkeeping	42.5
Mech.Drawing	14.	Com'l Geography	33.8
Sehior Geography	12.	Typewriting	31.0
French	12.	Com'l Arithmetic	29.0
Trigonometry	4.	Economics	26.4
		Shorthand	25.9
		Senior Arithmetic	24.5
		Com'l Law	23.0
		Senior Eng.Drama	23.0
		Eng. History	18.9
		Senior Geography	16.6
		Free H.Drawing	14.3
		Norwegian	7.8
		French	6.9
		Swedish	4.6
		Trigonometry	3.2
		Astronomy	1.8
		Danish	

The social and economic trend that is shown in the curriculum so far, is a good illustration of the fact that the standards of the high schools are now determined by the individual and social needs. As the school is paid for by the community, it becomes the social and economic duty of school officials and teachers to remove elimination and retardation by supervising private study of the student. The well administered and efficient curriculum provides for this supervision, and the high schools of Minnesota are showing signs of improvement in this direction. Out of 160 high schools that reported, 46 per cent of schools are using the assembly room in which students are required to study every day under the supervision of teachers. 16 per cent of the schools are using the assembly room and supervision of special teachers in the class room. Two schools are following the plan of supervision in the class room by the respective teachers of different subjects. Two schools give help to backward students only, while one school is using the plan of using the assembly room,

Supervision by special teachers and supervised study. 33 per cent of schools are using no plan at all.

The problem of elimination and retardation is after all a social problem and cannot be solved fully by the supervision of studies. The high school education in Minnesota generally begins from the fourteenth or fifteenth year and requires four years for its completion. It is a social and economic interest of the state to retain all students of the high school until they complete the high school course. But it is found by many investigators that a large number of students of the high school drop out after the first or second year and some never enter any high school at all. A vocational survey was made a few years ago by a committee of interested Minneapolis citizens. This committee testifies to the following fact: "That one-half of those leaving our schools, before the age of sixteen years, could be retained if there were some plainly seen value in our educational curricula."

The concensus of opinion of educational exper

perts is that a solution of this social problem of elimination would come by reorganizing curriculum of the high schools, and thus bringing about a complete correlation between the graded school and the high school. Two plans are suggested to remedy this defect, viz: the junior prevocational and senior high school plan and departmental work in grades. The departmental work in grades would make the students familiar with high school methods and thus insure their progress in the high school. The junior high school plan is to begin prevocational education from the eighth grade and to retain the student for a longer time in the school than he would otherwise be disposed to remain. The high schools in Minnesota have awakened to this reform and are showing signs of improvement. Out of 160 which reported, thirty-five per cent are following departmental work in grades. Thirteen schools, that is 7 per cent of the schools, are following the junior and senior high school plan. The superintendents at Cokato and Faribault State High Schools speak very favorably of the junior and high

high school plan. As yet 56 per cent of the schools have not adopted any reform plan.

Mr. S. Wirt Wiley, General Secretary of the Minneapolis Y.M.C.A. and his associates with the co-operation of fifty prominent and business men of the City, carried on recently an interesting investigation regarding the young men of Minneapolis. In his report Mr. Wiley says: "There are approximately 85,000 men and boys, between the age of 12 and 30 years of age in the City. 60,000 of them have less than high school education, and 36,000 of these have less than a common school education."[9] The social problem lately attracted the attention of Dr. Spaulding, Superintendent of Minneapolis City Schools, who has decided to open two junior prevocational high schools in the City, as a preliminary experiment for opening more of this type of schools in the future. The lead that is taken by Minneapolis in the opening of junior high schools is sure to be followed by other high schools in the state of Minnesota.

9. St. Marks Outlook, March 1915.

III. The Introduction of Industrial Subjects.

The curriculum reforms, the right supervision of studies, the coordination of the high school and the graded school, all lead in making schools a great socializing force for the betterment of society in point of industry, wealth, and knowledge. One great duty of the high school to society is to provide efficient men and women for carrying forward all kinds of industrial and technical work on which the wealth and social happiness of the state depends. The High schools in Minnesota have started to do this great work by adding the new normal, industrial, and commercial departments. These new departments are the connecting link between the school and the outside world and the comparative strength and permanency of the high school as a social institution depends upon the strength and permanency of these departments. By the provision of industrial and prevocational subjects the Minnesota high schools have been enabled to reach a great variety of students and meet them at different angles. Through

the medium of these subjects the high schools appeal to the strong innate impulses present in every healthy minded boy and girl to do something, to be something. It is quite interesting to trace the general social and economic improvement in the Minnesota high schools brought about by the introduction of commercial, normal, and industrial departments.

(1) Commercial Departments.

The commercial department, introduced in 1903-04, was the first vocational department to be organized in the Minnesota high schools. Only one commercial subject, book-keeping, was taught at first, and this subject alone could not secure a large enrollment. Other practical commercial subjects such as shorthand, typewriting, commercial history, law, economics, etc. were needed. Such being the case many private business schools flourished and the graduates from the graded schools and the eliminated high school students joined these schools for commercial training. In this way the high schools in Minnesota were deprived of a

large number of students who could easily have been retained by offering secondary education with commercial subjects. The introduction at least of a well-rounded commercial course in the leading high schools proved this case.

The Commercial Course in the high schools of Minnesota generally consists of shorthand, typewriting, bookkeeping, penmanship and business correspondence. In many schools commercial geography, commercial history, commercial law, and economics are offered if sufficient students register for them. In Faribault State High School a course is given in salesmanship. In the commercial department of the Central High School, Minneapolis, a form of "stage" money is used. Goods are bought and sold by students who for the time being are firms and corporations. These concerns do send real bills and keep real books and their checks and drafts pass through a "bank". Such a procedure gives a vital touch to commercial education.

The opening of the commercial department has

benefited the Minnesota high schools in point of enrollment and social popularity. In the year 1903-04 the average enrollment in all commercial subjects was 1% of the total enrollment of that year. In the year 1907-08 it became 4.3% of the total enrollment of that year. In the year 1913-14 it has become 5.9% of the total enrollment of that year. The gain per cent in the average enrollment of the year 1914 over the year 1903 is 812%. The Table VI on page 41 illustrates these conclusions.

Table VI.

A. Table showing increase in enrollment in commercial subjects.

	03-04	p.c	05-06	p.c.	06-07	p.c.	07-08	p.c.	08-09	p.c.
Average enrollment in Commercial subjects (Bookkeeping; Com.Law; Com. Geog.; Com.Arith.; Short-hand; Typewriting)	241	1.%	783	3.5%	917	3.8%	1071	4.3%	1065	4.%

	09-10	p.c.	10-11	p.c.	11-12	p.c.	12-13	p.c.	13-14	p.c.
Average enrollment in commercial subjects (Bookkeeping; Com.Law; Com. Geog.; Com.Arith.; Short-hand; Typewriting)	1262	4.4%	1501	5.%	1796	5.4%	1925	5.5%	2199	5.9%

Gain per centage in the average enrollment in the years 1903-1914 is 812%.

Bookkeeping was taught in many schools from the year 1896. Other commercial subjects were introduced in the year 1903-04.

(2) The Normal Department.

In 1905-06 this department was completely organized and at that time 13 different high schools were conducting them. In 1910 the state legislature passed a special law granting a bonus of $750 to all high schools, qualifying for such work and paying for their instructors not less than $670 per year. Owing to this impetus the number of departments in the high schools for the year 1910-11 increased to 56. In the year 1912-13 the state subsidy was raised to $1000 and the instructors' minimum salary was raised to $750. In the year 1913-14 the number of normal departments in the high school had increased to 106 with an enrollment of 1256 students, which is 5% of the total enrollment of that year. Table VII on page 43 illustrates the progress in the normal departments of the Minnesota high schools.

The course offered in this department is intended for the preparation of teachers for the rural schools. It consists of a review of the common branches from an

Table VII.

Table showing progress in Normal Department of High Schools

Year	A	B	P.C.of Total Enrollment	C	D
1905-1906	13	220	.09%	Not given	Not given
1906-1907	10	182		" "	" "
1907-1908	10	233		" "	" "
1908-1909	8	173		" "	" "
1909-1910	28	489	1.7%	" "	" "
1910-1911	56	740		384	136
1911-1912	81	1018		711	169
1912-1913	80	979		714	145
1913-1914	106	1256	3.%	969	160
Gain p.c.	815%	570%		252%	117%
	715%	470%		152%	17%

The total enrollment for the last nine years was 5290.

A. Number of Departments

B. Total Enrollment

C. Students that obtained First Grade Certificate.

D. " " " Second Grade Certificate.

educational standpoint, study of methods and history of education, and certain industrial branches offered by the school. One-half of the day is given to practice teaching, while the other half is spent in class recitation and other exercises. The extent of the course is one school year and requires three years study in the high school as prerequisite. The normal department in the Minnesota high schools is reaching more students every year by offering this practical vocational training, which, considering the condition of the rural school, is a great social need.

(3) Industrial Departments.

The new era of socializing the high schools of Minnesota by the introduction of practical industrial subjects really began from the year 1903, when the commercial studies were introduced. This was followed by the establishment of normal departments in the year 1905-06. Manual Training had already been introduced in the year 1898-99, when 8% of the schools were giving education in Manual Training. This course included

general mechanical drawing, wood work, pattern work, general carpentry, plain joinery and a very little forge work. But the course in manual training as it was given then did not receive any special state aid and so did not grow in public favor. From the year 1903-04 manual training seems to have grown in public favor.[10] [11] On account of this impetus created by the policy of special state aid the percentage of schools teaching manual training at once leaped to the figure of 58% from the figure of 40% of the previous year.

Domestic Science consisted primarily of sewing and cooking and was first offered in the Minnesota high schools in the memorable year of 1905-06, when 5% of the schools were giving education in sewing and only 1% in cooking. In the year 1909-10 on account of the impetus of special state aid for industrial subjects, seven more schools began to teach cooking and ten more schools sewing than the corresponding number of schools in the year 1908-09. (Table IV. p. 30 and 31).

In the history of industrial education in Minnesota

[10] Please refer to Table IV. on pages 30 and 31 to verify the statements made in this Section.

[11] Full details about Putnam and Benson Lee Acts are given under Section I "The General Progress of the High Schools in Minnesota".

the year 1909 will pass down as a golden year in the cause of practical education. In that year the number of schools teaching manual training and domestic science increased remarkably on account of this policy inauguarated by the state of giving special state aid to those schools that fulfilled the state requirements in teaching industrial subjects. [12] In that year also the state policy of creating Putnam schools was adopted by the legislature. The Benson Lee Schools were authorized by the legislature of 1911. They have met with great success and together with the Putnam Schools, have become leaders in converting other high schools to the new religion of social and industrial education.

Table VIII on page 50 very adequately shows the annual increase in enrollment and expenditure of the Putnam Schools from the year 1909-14. By this Table also, the steady annual increase in enrollment is shown for Agriculture, Domestic Science, and Shop. The gain per cent of total expenditure of the year 1914 over that of 1909 and 10 is 292% which clearly shows the willingness

[12] Full details of Putnam and Benson Lee Schools are given under Section I

of the people to tax themselves more every year toward enabling their schools to qualify for Putnam Aid. On account of the special state aid policy the high schools that received it were enabled to extend industrial education down into the grades, and give short courses in Agriculture, Domestic Science and Shop for outside students, who had not received any education along industrial lines. In this way the Putnam Schools have become very effective and practical, and the policy of state aid seems to be justified.

On account of the great success of the Putnam High Schools, the state legislature in the year 1911, took another important step in passing the[13] Benson Lee Act for further promotion of industrial education thruout the state, and thus the Benson Lee Schools were created.

Table IX on page 51 shows the annual increase in Benson Lee Schools in case of enrollment and annual expenditure. This table shows that Benson Lee Schools are getting as popular as the Putnam Schools.

[13] Full details of Benson Lee School Act are given under Section I

The Putnam and Benson Lee Schools in Minnesota are very peculiar and worth investigating from two standpoints:

Firstly, these schools exemplify the much required coöperation of the state and community in working for the ideal of industrial and practical education. Secondly, these high schools are the types of high schools in Minnesota wherein the social and economic trend is very clearly seen. The introduction of the study of Agriculture into the classical high schools, where Latin, Plane Geometry, and Elementary Algebra reigned supreme, is especially due to the Putnam and Benson Lee Acts, which greatly helped the cause of industrial and social education. It is very interesting to note the aim, content, and recent practical development in the study of Manual Training, Domestic Science, and Agriculture. These industrial subjects characterize the Putnam and Benson Lee schools and really form the fulcrum of the social and economic movement for reforming and reorganizing the old classical education of the high schools.

Industrial Department (1) Manual Training

It is the social and economic duty of the high school to give every boy some experience in handling material things. The work in wood, metal, sewing and cooking are really methods of life, instead of mere book studies and would really help the student in the preparation for his future life. [14] In the year 1913-1914, the subject of manual training was offered by 85% of the schools as compared to 8% of the schools offering it in the year 1898-1899. In the graded schools, the course runs parallel to the Domestic Science course and while the girls sew or cook, the boys work in the shop. The course is compulsory in the grades and elective in the high school. In the 7th and 8th grade, simple carpentry and introductory mechanical drawing are taught.

The shop course begins generally from the 6th grade and in this course, the working, use, and care of tools is taught and students are required to prepare some simple models such as match holders, tooth-brush holders, calendar mounts, etc. In the high school the

[14] Please refer to Table IV on pages 30 and 31.

Table VIII. Table showing Putnam High School Enrollment and Expenditure for 1909-1914.

I. Enrollment	Number	Agriculture			Domestic Science			Shop		
Year	H.S.	A	B	C	A	B	C	A	B	C
1909-1910	9	266	201	544	292	27	672	233	148	665
1910-1911	9	289	276	427	418	101	842	280	167	678
1911-1912	28	937	532	1536	1492	221	2502	995	448	2304
1912-1913	28	1118	544	1461	1529	167	2377	901	478	2280
1913-1914	37	1678	489	2023	2412	214	3720	1491	395	3305
Gain percent ↘	411% 311%	706% 606%	243% 143%	371% 271%	825% 726%	792% 692%	553% 253%	639% 539%	266% 166%	496% 396%

A. H. S. Pupils B. Short-course Pupils C. Grade Pupils

II. Expenditure

Items	1909-1910	1910-1911	1911-1912	1912-1913	1913-1914
Salaries	$25076.00	$25425.00	$85583.00	$90603.00	$127906.00
Real Estate	7818.00	1788.00	16729.00	11910.00	3907.00
Agriculture	7501.00	8345.00	20726.00	26335.00	32551.00
Domestic Science	5888.00	2286.00	11157.00	7779.00	12597.00
Shop Work	4247.00	5435.00	20379.00	15770.00	23445.00
Not classified	466.00	1101.00	3573.00	4852.00	-----
Total	$50996.00	$44380.00	$158117.00	$151749.00	$200406.00

Gain Per cent in Total Expenditure 392%
↘ 292%

Table IX. Table showing constant increase in enrollment and expenditure in Case of Benson Lee Schools years 1911-1914.

I. Enrollment

Year	No. of H.S.	Agriculture A	Agriculture B	Agriculture C	Domestic Science A	Domestic Science B	Domestic Science C	Shop A	Shop B	Shop C
1911-1912	51	1538	584	1952	1668	197	1960	1086	457	1903
1912-1913	66	2125	656	2539	2434	154	2946	1392	482	2679
1913-1914	82	2491	689	2621	2868	195	3536	1358	477	3190
Gain Per Cent	140%	161%	118%	134%	171%	--	186%	125%	101%	167%
	40%	61%	18%	34%	71%		86%	25%	1%	67%

Enrollment - A. H. S. Pupils B. Short-Course Pupils C. Grade Pupils

II. Expenditure

Year	A	B	C	D	E	F	G-Total
1911-1912	$8869.00	$12333.00	$13446.00	$11893.00	$743.00	$90333.00	$137617.00
1912-1913	12923.00	14062.00	16066.00	14197.00	1130.00	155031.00	$213409.00
1913-1914	4093.00	24444.00	21247.00	22385.00	---	201241.00	$273410.00

Gain Per Cent in Total Expenditure 198%

98%

typical course in manual training requires a double period daily for four years. In such a course, wood turning, joinery, pattern and cabinet work, preparation of different models, forge and machine shop work and mechanical drawing are the subjects covered. Some high schools do not offer forge and machine shop practice owing to want of equipment. In some strong high schools, familiar talks are given on history of tools, different kinds of wood and metal. The writer on many occasions had the pleasure of seeing fine benches, tools, desks, cabinets, trays, ironing boards and other articles required in the house prepared by boys of the manual training classes of the high schools in Minneapolis. Students paying for the material are allowed to take the finished things home. This method really gives great encouragement towards personal achievement, which is a great factor in the social and economic life of the student. In the machine shop of the Central High School, Minneapolis, the boys make gasoline engines, drills, lathes, nail boards, tool chests, etc. The fine wireless apparatus, that is used in the physical laboratory of

of the Central High, was made by students in the machine shop. The manual training in Minnesota high schools fulfills to some extent its mission of making boys use their hands in cooperation with their heads in making actual things of wood and metal that really add to the material wealth of the world.

Industrial Department (2) Domestic Science

The last census reports show that of the American women 25 years old and over, 67% are generally married. This proves the social and economic importance of introducing Domestic Science in the schools. The high schools in Minnesota realized this great need and began the instruction in sewing and cooking in the year 1905-06. The course in Domestic Science usually begins in the 5th grade and is continued for eight years. Until the 8th grade is reached general sewing and textiles are the subjects taught, while cooking is introduced in the 8th grade. The course in the grades is compulsory, while that of the high school is elective. In the four years of the high school course general household

cooking, advanced cooking and serving, dress-making, art needle work, home nursing, and household management are the subjects taught. In the high schools that are not very strong a two-year course is given in cooking, physiology, hygiene, and chemistry. The work in this course proves both interesting and profitable, because it aims to fit as nearly as possible into the home life of the pupils. In some schools, like the Central High, Minneapolis, the girls are taught practical homemaking by experimentation in the school kitchen. Small luncheons, or dinners given to the parents and school board are especially interesting practical demonstrations planned, worked out, and successfully executed by the girls themselves. The writer had the pleasure of attending such a luncheon, which he considers the most delightful event of his life. The girls plan the menu, do the marketing and serving and supply nice little luncheons for the ordinary price of 10 cts. In this way food values and cost of time and labor are studied with care. The Superintendents of the Faribault and Cokato schools

report that conventions, athletic meetings, farmers' institutes, and other local gatherings are acquiring the habit of looking to the Home Economics Department of the High School as a practical place for well cooked and cheap banquets. In the Domestic Art Department of the Central High School, the girls are taught practical housekeeping by the economic management of a housekeeping suit of five rooms. In the Mechanic Arts High School, St. Paul, a practical four-year Arts course is given in modelling, wood carving, wood engraving, freehand drawing and sewing. In modelling the girls are taught clay modelling, ornamental pottery work, cement work and terra cotta work. The girls taking this course prepare very fine busts, flower vases, bowls, tea and coffee stands, and garden jars. This course in modelling develops an aesthetic taste and endows the learner with an appreciative eye for fine arts. The examples of Mechanic Arts and Central High Schools are sure to be followed by other high schools in the state in time to come. In this way the course in Domestic Science really fulfills one great

social need in the girl's education. This is sure to usher in the new era of scientific housekeeping, good food, and cheerful and prosperous homes in the state of Minnesota.

Industrial Department (3) Agriculture

In a state like Minnesota, that has a great agricultural future owing to its abundant resources in soil and surroundings, agricultural education of the future farmers is a great social and economic need. In the memorable year 1909-10, the study of agriculture backed up by the state and communities, entered the sacred grounds of classical learning and from that time on the agricultural courses have rapidly increased in enrollment and popularity.[15] In the year 1913-14 62% of the schools were teaching agriculture as compared to the 19% in the year 1909-10. The total enrollment for agriculture for the last five years is 13,680.

The prevalent course in this subject consists of general agriculture, taught from an elementary text-book once a week in the 7th and 8th grade, a freshman class in farm crops, and a sophomore class in live stock.

[15] Please refer to Table IV page 30 and 31.

A few of the strong schools have a third and fourth year of work in soils and farm management. Agricultural botany is displacing botany of the old type. Some effort is being made in giving Chemistry an agricultural trend. Animal husbandry, dairy products, horticulture, and gardening are other subjects that are added to the general course in places where local conditions demand their teaching. In South St. Paul, the conditions being favorable for stock-industry, stock raising is taught, while in St. Louis Park the horticulture and gardening are emphasized as local conditions are favorable for these subjects. The more enterprising instructors enrich school room instruction by a careful study of elevators, flouring mills, and the growing crops of farmers. (H. S. Report) Besides this, extension work is carried on by agricultural instructors, and short-courses are given during the winter months. In many schools general lectures in agriculture with some practical work in rope-tying and gardening, are given to the girls of the Normal Department, with the idea that they should do some practical teaching in the rural schools and interest the

farmers in the general improvement of agriculture. The agricultural department in the high schools is a quite new experiment and full of hope and promise for farming communities.

The manual training department brings the shop into the school and gives the boys an insight into the hard and stern yet promising facts of the business world which they have to face. The Domestic Science department brings the kitchen and home into the school and makes the girl realize, the intricate duties, the high responsibilities, and the never ending pleasures of the home, in which they want to reign peacefully and permanently. The Agricultural department brings the farm into the high school and endows the future farmer with every possible practical knowledge, which enables him to bring about increased products from his soil. In this way the shop, the kitchen, the farm, the business office have invaded the old classical high schools of Minnesota and have given them a distinct social and economic trend for the upkeep of which state and communities are only too willing to spend thousands of dollars.

The introduction of industrial subjects has really greatly added to the total enrollment each year. Table X on page 60 illustrates the progress in enrollment in industrial subjects from the year 1905-1914. This Table shows that 16.3% of the total enrollment are studying manual training, 16.4% of the total enrollment are studying Domestic Science, 11% of the total enrollment are studying Agriculture for the year 1913-14. Table VI on page 41 shows that 5.9% of the total enrollment are studying commercial subjects for the year 1913-14. For the same year Table VII on page 43 shows that 3% of the total enrollment are studying normal subjects. From this it can be approximately concluded that a large number of students enrolled in the year 1913-14 in high schools of Minnesota, were studying subjects having a distinct social and practical bearing on their lives.

Another very important fact, brought about by a close study of the separate enrollment of boys and girls from the year 1903-04, is that more boys every year are kept in the high school than the previous year. In the

Table X. Table showing progress in enrollment in industrial, subjects (Manual Training, Household Economics, Agriculture) for the years 1905-14.

	04-05	p.c.	05-06	p.c.	06-07	p.c.	07-08	p.c.	08-09	p.c.
A	1804	8.9%	2138	9.6%	2365	9.1%	2731	11.1%	3590	13.5%
B	Not Offered		347	1.5%	420	1.7%	501	2%	815	3%
C	"		Not Offered		"		"		"	

	09-10	p.c.	10-11	p.c.	11-12	p.c.	12-13	p.c.	13-14	p.c.
A	4318	15.1%	4931	16.4%	5747	17.2%	5770	16.5%	6003	16.3%
B	1441	5%	2507	8.3%	4124	12.3%	5216	14.9%	6239	16.4%
C	1331	4.6%	1702	5.6%	2961	8.7%	3631	10.4%	4053	11%

A. Average enrollment in Manual Training (Manual Training and Mechanical Drawing.

B. Average enrollment in Household Economics (Cooking and Sewing)

C. Total enrollment in Agriculture.

P.C. Per centage to total enrollment of that year.

Household Economics was first offered in the year 1905-1906. Agriculture was first introduced in the year 1909-1910. The total enrollment in Agriculture for the last five years is 13,680.

In the Minnesota high schools there are more girls than boys and their proportion for the years 1903-04 was 60 to 40 in every hundred, showing a difference of 20. In the year 1903-04 commercial deparments were introduced, and manual training was started in many schools in the year 1904-05. The effect of the introduction of these practical subjects is clearly seen in the year 1907-08, when the proportion of girls to boys was 58.8 to 41.2 showing the difference of 17.6 which is less than the 20% of the year 1903-04. Agriculture was introduced in the year 1909-10 and this study materially attracted and retained more boys in the school. The effect of the introduction is clearly seen in the year 1911-12 when the proportion of girls to boys is 57.1 to 42.9, showing the difference of 14.2 which is far less than the difference 20 of the year 1903-04. Approximately it can be said that owing to the introduction of industrial and prevocational subjects, the proportion of boys to girls in the Minnesota high schools has decreased 4%, within the period of the last eleven years for which figures are available. Table XI on page 62

Table XI.

A table showing the proportion between the enrollment of boys and girls from the year 1896 to 1914.

Year	Total Enrollment	No. of Boys	P.C. to T.E.	No. of Girls	P.C. to T.E.	Percentage Difference
1896-97	11218	Not given		Not given		Not known
1897-98	11377	"		"		"
1898-99	11742	"		"		"
1899--1900	12802	"		"		"
1900-01	14170	"		"		"
1901-02	15715	"		"		"
C.Subjects 1903-04	18622	7436	39.9	11186	60.0	20.1
M.Training 1904-05	20215	7820	38.6	12395	61.4	22.8
D.Science 1905-06	22106	8937	40.4	13169	59.6	19.2
1906-07	23687	9560	40.3	14127	59.7	19.4
1907-08	24530	10116	41.2	14414	58.8	17.6
1908-09	26583	11173	42.0	15410	58.0	16.0
Agriculture 1909-10	28562	11953	42.2	16609	57.8	15.6
1910-11	29971	12728	42.4	17243	57.6	15.2
1911-12	33295	14289	42.9	19006	57.1	14.2
1912-13	34854	14551	41.7	20303	58.3	16.6
1913-14	36703	15372	41.8	21331	58.2	16.4

In 1900 the ratio of males to females in Minnesota was 113.9 to 100 females: in 1910 the ratio of males to females in Minnesota was 114.6 to 100 females. (13th Census of the U.S. Vol. II.)

illustrates this conclusion.

IV. Vocational Guidance and Prevocational Education.

"No teacher can truly promote the cause of education until he knows the conditions of the life for which that education is to prepare his pupil".

John Ruskin

The introduction of industrial courses into the curriculum does not lessen the duties of the high school, but only places upon it higher responsibility of giving vocational guidance to students in choosing the course to suit their future life career. In this new industrial age of steam and electricity, old vocations and industries are dying out and new vocations and industries requiring prevocational training are coming to the front. In such a changing age, boys necessarily require vocational guidance to qualify themselves for various trades and occupations that require efficient skill and trained intellect. The principle that education to be effective must touch the life motive of the child has brought about the introduction of industrial

education in Minnesota.high schools. The same principle further requires the teacher to give constant educational and vocational guidance to his pupils to find out his life-motive.

The movement of vocational guidance and prevocational education first of all arose in Boston, where it met with great success, and now it is making its headway in the state of Minnesota. In the last two decades, when the high schools were college preparatory institutions, there was no place for educational or vocational guidance. But very recently much activity along this line is being shown in the high schools of Minnesota. Out of 160 high schools that reported, about 36% of them are following the general advisory plan of giving vocational guidance. In this plan the principal of the high school in cooperation with special teachers confers with the students and directs them in the selection of the courses after taking into consideration their previous preparation and future plans. The economic conditions of the students and wishes of their parents are also taken into consideration in this plan. This is giving vocational

guidance in a most elementary way. Nevertheless this is an improvement over the old plan of registering students for one college preparatory course without considering whether it is possible or practicable for them to reach the University or not. But of the high schools that reported 5% of them go further than this. These follow the general advisory plan, and besides, they arrange lectures by teachers and other professional men, about the different vocations and the preparation required for them. Besides lectures, they arrange personal talks to groups of boys through their clubs. These lectures and personal talks interest the students in the practical side of vocations and thus enable them to make their final selection according to their preparation and means.

The plan of giving lectures and personal talks about vocations is an improvement upon the general advisory plan, as it enables the students to receive at first hand the information they want to follow. Such personal talks on different occupations are given twice a week in the state high school of Mankato, and they are

proving popular. The Principal of the Central High School, Duluth, reports the plan employed in his school as follows:

"Vocational guidance is given under the direction of a Committee for the boys and for the girls. Talks and lectures by the teachers and men and women of the professions, personal conferences with the pupils, placing of literature and information as to different lines of vocations at the disposal of the pupils, etc. are the main lines along which the work is done".

In the two state high schools of Winona and Litchfield, besides following the advisory plan, much vocational guidance is given through English classes. The Superintendent at Winona reports his plan as follows:

"In the junior and senior English classes, some vocational guidance books are read and discussed". The State High School at Litchfield seems to have developed this work of giving vocational guidance through English classes more adequately and efficiently. The plan, as reported by the Superintendent is given as follows:

Ninth-grade theme. First semester: The elements of character that make for success in life. Purpose, to draw out an understanding of real success in life and how it is obtained, and to apply the fundamental lessons of character building to the needs of each pupil.

Tenth-grade theme. First semester: The world's work. Purpose, to study vocation in general in order that the pupil's vision of the call to service may be as broad as possible.

Tenth-grade theme. Second semester: Choosing a vocation. Purpose, to attempt to select that vocation or general field of occupation for which the pupil by self-analysis seems best fitted.

Eleventh-grade theme. First semester: Preparation for life's work. Purpose, to plan out a definite course of study and conduct to meet the special requirements of the profession, business or industry chosen.

Eleventh-grade theme. Second semester: Vocational ethics. Purpose, to study the oral problems peculiar to the chosen business, profession or occupation.

Twelfth-grade theme. First semester: Social ethics. Purpose, to study the relation of the individual to his future vocation to society.

Twelfth-grade theme. Second semester: Civic ethics. Purpose, to study the relation of the individual in his future vocation to the state.

This plan of giving vocational guidance through English work has been found of great value by Mr. Jesse B. Davis of Grand Rapids, Michigan.

Out of 160 high schools that reported, 3% are using a card record system for giving the analysis of each student. A separate card is prepared for every student and this card records the general tendencies, character analysis, and previous training of each student. This system seems to be an improvement over the previous plans in one point, as it supplies the teacher all necessary data upon which he is to base his final judgment. This card record system seems to avoid snap judgments and mere opinions. The best example of this plan is the "Vocational Registration Card" of the Crookston state high school, which is to be filled out by students seeking vocational guidance. This card, which is attached here for reference, contains information about the physical life, social life, personal record, and character study of the student. In the card a few important questions are added to enable the teacher to know about the future plans of the student. The Superintendent at Crookston speaks very favorably of the success of these cards. In the Central High School, Minneapolis, after consultation with the Principal and

CROOKSTON STATE HIGH SCHOOL

Vocational Registration Card

Name----------Age-------- Grade----------

Physical Life -

1. Height ----------2. Weight----------
3. Lung capacity ----------
4. Body
   a. Height sitting --------b. Girth of chest ----------
   c. Peculiarities ----------

   ----
5. Head
   a. Circumference ---------b. Distance from ear to ear --------
   c. General shape ----------
6. Face
   a. Forehead height ---------- b. Chin, full or receding ----------
7. Eyes
   a. Sight ----------b. Expression ----------
8. Ears
   a. Hearing ----------b. Abnormalities ----------
9. Nose
   a. Breathing ----------
10. Mouth
   a. Shape ----------b. Teeth----------
11. Hands
   a. Strong----------b. Nervous ----------
   c. Feeble _____
12. Back
   a. Strength of ----------b. Legs _____
   c. Shoulders _____
13. Peculiarities _____

_____

Social Life

1. Home
   a. Owned or rented --------- b. Conditions ----------
   c. Sleeping quarters _____
2. Father
   a. Nationality ---------- b. Habits ----------
3. Mother
   a. Nationality ---------- b. Habits ----------
4. Brothers
   a. Employments ----------
5. Sisters
   a. Characteristics ----------

6. Church ----------
   a. Member _____ b. Attendance _____
7. Companions
   a. Kinds _____ b. Sociability _____
8. Remarks _____

_____

_____

_____

_____

Personal Record

1. School
   a. Mental ability _____ b. Effort _____
   c. Initiative _____ d. Special interests ___

   _____
2. Work
   a. At home _____ b. Attitude toward work _____
3. Play
   a. At home _____ b. At School _____
   c. Leadership ability _____
4. Mechanical ability
   a. Drawing _____
5. Trading ability
   a. Habits of svaing and spending _____
6. Musical ability _____
7. Literary ability _____
8. Conversational ability _____
9. Habits _____
10. Special ability _____
11. Sense of responsibility _____
12. Ambition _____
13. Remarks _____

_____

Character Study. (Underscore qualities possessed. Bracket those lacking)

1. Bright; memory; attention; reason.
2. Honest; truthful; frank; sincere; trustworthy; faithful; obedient.
3. Shrewd; long-headed; prudent; provident; saving.
4. Obstinate; stubborn; pugnacious; persistent.
5. Good-natured; social; pleasant; kind-hearted; affectionate.
6. Brave; braggart; bashful; modest.
7. Acquisitive; constructive; emulative; imaginative; imitative; dramatic.
8. Active; buoyant; hopeful; confident; ready; enthusiastic.
9. Prompt; intense; responsive; hasty; irritable; fiery; nervous.
10. Emotional; sensitive; secretive; conceited.
11. Sluggish; indifferent; stupid; depressed.
12. Ambitious; generous.
13. Independent; leader; easily led.
14. Remarks:

Questions Concerning Future.

1. How long do you intend to go to school?_____
2. How far will your parents help you in your education?_____
3. Would you care to follow your father's occupation? _____
4. What initial advantages will you have if you enter your father's occupation?_____
5. Can your father or mother help you to make a success in this line of work?_____
6. Do you plan to go to college?_____
7. Have you decided which college you will likely attend? _____
8. What offers of permanent employment may you have?_____
9. Would you prefer indoor or outdoor work?_____

other teachers, individual cards are prepared for each student and on each card the future vocation and the studies preparatory to that are written. This card system helps the principal in following up the student in his school life and is a very important aid to backward pupils. A follow-up system of vocational guidance is now in operation in the new Central High School. Out of 160 high schools that reported, about 83, i. e. 53%, are following no definite plan regarding vocational guidance.

The theory and plans of giving vocational guidance presuppose to some extent the provision for giving prevocational education in the high schools. The recent activities in Minneapolis and St. Paul are examples of this general rule. In large cities like the Twin Cities, the need and significance of vocational and prevocational education is much more obvious than in the other smaller towns within the state. David H. Holbrook, Director of Attendance in the Public Schools, expressed his opinion as follows, based on his recent investigation. "Three-fourths of the public school pupils under 16 who left

school last year to go to work went into lines of work that had no future for them". The vocational survey carried on a few years ago by a Committee of interested Minneapolis citizens very well agrees with the conclusions of Mr. Holbrook. This condition proves the need and significance of educational guidance and prevocational education in the Twin Cities. In the year 1915, on account of the recommendations of Dr. Spaulding two intermediate schools giving prevocational education are planned by the school board to take care of the students of seventh, eighth and ninth grades, in a most practical way. In these schools, the pupils will be free to choose the line of work they want, and they will have to study prevocational subjects to a large extent. It is Dr. Spaulding's intention to introduce these intermediate schools in but two sections of the city at first. He expects eventually to develop the system to reach all sections. The lead that Minneapolis is taking in organizing high schools to suit the vocational tendencies of the student, will be sooner or later followed by smaller towns in the state.

Prevocational education is an effort in the right direction to systematize vocational guidance and give it some tangible immediate expression in vocational schools. The Dunwoody Vocational School established in Minneapolis in the year 1914 is a very good example of such an effort. This school offers two year courses in following vocational subjects.

Vocational Subjects	No. of boys enrolled in each subject 1914-15.
I. (Cabinet Making (Carpentry (Millwrighting	40
II. Machine Shop practice	32
III. Automobile construction	29
IV. Electrical construction	32
V. Machine and Architectural drafting	21
VI. Printing	28
Six vocational subjects	182

Half the time in the school is spent in industrial work and the other half in learning academic subjects adapted to the industrial work. Instruction in other trades such as bricklaying, plastering, plumbing, and sheetmetal work is to be provided according to the demands. Two years are required to complete any course, but it can be completed in a shorter time if the student can do the assigned work in that period. Those who teach different vocations are experts in their own special lines. On the same plan as the Dunwoody Vocational School, the Girls' Vocational School was opened in the old Central High School Building in the month of November 1914. The school admits girls above fourteen for learning different vocations. Half the time in the school is spent in practical work, while the other half is spent in studying academic subjects related and adapted to vocations. The course can be completed within two years. The teachers in charge are experts in their respective vocations. Following are the vocational subjects taught in the school.

Vocations	No. of girls enrolled for 1914-15.
I. (Home work and management (Junior nursing	40
II. Sewing and dressmaking.	60
III. Millinery	36
IV. (Drawing room service (Lunch room and tea room (Service and management (Catering	22
V. (Salesmanship (Stenography and Typewriting (Clerical work	64
Five vocations	212

An extension class in cooking and sewing is conducted for two hours once a week. The school is conducting a model store and will in the future install a model flat where girls may get actual training in do-all house work. As the school progresses, it plans to

give courses in fine laundry work, commercial design, photography, hand weaving, and advanced course in salesmanship. This school is designed to meet the needs of girls and young women of the high school age who are in need of prevocational training to earn their livelihood. In the Mechanic Arts High School, St. Paul, prevocational courses are offered in electrical engineering and architectural drawing. Principal Webster of the East High School, Minneapolis, desires to start at East High next year two year course in business and manual training upon the completion of which students can have a certificate of graduation with no further schooling. This change is much needed by the industrial conditions of the particular locality where East High is situated.

V. The Cooperation of Home and School.

The problem of giving vocational guidance requires a sympathetic cooperation between the home and the school. In the four-fifths of the waking hours, the children are responsible to the home. Every high school that wants to bring about a social and economic improvement of the pupil must interest the home in the school work. Furthermore, the school every year needs more money, and this money must come from the parents. It is needful, therefore, that school authorities and parents cooperate.

There are various plans to interest the parents in the school and thus secure their cooperation. Out of 160 high schools that reported, 50% are trying to interest parents in the school work by holding school exhibitions and assigning visiting days. This plan seems to be most popular with Minnesota high schools than any other plan. 10% of the schools have exhibitions, visiting days, parents' and teachers' associations, home visitors, parents' meetings. 9% use

only exhibitions. Eight high schools have visiting days, six use parents' meetings, six have home visitors, seven have special exercises and literary entertainments to bring parents into close touch with school activities. Only 6% of the schools use no plan to interest parents in the school work.

The communities are naturally interested in the school work as they elect the school board and get themselves taxed for the cause of education, but efforts as mentioned above are still required to stimulate a closer sympathetic understanding between home and school. The superintendent of the Arlington State High School gives his plan and opinion regarding this phase of social work as follows: -- "We use parents' meetings in the school building, industrial exhibits, and visiting days, not to forget school entertainments in school building and in public hall. I feel that we have a big field in that respect. In fact our greatest problem lies in the fact that some parents do not feel a vital interest in the school work of their own children."

The superintendent at International Falls reports as follows: -- "There are exhibits renewed monthly, which are arranged in uniform manner on appropriate monthly boards, placed on walls in corridor, - also display work in all rooms - visitors are always attracted by such exhibits". The Central High School, Minneapolis, has a plan of sending out a Home Visitor to see parents and get their cooperation whenever the students show some deficiency or backwardness in the class. The parents' and teachers' associations are doing a very good work in some high schools of the state.

VI. Socializing the School Life of the Student.

Besides giving proper training in industrial subjects the high school has the most sacred duty to perform, namely training students for social efficiency by actually making them participate in all healthy life activities on a small scale within the school. One of the first things to be noted in this line is the remarkable club activity that is seen in the Minnesota high schools. Out of the 160 schools reporting, 40% have three

to six clubs, 21% have one to two clubs, 18% have only one club, five schools have more than six clubs, while 16% have no clubs. The various kinds of clubs and their respective popularity, according to the number of schools having those clubs, is illustrated by Table XII on pages 79 and 80.

The athletic club seems to be popular in all schools. Next place is taken by agricultural clubs, which include farmers' club, corn club, baking club, etc. Next to this come musical clubs, literary societies, etc. There are 39 kinds of clubs in Minnesota high schools. Athletic events, literary and scientific societies, debating clubs, art and musical organizations, assembly exercises, parties and plays are wholesome enterprises in which the students daily participate to some extent. All the different clubs popular in Minnesota high schools are the real training grounds for the intellectual diversions and avocations which are so important in the social life of the student. The athletic club may develop a permanent interest in physical culture. The aviation club may bring out a student who

Table XII. A table showing the variety of clubs and their popularity in Minnesota High Schools.

Clubs arranged alphabetically	No. of schools having them	Clubs arranged alphabetically con't:	No. of schools having them
1. Agricultural	75	22. French	1
2. Athletic	89	23. German	13
3. Aviation	1	24. Girls' Baking Club (Agricultural)	Included under #1
4. Astronomy	1	25. Girls' Quartet	2
5. Boys' Glee	24	26. Girls' Sewing	1
6. Boys' Corn Club (Agricultural)	Included under #1	27. Girls' Glee	23
7. Basket Ball	6	28. High School Chorus	3
8. Base Ball	2	29. Horticulture	1
9. Bird Club	2	30. High School Band	5
10. Camp Fire Girls	1	31. Literary Society	40
11. Civics	1	32. Latin Club	2
12. Checkers	1	33. Musical	59
13. Class Party	1	34. Norwegian	1
14. Commercial	1	35. Orchestra	23
15. Camera	1	36. Outdoor	1
16. Dramatic Club	6	37. Scientific Club	1
17. Debating Club	7	38. Tatler Board	1
18. English	9	39. Y.M.C.A.	1
19. Engineering	2		
20. Foot Ball	4		
21. Fife & Drum Corps	1		

Table XII. A table showing the variety of clubs and their popularity in Minnesota High Schools.

Relative position in popularity	Number of schools having the club
1. Athletic	89
2. Agricultural	75
3. Musical	59
4. Literary Society	40
5. Boys' Glee	24
6. Girls' Glee	23
7. Orchestra	23
8. German	13
9. English	9
10. Debating	7
11. Dramatic	6
12. Girls' Baking	6
13. Basket Ball	6
14. Foot Ball	4
15. High School Chorus	3
16. (Base Ball (Bird's Club (Engineering (Girls' Quartet	2

The remaining occupy the last position.

will become famous in the American air-craft. The language and literary clubs may develop a mastery over the songs and literature of that language.

The state high school at Faribault reports 13 different clubs. One faculty member is elected by the boys in each club as a guide. Each club by turn gives some literary or other programme in the assembly hall for the whole school. In Albert Lea high school* credit is given for such work as chorus, rhetoricals, debate, and various other phases of literary work. In Detroit state high school "work, with credit, may be offered in debate, dramatics, public speaking and glee clubs". These examples only show what practical steps can be taken in this direction.

Next in importance to the club activities comes the publication of school paper or school annual. This school journalism is now quite popular in many of the state high schools in Minnesota. To train the student in getting out a decent, well-written school paper is a great social and economic education in itself. The pur-

*[16] The information is based on the reports received from the state high schools.

pose of writing for a newspaper appeals to the student more than anything else and hence this motive can be very well utilized by getting students to write for the school paper. A typical high school paper in Minnesota contains the news of the school, the information in athletics, debating, oratory, social affairs, assemblies, the work of the various departments of the high school and additions of new courses. Local conditions in various places determine the content of the paper and its general tone. In smaller high schools, where no paper is printed, students are encouraged to contribute school news to the local paper. Out of 160 high schools that reported, 66% encourage their students to contribute to local papers. For instance in a place like Faribault not a day passes on which school matter fails to appear in local papers. This kind of school contribution develops a love for writing amongst students and keeps the public well informed about school affairs. 16% of the schools that reported have school paper and ten high schools have an annual. Such publications are always under the supervision of one or two faculty members, and

the superintendent. The superintendent at Rush City reports his plan as follows -- "Students elect an editor each semester. He interviews all teachers for news. His notes are first O.K.'d by the superintendent and then published weekly, with editorials from the superintendent himself. Very good results." Such a guidance from the faculty members or the superintendent is bound to give students experience that they so badly need. Out of 160 high schools only 71% are making no effort in this direction.

The right use of the libraries is another great socializing factor of the 20th Century. In the State of Minnesota the high schools and the graded schools always cooperate with the public local libraries and encourage students to seek the libraries for information on their subject matter. This method develops in the student the library-going habit, which has great social and economic value. Some high schools have libraries of their own, and besides that they use public libraries as well. In St. Louis Park high school students studying agriculture are required to bring their subject up to date by reading

recent articles in current magazines relating to that subject. In the East High School, Minneapolis, students in senior English classes read literary magazines to learn the modern way of writing and compare it with the old. Such magazine reading and reference work is encouraged in many Minnesota high schools.

Out of 160 schools that reported

31% have 500 - 1000 books in their libraries
31% " 1000 - 1500 " " " "
13% " 1500 - 2000 " " " "
9% " 2000 - 2500 " " " "
6% " 2500 - 3000 " " " "
3 high schools have 5000 - 6000 " " "
5 " " " 500 - 1000 " " "
2 " " use public libraries only and have no libraries of their own.

This table shows quite a good condition of the school libraries, though much improvement may be expected every year.

The health of the student is another great social asset. All the socializing agencies used by

the school would be greatly handicapped if this were neglected. The high schools in Minnesota are gradually coming to consider physical education and health supervision as important social duties.

The high schools have many problems of retardation, elimination, nonpromotion, incorrigibility, etc. The condition of the health of the student is a large factor in all these problems.

Among the means for improving the health of the Minnesota student, school sanitation is being largely insured by state requirements. *The fact, that athletic clubs are the most popular clubs in the Minnesota high schools, shows that the students are greatly interested in games and sports which greatly better the general health of the students. The study of physiology and hygiene is compulsory in the graded schools, but is often elective in the high school. Out of 160 high schools that reported, 51% are giving elective courses in physiology and hygiene. 15% are giving compulsory education in these subjects, while 35% of the schools are giving no instruction in them. These figures show that

17
* Please refer to Table X11 on page 79.

the tendency of the majority of the high schools in Minnesota is toward offering health instruction. It is a fact worth noting that the study of hygiene is required of all students in the grades.

Besides providing for the teaching of hygiene, corrective and strengthening gymnasium work under the supervision of a health director is quite necessary to increase the health efficiency of the student. Interesting work along this line is provided for by some high schools in Minnesota that have strong gymnasium facilities. The double gymnasium at new Central High is a model worth imitating by other schools, under a high ceiling a huge room is divided in halves by a removable wooden partition. When the partition is in place one of the halves is the boys' "gym" and the other the girls'. The compulsory gymnasium work comes in the morning. In the afternoon students who are "up" in their studies take the optional work. In gymnasium work at Central High individual training is given preference to group training. The defects and weaknesses revealed in physical

examinations are generally treated by special forms of physical exercise. Many other smaller high schools in Minnesota are sure to follow the example of New Central High as their equipment and resources permit.

The provision of medical supervision for eliminating defects and curing preventable ailments is quite as important as teaching of physiology and hygiene, and gymnasium. The medical supervision in the high school has a great social and economic importance. The high schools in Minnesota are waking up to this fact gradually, and attempts are being made in many places to provide medical supervision. Out of 160 high schools that reported 11% have medical supervision by doctors helped by nurses. This is a quite satisfactory way of medical supervision, which discovers and prevents the spread of contagious diseases and provides for the correction of physical defects. Attempts made along this line in Cloquet State High School in the year 1913-14 are typical and deserve special notice. "At Cloquet the medical inspection has included the making of physical examinations with physical records for each child, the control

of epidemics, the giving of advice to parents, and caring of emergency cases. A disease census card for all the children including the high school has been prepared. The cards are filed in alphabetical order and so arranged that they can be kept up to date. The serious eye defects, tooth defects and defects in hearing were successfully treated". (State High School report) Out of 160 high schools that reported, ten have engaged nurses for the work of medical inspection. This accomplishes much in the direction of cleanliness, the following up of obvious cases of disease, defects, etc. In five high schools systematic testing of eyes and ears is done by school teachers, previously trained for that purpose. The defective cases, needing medical treatment, are reported to the parents. 38% of the schools that reported require teachers to report doubtful cases to the parents or the school board. 35% are following no definite plan regarding medical supervision. The condition of medical supervision in Minnesota is quite hopeful and typical examples like Cloquet are leading the way for other schools to follow.

VII. The Extension Work of the High School.

The high schools in Minnesota by introducing industrial courses and socializing school life, have brought about a real connection with society. The new idea that the high school plans should be used to the fullest capacity is gradually coming to the front in Minnesota. The high school in a wide-awake community does not exist alone for pupils below the school-going age, but it exists for all those, who are in a position to take advantage of it. The socializing of the school life does not stop with the student and should reach society itself, where there is a great need for doing educational work of all kinds. In a new and democratic country like America, the social and economic changes are taking place very rapidly. The high school is the best available agency in a community, which must run more or less parallel with the changes and adapt education to the growing needs of the public. The high schools in Minnesota are meeting this new social demand

by offering short courses on practical subjects, running night schools and doing all kinds of extension work in the industrial department.

(1) Short Courses.

One of 160 high schools that reported, 62 per cent offer short courses in industrial subjects. These short courses generally run over a period of three months and are adapted to local conditions and needs. In the year 1913-14, there were 119 Putnam and Benson Lee Schools and all these schools were offering short courses from the very beginning.[18]

The following table illustrates that within the period 1909-1914 about 7000 above the school-going age, attended the short courses:

Enrollment in Short Courses.

	Agriculture	Domestic Scin.	Shop.
Putnam Schools 1909-1914	2042	730	1606
Benson Lee Schools 1911-1914	1929	546	1436
Total	3971	1276	2042
Grand Total		7289	

18. High School Reports by Mr. George B. Aiton.

The superintendent of Detroit State High School reports a typical short course in Agriculture for farm boys and girls as follows: "Both can take work in agriculture, letter writing, farm arithmetic, spelling, penmanship, etc. The boys do work in carpentry and the girls do sewing and cooking. The agricultural work covers in a practical manner - crops, animals, soils, and topics of local importance." Work is generally given in the following subjects: dairying and milk testing, examining and testing grains, corn judging and testing, different methods of tilling the soil, care and management of live stock, soil fertility, farm management.

In the Cokato State High School another such typical short course of three months is given in all industrial subjects. The course of study is divided into two divisions and each division is divided into two years. In this way the student is enabled to continue his studies in the second, third, and fourth years and thus can easily get two years advanced stand-

ing in the regular industrial course of the high school. The plan is to alternate the work of the first and second years, as well as that of the third and fourth years, offering half of the subject of a division one year and the other half the next. This way of giving credit for work done in short courses seems very practical and will surely raise the status of short courses in general. The short courses that are offered in Minnesota high schools bring culture in touch with the uncultured. They give a new meaning to the uses and possibilities of the school house, and not only add to the stock of information of the people, but furnish them with ideas.

The night school is another sort of extension work carried on in Minnesota high schools. That a very large number of students are required to leave school through economic necessity is the general conclusion of the vocational survey conducted a few years ago by a committee of interested Minneapolis citizens. Young people at work who desire to renew

their education, can only be reached by means of night schools. Out of 160 high schools that reported, 15 per cent are running night schools. In the country the need for evening instruction is not so great as it is in the Twin Cities and this seems to account for the fact that there are only 15 per cent of the schools open for night work. The night schools in the country teach the English language, simple arithmetic and general correspondence to foreigners. In big cities like Minneapolis and Saint Paul the night schools are doing advanced work to meet the needs of young men and women who cannot attend day school.

In Minneapolis 12 high schools were run from October to April in the year 1914-15. Classes are in session from 7:30 to 9:30 p m, three nights each week in the elementary schools, and five nights each week in the high school. The aim of the schools is to enable toe foreigners to adjust themselves to the American condition and to make better citizens of the large number of individuals who have been forced to leave school early

in life. The elementary schools largely teach English to foreigners. The night high schools are planned to meet the needs of young men and women who cannot take advantage of day schools to complete their education. The pricipal departments in the night high schools are industrial and commercial. In the industrial department building trades, agricultural drawing, mechanical drawing, elementary and advanced carpentry, electricity, mathematics, physics, practical apparatus work, wood-turning, pattern making, cooking, sewing, laundry and millinery are the subjects taught.

Table showing the condition of night schools in Minneapolis from 1912 to 1915.[19]

Year	number of schools	men	women	total enrollment	number of Clubs	number of Gyms
1912-13	12	3264	3310	6574	19	13
1913-14	12	3794	3442	7236	19	
1914-15	12	3422	2737	6159	20	10
Total		10480	9489	19969		

During the last three years the night high schools in Minneapolis have served the social and econom-

19. The table is based upon the report of the Inspector of Night High Schools in Minneapolis.

ic need of about 19969 adults, who cannot take advantage of the day schools. Mr. S. Wirt Wiley, General Secretary of the Minneapolis Y.M.C.A. recently made an interesting survey of the youths of Minneapolis with the cooperation of fifty prominent business men of the City. As a result of this investigation he says: "About 60,000 men and boys between the ages of 12 and thirty in the City have less than a high school education and 36,000 of them less than the eighth grade or common school education." This proves the great and economic need of night schools in Minneapolis. Mr. T.W. Gilbert, Director of Evening Schools, is of the opinion that the night schools would be more popular if the work done in them received high school credit.

The industrial department in the high schools are in a position to carry on different kinds of extension work throughout the year. The system of giving credit for industrial work performed outside is being introduced in some high schools in Minnesota. In the Hibbing State High School, a plan has been arranged

to give credit for household work of an approved nature and quality done in homes. A plan of giving credit for outside industrial work is reported to be in operation in St. Louis Park. [20] In some high schools the domestic science teacher interests the women of the town in the problems of general good housekeeping.

The extension work by the agricultural department of the high schools far exceeds that done by other departments. Out of the 160 high schools that reported, 64 per cent are doing extension work in agriculture. Out of 216 high schools in Minnesota 55 per cent have government agricultural departments, and all of these are doing some kind of extension work. The agricultural extension work is of great variety and adapted to local conditions and needs. School house meetings, the formation of farmer's clubs, corn testing, inocculation against hog cholera, the building of silos, trimming orchards, spraying fruit trees, the introduction of sires, milk-testing, seed germination, the encouragement of cooperative enterprises, the holding of farmer's

20. See plan of St. Louis Parl school on pahe 102.

institutes, the boys and girls clubs are among the general activities of this department with local variations and adaptations. The instructor in charge is looked upon as an agricultural missionary and is engaged all the year round in visiting farmers, in helping them out of their difficulties, in giving talks to farmer's clubs, supervising school farms, and in caring on experimentation in agricultural problems of the local place. The agricultural department in the high school gives elementary instruction in agriculture to the students in the grades, offers a general course to girls in normal departments and gives high school instruction of a secondary nature. Besides this, the department offers a short course in agriculture to farmer's boys and girls that cannot attend school regularly. Out of the 160 high schools that reported about 46 per cent have agricultural clubs of one nature or another. Some schools have modern school farms where boys can work, and farmers can see some actual new things being done. Spring Valley has a very

flourishing school farm of about sixteen and a quarter acres. "Tests of seven varieties of wheat, twenty-five of oats, fifty of corn, six of barley and a profit withal of $200 in the summer crop" was the work reported on this school farm for the year 1913-14. Hinkley has thirteen acres in a corn plot. The superintendent of East Grand Forks reports the nature of extension work as follows: "Farmers' Clubs, girls' and boys' clubs, personal visits to farmers, extension stereoptican lectures, farmers' week short course, farmers' auto excursion and picnic and corn shows." The superintendent of Jackson State High School reports the nature of extension work as follows: "Organizing farmers' clubs, boys corn contest club, farmers' institutes, testing of seeds, milk testing, exchange of good corn, clover seed, furnishing information by personal visits, bulletin talks and demonstration work." The superintendent of Sauk Center reports the nature of extension work as follows: "Our agricultural man organizes farmers' clubs, standardizes crops, such as potatoes, by getting all to plant a

uniform type, interests them in blooded stock and in importing stock in car-load lots."

The boys' corn contest and girls' baking club organized by the agricultural department in the high school are doing a very important social work along important agricultural lines. [21] Such club projects mean the caring for a crop or animal for a season, or the doing of certain home duties for a certain length of time. These corn contests and baking clubs are organized by the agricultural department of the high school, under the direct supervision of the extension department of the state college of agriculture. In the Acre Yield Corn Contest, every boy who enrolled plants, cares for, and harvests one or more acres of corn. This has been the boys' state club project for the year 1914.
Mr. Erickson, rural school specialist, Extension Division, University of Minnesota, reports: "The corn contest has been unusually successful during 1914. There have been 3100 boys enrolled, representing 80 counties. More than half of the boys are fulfilling all the re-

21. Information is based on Minnesota Educational Association Report for 1915, Vol. II, No.1.

quirements of the contest and are sending complete reports either to the local or state leader. The making of the reports give insight into real farm management." Another interesting project is that of the girls' bread-making club. In the year 1914 1600 girls enrolled in this club project all over the state. In this contest each girl was required to bake bread at home at least six times and to report on blanks furnished by the Extension Division of the University, to take part in a demonstration with other club members under the supervision of a teacher or expert housekeeper, to write a sto story of five hundred words on "How I learned to make my loaf of bread," and to send a final exhibit of one loaf to the judged at the University. The boys' corn tontest and girls' bread making project are the most interesting projects of the extension work carried on by the agricultural departments of the high schools with the cooperation of the Extension Division of the State University. This work proves what high schools can do along this line if they receive necessary

cooperation and guidance from the state. The extension work of the high school as outlined above is vast social and economic importance and sure to bring about continued progress and prosperity in the state of Minnesota.

St. Louis Park State High School

Industrial Credit Plan for Outside Work.

The following outsideindustrial work when properly certified will receive credit as indicated.

1. Regular weekly piano, violin, cornet, pipe-organ, voice, elocution, or any approved course of music or speaking, under an accredited instructor, will receive one-half credit per year when at least five hours per week are devoted to such work.

2. Regular and active membership in any high school course, church choir, or approved city musical organization, one-fourth or one-half credit, according to time spent in practice or rehersals.

Amount of credit in 1 and 2 limited to two credits in the high school course, and one credit in grades towards entrance into high schoob.

3. Industrial work in approved lines: such as clerking in stores, office work, local trades, shop work, factory, during summer vacation, one-fourth credit; work to be certified by employer or some responsible person.

4. Steady work on farm, dairy, domestic science, or truck garden during summer vacation, essay on some phase of the work done, which shall reveal some important information along the line of the work done, one-fourth credit.

5. Horticulture, gardening, poultry raising, or bee culture with essay giving important information on the work, one-fourth credit for one season.

6. Raising one-fourth acre of vegetable, or taking care of one-fourth acre of fruit, or raising one acre of corn or other approved crop, one-fourth credit, with essay on methods of caring for the same.

7. Selecting, drying, and testing seed corn, or any other kind of seed approved by the horticultural department, one-fourth credit with report on methods employed.

8. Handicraft work, done under an approved accredited instructor, one-fourth credit.

All credit for any of the above will be limited to two and one-half credits towards graduation from the high school. Any one wishing credit for any of the above work will please call at the office and make arrangements.

VIII. The School as a Social Center.

The social and economic phases of the high school activities in the state of Minnesota thus far considered show how the social spirit of the age is dominating the high school in all its fields of activity. The school building is not only a place for the education of the young; it is a place, where the whole community should educate itself, adults as well as children. It should not remain open simply a few hours each day for the one specific purpose of preparing a few students for college, but it should remain open for all social hours to serve social ends. The social club, gymnasium, the amateur theatrical representation, the concert, the stereoptican lecture should provide such opportunities for adults as should enable them to discover and carry to some pefection the particular capacities that distinguish them. The high school is the only institution, which can offer such educational opportunities to the public and thus become the social

center of all intellectual and industrial activities in society. The new American movement of making the high school a social center is gradually gaining ground in the high schools of Minnesota.

If the people do not come to the high school, the high school must reach the people by industrial courses and all kinds of extension work and thus provide the educational needs. Out of 160 high schools which reported, 60 per cent are used as social centers; while 36 per cent are not used as such. The social center high schools are the places of public meeting, the home of games, and of lectures, concerts, reading rooms, and many other forms of social entertainment that develop social spirit and social efficiency. The social hours spent in the schools by the parents increase the worth of usefulness of the high school in the eye of the public. Out of 160 high schools 7 percent have parents and teachers associations, that develop a friendly feeling between teachers and patrons.

In many high schools in Minnesota, the dramatical presentation, literary entertainments and graduation exercises attract the public into the high school buildings.

The assembly meeting in the high schools of Minnesota is a social program of great psychological importance to the students. Out of 160 high schools that reported, 99 per cent holds social assembly meetings every week. The frequency of these meetings varies according to the local conditions. These general assembly meetings are of an educational nature. From half an hour to one hour is set aside for exercises. The time is occupied sometimes by lectures and social subjects, by the superintendent, school inspector, or other public man. Occasionally school programs are arranged during these assembly periods and the whole school enjoys the literary and musical productions. This develops on the one hand self-confidence, method of work, and initiative in those who give the program and on the other hand it develops appreciation, public spiritedness, and solidarity amongst those who attend. In these social assembly

meetings the girls and boys, as a part of the exercise, sing together their patriotic state and national songs and thus develop from their childhood a love for their country, an admiration for great men and high ideals of service.

The motion picture and stereoptican shows are another important educational means, which the high schools in Minnesota are using now to attract the parents and the public to the school and provide for the students some healthy and educational entertainment. The use of motion pictures in the school house is of importance from the standpoint of the student and the public. The students in towns and cities have access to a thousand and one attractions, such as a street-car ride, the department stores, cheap moving picture shows, vaudeville, pool-rooms, etc. It is the business of the schools to keep students away from such of these attractions as are harmful, and for doing it successfully they must provide some healthy counter-

attraction in the school itself. Pictures shows would also be useful to attract parents and the public to the school house and thus help the social center idea. Out of 160 high schools that reported, 27 per cent are using motion pictures, 10 per cent are using stereopticans, 16 per cent cooperate with local motion picture shows as they have no machines of their own, while 44 per cent of the schools are gradually taking interest in this line of work. Motion picture films as an aid to teaching, are in successful use in the Central High School, Minneapolis, which reports as follows: "In the early part of the year 1915 one class in Ancient History and another studying Shakespeare were shown a woderfully tinted film adaptation of 'Anthony and Cleopatra.' The films are used in teaching history, literature and industrial subjects, and are put on with a full-sized projecting machine in the big auditorium having a seating capacity of 1600 persons. Interesting films, bringing out some point in history are always secured and shown in the school from time to

time."

The school exhibition is another great means of demonstrating what schools can do for the community. It is a great social and economic affair that is appreciated by all and draws large crowds to the school house. Out of 160 high schools that reported, 63 per cent hold from one to two exhibitions every year; 31 per cent hold from three to six exhibitions every year; and 17 per cent do not hold any exhibitions. In these exhibitions general work in all industrial lines, maps, water colour work, penmanship specimens, written lessons of various sorts, science note books, drawings, are generally exhibited. Exhibitions are generally open for two or three days, during which, addresses, musical programs and dramatical representations are arranged to entertain the visitors and make their stay happy and delightful. The students, when they see that their literary and industrial achievements are appreciated by the public, develop self-confidence. The public also learns what the school is doing for

the students in a social and economic way as future citizens of the community.

The high schools in Minnesota are themselves cosmopolitan communities representing many nationalities of widely different types. To socialize school life, to interest the community in the work of the school, to supply the social needs, the high school must become a social centre of inspiration and knowledge. The high schools in Minnesota are gradually showing some tangible results in this direction.

Concluding Remarks:

From the above consideration, it is quite evident that the high schools in Minnesota are in the process of expanding their social functions. The vocational guidance, the introduction of industrial subjects, the socializing of school life, extension work of the high schools - all these five means are developing a new and more immediate relationship between the school and society. The co-operation of home and school, the growth of the Social Centre Idea of the

high school are bringing about a deeper and more sympathetic understanding between the teachers and parents in the state of Minnesota. The policy of giving special state aid for industrial and normal departments, has brought about a general efficiency in the high schools in point of enrollment, number of schools, nu,ber of graduates, number of daily classes, etc. The present day curriculum of the Minnesota high schools is quite different from the old classical curriculum preparing students for college. The social and economic trend is clearly seen in the high schools and a golden and glorious future is opening for the coming generation of boys and girls in the atate of Minnesota.