DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 15

EDUCATIONAL SURVEY OF ELYRIA, OHIO

MADE UNDER THE DIRECTION OF THE
UNITED STATES COMMISSIONER OF EDUCATION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

ADDITIONAL COPIES

OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.
AT
30 CENTS PER COPY

CONTENTS.

	Page.
Letter of transmittal	5
Introduction	7
Chapter I—The City of Elyria	9
Chapter II.—Summary of conclusions and recommendations	12
Administration and supervision	12
School buildings	13
High school	13
Elementary schools	14
Civics	15
School and home gardening	16
Music	16
Art	17
Home economics	17
Manual training	18
Vocational education	18
Chapter III.—Administration and supervision	19
Finances	19
The school board	27
Elementary teachers	30
Supervision	37
School population and progress through the grades	41
Supplementary classes	55
Chapter IV.—School buildings	57
The Washington School	57
Workmanship	59
The selection of school grounds	60
Planning school buildings	63
Size of classrooms	63
Floors	65
Lighting of school buildings	66
Seating	67
Blackboards	68
Heating	69
Ventilation	70
Drinking water	71
Toilets	72
Vacuum cleaning	73
Janitor service	74
Chapter V.—High school	76
Program of studies	76
Science	93
German	94
Latin	94
English	95
Mathematics	97
Methods of teaching	98
Administration of the high school	106
Teachers	118
Suggestions	125

	Page.
Chapter VI.—Instruction in primary grades	127
Reading	127
Phonics	129
Language	136
Arithmetic	140
Penmanship	143
Spelling	144
Recesses and dismissals	145
Need of kindergartens	146
Chapter VII.—Instruction in intermediate and grammar grades	148
Reading	148
Spelling	154
Penmanship	157
Arithmetic	161
Chapter VIII.—Civic education	173
The special industrial class for boys	174
The elementary schools	177
The high school	183
Suggestions for a course of study	193
Pupil activities	195
The public library	204
Education of the foreigner	206
Conclusions	207
Chapter IX.—School and home gardening	210
Farm products of Lorain County	210
Land available for home gardening	211
Cost of vegetable foods for an Elyria family	212
Relation of idleness to juvenile offenses	216
Efforts to promote gardening	218
Labor income of Elyria workingmen	219
Number of children who leave school before completing the eight grades	220
Boyhood occupations of successful business men of Elyria	220
Obligations of the city high school in training its pupils for country life	221
Value of school-directed home gardening to Elyria children	222
Summary of findings	223
Chapter X.—Music in the public schools	228
Music in the elementary schools	230
Music in the high school	238
The schools in relation to the community	242
Recommendations	243
Chapter XI.—Drawing and art education	247
Supplies and equipment	249
Schoolroom interiors	250
Recommendations	251
Chapter XII.—Home economics	253
Faults in the high-school home economics course	254
Rooms and equipment	256
Suggestions for improvement	257
Transition from the present to the new conditions	259
Opinions of mothers	260
Afternoon and evening classes	261
The high school	267
The manual-training staff	270
Recommendations	274
Chapter XIV.—Vocational education	281
Study of occupations in Elyria	286
Manufactures in Elyria	287
Present provision for vocational education	288
Summary of recommendations	297

LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, May 8, 1918.

SIR: I am submitting herewith for publication as a bulletin of the Bureau of Education the report of a survey of the schools of the city of Elyria, Ohio, which was made under my direction in the fall of 1916 and early spring of 1917 at the request of the board of education of that city. The report will, I believe, be useful not only to the board of education and the citizens of Elyria, but to school officers in many other cities of about the same size and to students of education generally.

The report should have been printed much earlier, but there was unavoidable delay in its official preparation.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

EDUCATIONAL SURVEY OF ELYRIA, OHIO.

INTRODUCTION.

During the fall of 1916 the Chamber of Commerce of Elyria, Ohio, invited the United States Commissioner of Education to make a survey of the Elyria public-school system.

The invitation was accepted upon the following conditions:

1. That the Bureau of Education shall be invited by the Elyria Board of Education and that the invitation shall be indorsed by the Superintendent of Public Instruction of the State.

2. That the survey commission may be permitted to find the facts as they are and to report them as they find them.

3. That the survey commission and the Commissioner of Education may make on the basis of the facts found such recommendations for the improvement of the schools as may seem wise, these recommendations to be not only such as may be put into operation immediately, but also such as may be put into operation from year to year as opportunity may permit; in other words, that the survey commission and the Commissioner of Education may be permitted to outline a constructive program which will receive at least the careful consideration of school officials.

4. That the Bureau of Education shall be permitted to publish the report of the survey, including the recommendations and reasons therefor, as a bulletin of the bureau, for distribution in the city of Elyria and also for general distribution.

5. That the necessary expenses shall be paid, which include the necessary traveling and local expenses of the members of the bureau engaged on the work and the necessary honorariums for such persons as it may be necessary to employ to assist in the work.

The secretary of the board of education wrote the Commissioner of Education:

> I have been unanimously instructed by the board of education to request you to make a complete survey of the Elyria city schools. We wish to assure you that you will have the hearty cooperation of the board, superintendent, and teachers in carrying on the work. The board of education can not assume any of the cost of the survey; however, we understand that the educational committee of the chamber of commerce has a plan whereby the expenses of the survey will be fully met.

The secretary of the chamber of commerce then notified the Commissioner of Education that the chamber of commerce would hold itself liable for expenses not to exceed $2,500.

The United States Commissioner of Education named as a survey commission the following persons:

From the Bureau of Education—

T. M. Ave L'Allemant.—Education of the immigrant.
William T. Bawden.—Manual training and vocational education.
Mrs. Henrietta W. Calvin.—Home economics.
W. S. Deffenbaugh.—Administration, supervision, and instruction, director of field work of survey commission.
F. B. Dresslar.—School buildings
Miss Florence C. Fox.—Primary education.
Arthur W. Dunn.—Civic education.
John L. Randall.—School and home gardening.

From outside the Bureau of Education—

Will Earhart.—Music (director of music, public schools, Pittsburgh, Pa.).
August Hiller.—Finance (chief accountant, public schools, Pittsburgh, Pa.).
C. Valentine Kirby.—Fine arts (director of art, public schools, Pittsburgh, Pa.).
W. C. Ruediger.—Elementary education (dean, Teachers' College, George Washington University, Washington, D. C.).
William F. Russell.—Secondary education (professor of secondary education, George Peabody College for Teachers, Nashville, Tenn.).

Three members of the survey commission spent two weeks in Elyria in the fall of 1916. The other members spent from one to six weeks during the months of January and February, 1917.

Chapter I.

THE CITY OF ELYRIA.

Elyria, Ohio, owes its name and its existence to Heman Ely, formerly of West Springfield, Mass., who acquired the land on which the present city stands on March 27, 1817. The tract comprised 12,000 acres, and it was known as No. 6, Range 17, Connecticut Western Reserve. Mr. Ely spent his entire life after that time in developing the resources of the locality. He established sawmills and gristmills and similar industries and organized the Lorain Iron Co. in 1832.

The location of the city is distinctly favorable. It is about 25 miles southwest of Cleveland and 8 miles from Lake Erie at the nearest point, the city of Lorain. Two trunk railway lines, the New York Central and the Baltimore & Ohio, pass through the city, and five trolley lines radiate in five directions and connect Elyria with all the principal towns and cities of Ohio, Indiana, and west Pennsylvania. Two electric lines and the Baltimore & Ohio Railroad afford excellent facilities for Lake shipments via Lorain.

The industrial and social community of Elyria includes a number of villages or towns, the chief of which are Grafton and Wellington. Both of these places were formerly centers of active sandstone quarries, but this industry has declined because of the increased use of cement and concrete in building. The greater part of the high-grade sandstone now quarried is used for grindstone. As a result of the industrial change in the chief industry in these villages, their working population had to find employment in other fields, and naturally went to find it in the developing industries of Elyria, the nearest city.

A feature reflecting the intimate interdependence of the communities in the vicinity of Elyria is the large number of young working women, mostly Poles, who live in Lorain but work in Elyria, because the city of Lorain offers but little desirable factory employment for young women.

In 1900 the population of Elyria was 8,791; in 1910 it was 14,825; in 1917 the estimated population was between 20,000 and 25,000. There are 3,239 dwellings and 3,519 families. Fifty per cent of the population are native born of native parents; 30 per cent are native born of foreign parents, and 20 per cent are foreign born. The nationalities represented by the foreigners are German, Dane, French, and

Hungarian, the Germans predominating. Of the foreign born represented in the industries the Hungarians predominate. This nationality furnishes the basic industries of the city with the greater portion of "roustabouts"; that is, workmen who do common labor of a rough and heavy nature.

The fact that the industrial development of Elyria is of recent date and has taken place to a certain extent against the wishes and under the protests of the older residents has caused the location of the industrial establishments near the outskirts of the city, in a direction west, northwest, or northeast of the main residential district. A separate foreign settlement has developed which is called West Heights, the dominant nationality of the settlement being Hungarian. Elyria, however, has no slums and no congested district, and the pressure of the problems which ordinarily affect an immigrant community is not so great as it otherwise would be. The problem of educating the children of foreign-born parents and of educating the parents themselves is an important problem, nevertheless.

The efforts that are made to educate the foreign-born adults are under semipublic auspices at the settlement house at West Heights, where an active settlement worker, a kindergarten teacher of the public schools, and a teacher in the manual-training department of the night school are teaching classes in English and civics.

The first school in Elyria was opened in 1819, and the first church was organized in 1824. There are now 15 churches, representing all the principal denominations, a Young Men's Christian Association building, which cost $141,000, and a Young Woman's Christian Association building, which cost $16,000. There are nine public-school buildings, a German school, two Catholic schools, and one business college. Oberlin College, only 6 miles distant, may be considered one of the educational institutions of the Elyria community. The Elyria Memorial Hospital, representing an expenditure of $225,000, consists of a general hospital, Gates Home for Crippled Children, and Nurses' Home. An additional $100,000 is now being expended on buildings. The Elyria Library was founded in 1870 upon a bequest of Mr. Charles Ely.

Cascade Park, a beautiful natural park, is a place for recreation not only for the children of the city but for the adults as well. For the wealthy inhabitants of the city there is a country club, which maintains golf links, tennis courts, etc. In the city there are halls maintained by the Elks, Knights of Columbus, and other social and fraternal organizations usually found in cities.

There are four banks, which have on deposit about $9,000,000; the community is by no means a poor one. The chamber of commerce, which is responsible to a large extent for the growth of the city, has

commodious quarters in one of the principal buildings of the city and employs a secretary and several clerks.

There are 63 factories, employing 6,000 men and 300 women and girls. The principal products are steel, sheet steel, tubing, bolts, nuts, screws, invalids' chairs, dies, tools, enameled ware, hosiery, electrical goods, chemicals, ammunition, automobile motors, etc. The factories represent an investment of over $10,000,000 and their total annual output is more than $9,000,000. Much is done by the factories to insure the contentment and permanent residence of their employees; and clubs, bowling alleys, lunch rooms, etc., are provided in most cases.

Chapter II.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS.

ADMINISTRATION AND SUPERVISION.

1. The minimum educational and professional standard for elementary teachers should be the completion of a four-year high-school course and a two-year normal-school course.

2. Salaries of teachers should be increased and the salary schedule revised, making the promotion of teachers depend upon improvement rather than upon length of service.

3. A card system for keeping a permanent record of pupils should be introduced.

4. An attendance officer should be employed on full time.

5. There should be more supervision in the elementary grades, which can be accomplished by the employment of a supervisor for the kindergarten and the first six grades and the employment of a supervisor for the junior high school. Provision should be made for the supervision of music and art. A supervisor, teaching part time, should be employed to supervise the work in manual arts, and one, teaching part time, to supervise the work in home economics. School gardening should be under the supervision of the teacher of agriculture, who should be employed for 12 months in the year. Provision should be made for playground supervision.

6. A cost-accounting system should be introduced to show expenditure for each building and for each kind of school.

7. The State tax law should be revised so that it would be possible for Elyria to obtain more funds for its schools.

8. The number of failures and the rather excessive retardation could be reduced by—

(*a*) A course of study better suited to the development and interests of the children.

(*b*) More and better supervision.

(*c*) The advancement of the teacher with her class for three or four years.

(*d*) A summer school for pupils who have failed.

(*e*) The division of each primary grade into three or four groups instead of two, so that pupils may be promoted more frequently.

SCHOOL BUILDINGS.

1. The Washington, or old high-school building, should be reconstructed and renovated or else torn down and rebuilt.
2. Floors should not be scrubbed, but treated with hot linseed oil.
3. Cement walks should be built.
4. Humidifying devices should be provided.
5. All shades should be removed from north windows.
6. Teachers in east rooms should be required to roll up shades in the afternoons and those in west rooms should do so in the forenoons.
7. Conferences for janitors should be instituted.
8. Ventilation in mild weather should be improved when the fans are not running.
9. More drinking fountains easily accessible to small children should be provided.
10. The method of seating which places children too far from the front of the room should be corrected.

HIGH SCHOOL.

(1) The three present curricula should be expanded into at least six, providing definite preparation for classical, general, and scientific work in college, and for industry, commerce, agriculture, and the home.

(2) The board of education should issue a booklet giving detailed information about these curricula and about the prospects of children electing each kind of work; the booklets should be distributed some time before a choice is to be made, so that teachers, principals, parents, and children may have information upon which to choose.

(3) The principal should take up with the teachers, through observation and in teachers' meetings, the findings of this survey in regard to mechanical errors in teaching.

(4) The board of education should make much more ample provision for teachers to visit the classes of other teachers.

(5) The practice of giving one teacher a number of sections of the same subject should be discontinued, and teachers should be encouraged to teach sections in several different classes and of several closely allied subjects. We especially recommend that each teacher have at least one first-year class.

(6) A number of teachers' meetings should be given to a consideration of the theoretical study of methods of teaching.

(7) A regular system for purchasing books for the library should be devised; the library should be catalogued and better supervised.

(8) The faculty should give consideration to the system of marking, to the end that there may be more unanimity as to standards.

(9) Salaries should be increased.

(10) The gap now existing between the elementary schools and the high schools should be bridged by the interpolation of the junior high school.

ELEMENTARY SCHOOLS.

Primary grades.—1. The subject of reading should be adapted to the individual pupil to a greater extent in order to lessen the failures in the first grades. More freedom for the teacher is needed in her use of methods and devices and a greater emphasis placed by her on the reading lesson which trains for appreciation.

2. Arithmetic lessons are developed logically rather than pedagogically. More application of number to measurement and construction work is needed. Reduce the time given to this subject.

3. A definite, systematic assignment for oral language should be placed in every program. The teacher should cultivate literary appreciation and the art of story telling.

4. New songs and new methods are needed in the primary singing exercises, and the use of music as a mode of expression closely correlated with the subjects of study is recommended.

5. A closer application of phonics to the spelling should be made and emphasis placed upon the auditory image rather than the visual image.

6. Materials and adequate desk room should be provided to make effective the instruction in penmanship.

7. More varieties of material should be provided for seat work, and a carefully prepared program for this work extending through at least one term of the school year should be prearranged by the teacher in every grade.

8. There should be more spontaneity in games and greater opportunity for initiative in these exercises.

9. An assistant nurse should be employed to make the work of the school nurse wholly effective.

10. Consideration should be given in the course of study to the out-of-school activities of the children in the lower grades. These interests should be collected and used as suggestive material for the daily program throughout the year.

11. A primary supervisor is recommended for these grades, who shall be prepared to direct all the subjects of study enumerated in the curriculum.

12. Kindergartens should be reestablished and the work done in them integrated with that of the primary grades.

Intermediate and grammar-school grades.—Introduce more of the spirit of delight in reading; give more practice in silent reading; provide more opportunity for relatively free reading for pleasure, and transfer much of the nonliterary material to other subjects.

Recognize nature study as a distinct subject in the curriculum and correlate especially with language, geography, and gardening.

Reduce the time given to formal grammar and correlate the work more intimately with the other school subjects and out-of-school interests.

Adopt either a good series of spelling books or a standard word list.

Dispense with the teacher of penmanship and hold the classroom teachers responsible for results.

Vitalize the subject of geography through the adoption of a series of geographical readers, through the use of geographical magazines, pictures, specimens, and observational astronomy, and through a more liberal use of globes and maps.

Relate arithmetic more closely to the pupils' interests in and out of school; let the children weigh and measure; correlate later with earlier topics and develop thoughtfulness by studying how to solve.

In general, vitalize the work by enlisting more generally the activity of the pupils and by relating the school subjects more intimately to those phases of the world outside to which they pertain.

CIVICS.

1. Provision should be made in both junior and senior high-school periods (or grammar school and high school) for adequate instruction designed explicitly to train for citizenship, and adapted carefully both to the civic and social needs of the present time and to the capabilities and experience of the pupils; and to this end the social studies of the periods in question should be thoroughly reorganized.

2. Training for citizenship should be recognized more definitely as a conspicuous aim of the entire work of the elementary and secondary schools, involving the cultivation of civic habits and traits as well as civic intelligence; and instruction in all subjects, the in-school and out-of-school activities of the pupils and the participation of the pupils in the control of such activities should be made to contribute to the fulfillment of this aim.

3. A head of a department of social studies should be appointed who shall be a director of the civic educational work of the schools; regular conferences of teachers of social studies and directors of pupil activities should be provided for, and other means adopted for the training and guidance of teachers in service for more effective methods of civic training.

4. Adequate provision should be made for the Americanization and civic education of the foreign population, both through the channel of the day schools and through evening classes for adults.

5. A closer relation should be established between the school and the community, in recognition of the interdependence of 100 per cent efficiency in community life and 100 per cent citizenship, and ex-

pressed in a closer coordination between the schools and the public library and other public institutions, the use of the schools as community centers, further development of the parent-teacher associations, and the closer adaptation of school work to actual community needs.

SCHOOL AND HOME GARDENING.

Elementary schools.—1. The high-school agricultural department should be the central influence in the promotion and direction of school-directed home gardening in the elementary schools.

2. The high-school teacher of agriculture should conduct practical after-school classes for the training of home-garden teachers in the grades.

3. One regular grade teacher, after having received sufficient garden training, should direct the home gardening of the children in the school to which she is assigned. This work should be done after school, on Saturday, and during the summer vacation, and the teacher should receive additional compensation for it.

4. A part-time garden teacher should be provided for each of the following schools: Hamilton, Jefferson, Gage, Franklin, McKinley. One teacher should conduct the work in the Garford and Ridge Schools.

5. A careful record of the money value of the crops raised should be kept in order to prove the financial as well as the educational success.

6. The gardening should be made as intensive as possible, and should continue through the maximum number of days possible in this climate. Winter gardening should be encouraged.

High school.—1. A course in agriculture should be offered in the high school instead of electives in several courses, adopting the Massachusetts plan of arranging studies and home projects.

2. A high-school instructor in agriculture should be employed for 12 months in the year, who should also direct home gardening of elementary school pupils and train his assistants.

3. Extra compensation should be provided for six grade teachers assigned to teach gardening outside of regular school hours.

MUSIC.

1. A manual and course of study for the elementary schools should be prepared. The school board should provide copies of rote song books for first and second year teachers, pitch pipes for all teachers, and a liberal supply of music for high-school orchestra and glee clubs. Orchestral groups should be developed in the elementary schools.

2. Requirements in music for elementary teachers should be increased.

3. In the high school there should be two periods a week of 45 minutes each devoted to chorus practice.

4. There should be strict control over credit for music taken outside of school.

5. The high-school auditorium should be open one night each week for community chorus singing.

6. It is desirable to have a piano for each floor of each elementary school, a reed organ and supplementary song books in sets of 45 or 50 for each elementary school, and in the high school a course in harmony and a course in musical appreciation and history, elective three recitations a week with the same credit as academic subjects.

ART.

1. The supervision of art should be restored at the earliest possible moment.

2. Art work should appear in the eighth grade.

3. There should be better equipment and more supplies of teaching art in the elementary schools.

4. Some art study should be planned and continued through the grades that will create a love for the world's best art, and some acquaintance with the principles and facts underlying it.

5. Elective courses should be offered in the high school so that any boy or girl may select, under guidance, any work in drawing, design, color, or any of the crafts that would be of service.

HOME ECONOMICS.

1. Make of arts and crafts a separate elective course in the high school, open to boys as well as girls.

2. Give a prevocational aspect to the instruction in home economics in the grades and in the first high-school year.

3. Make home economics a required subject for all girls from the fifth grade to the first high-school year, inclusive, and an elective in the second, third, and fourth high-school years.

4. Make the necessary changes gradually over a period of three years.

5. When the new conditions are fully established, employ one supervisor of home economics, teaching part time, six special teachers of home making in the grades, and three special teachers for home economics in the high school, and for night and special classes.

6. Shorten the noon intermission for high school, and provide hot lunches to high-school teachers and students.

7. Organize afternoon and evening classes for adults and for young women employed during the day.

8. Provide more sewing machines, better equipment in particulars enumerated, and make specified changes in the use of rooms.

9. Include laboratories for home economics in all plans for new buildings.

10. Construct a "model cottage" in the Hungarian section of the city, and equip a "practice apartment" in the high school.

MANUAL TRAINING.

1. Appoint a supervisor to have charge of all manual training and vocational classes, with an assistant to direct the handwork in grades one to six. These two should give not more than half-time to teaching.

2. A scheme of handwork throughout the grades should be carefully organized, with a time allotment ranging from 30 or 60 minutes per week in the first years, to one-fifth or one-fourth of the present school time in the upper grades.

3. Some reorganization of the elementary school course of study is desirable in order to give handwork a due proportion of the school time.

4. The manual arts should not be limited to general educational aims, though these should receive the greatest emphasis in the early years. Beginning with the seventh school year, the prevocational aim for most children and the vocational aim for some children should have definite recognition.

5. Shop and laboratory equipment should be adapted gradually to the new point of view, which conceives of problems or projects to be worked out by the pupils.

6. A library of the best current literature pertaining to the manual arts, vocational guidance, and vocational education, should be made at once available to teachers and pupils.

VOCATIONAL EDUCATION.

1. School instruction, especially in shop and drawing, should be related more definitely to real life situations and should function more definitely in preparing young people for living.

2. The special six-year vocational course and the technical vocational courses in the high school should be strengthened and extended, with the twofold aim of assisting young people to choose and prepare for vocations, while at the same time preparing for intelligent citizenship and the discharge of individual and social obligations.

3. Evening classes of the kinds enumerated should be organized for employed workers.

4. Advisory committees representative of employers and employees should be organized.

5. Part-time day continuation schools should be organized in certain lines of business and industry.

Chapter III.

ADMINISTRATION AND SUPERVISION.

FINANCES.

The chief obstacle to the adequate financing of the public schools of Elyria is the limitation imposed by State law on taxation. The direct tax for operating expenses for all purposes—State, county, city, and school—is limited to 10 mills, with another 5 mills for interest and sinking fund. The tax levy for all school purposes may not exceed in any year 5 mills on the dollar of taxable property in the school district; the aggregate of all taxes levied by a municipality for corporation purposes may not exceed 5 mills; the aggregate of all taxes for township purposes may not exceed 2 mills.

The levy in Elyria is up to the 15-mill limit, distributed as follows: State, 0.45 mill; county, 1.85 mills; township, 0.02 mill; road district, 2.57 mills; school, 3.5 mills for general purposes, 1.055 mills interest and sinking fund; city, 3.34 mills for general purposes, 2.135 mills interest and sinking fund, 0.1 mill flood emergency. For the past three years the tax for the road district and for interest and sinking fund has reduced the 10 mills, leaving only 9.146 mills in 1914; 9.036 mills in 1915; and 9.16 mills in 1916 for the State, county, city, and school.

When the tax rate for Elyria, both for city and school purposes, is compared with that of other cities of about the same size as Elyria, it is found to be low, as may be noted from the following table:

Tax rate on each $100 assessed valuation.

FOR SCHOOL PURPOSES.		FOR SCHOOL PURPOSES—Contd.	
Dubois, Pa	$2.00	Tonawanda, N. Y	$1.04
Muscatine, Iowa	1.75	Hackensack, N. J	.90
Fargo, N. Dak	1.62	Missoula, Mont	.05
East Chicago, Ind	1.54	Connersville, Ind	.92
Beaver Falls, Pa	1.30	Bethlehem, Pa	.90
Meadville, Pa	1.30	Trinidad, Colo	.88
Homestead, Pa	1.20	Greensburg, Pa	.85
Mankato, Minn	1.20	Lewiston, Idaho	.85
Goshen, Ind	1.12	Spartanburg, S. C	.85
Helena, Mont	1.10	Morristown, N. J	.85

Tax rate on each $100 assessed valuation – Continued.

FOR SCHOOL PURPOSES—contd.

Cadillac, Mich	$0.80
Sioux Falls, S. Dak	.79
Plainfield, N. J	.78
Fairmont, W. Va	.72
Braddock, Pa	.70
Lawrence, Kans	.68
Hutchinson, Kans	.66
Adrian, Mich	.62
Emporia, Kans	.60
Boise, Idaho	.60
Chickasha, Okla	.60
Melrose, Mass	.56
Winfield, Kans	.53
Ironwood, Mich	.50
Henderson, Ky	.50
Athens, Ga	.50
Elyria, Ohio	.455
Piqua, Ohio	.45
Middleton, Ohio	.41
Marshall, Tex	.40
Marietta, Ohio	.40
Sandusky, Ohio	.37
Greenville, Miss	.30
Selma, Ala	.30
Jackson, Miss	.30

FOR GENERAL CITY PURPOSES.

Fargo, N. Dak	$2.61
East Chicago, Ind	1.90
Dubois, Pa	1.50
Goshen, Ind	1.50
Athens, Ga	1.50
Lewiston, Idaho	1.50
Tonawanda, N. Y	1.47

FOR GENERAL CITY PURPOSES—contd.

Jackson, Miss	$1.35
Marshall, Tex	1.31
Greenville, Miss	1.30
Connersville, Ind	1.20
Cadillac, Mich	1.17
Spartanburg, S. C	1.25
Missoula, Mont	1.25
Helena, Mont	1.25
Muscatine, Iowa	1.22
Meadville, Pa	1.20
Beaver Falls, Pa	1.20
Henderson, Ky	1.15
Morristown, N. J	1.08
Boise, Idaho	1.07
Chickasha, Okla	1.06
Trinidad, Colo	1.00
Homestead, Pa	1.00
Sioux Falls, S. Dak	.99
Bloomfield, N. J	.97
Bethlehem, Pa	.90
Greensburg, Pa	.90
Adrian, Mich	.87
Emporia, Kans	.87
Braddock, Pa	.85
Hackensack, N. J	.82
Hutchinson, Kans	.80
Winfield, Kans	.72
Selma, Ala	.70
Lawrence, Kans	.69
Ironwood, Mich	.62
Elyria, Ohio	.56
Marietta, Ohio	.47
Parkersburg, W. Va	.41
Fairmont, W. Va	.40

A more nearly equitable comparison of tax rates in different cities is on real wealth rather than on assessed valuation, since there is no uniformity throughout the country and but very little in the same State in assessing property. The chief difficulty in making a comparison of this kind is the fact that few city officials know the real valuation of their cities. Superintendents in several cities of less than 25,000 population have furnished this bureau with statistics giving the estimated wealth of their respective cities. The following table shows for these cities the tax rate on estimated real wealth:

Tax rate for school purposes on $100 estimated real wealth.

Keokuk, Iowa	$0.98	Adrian, Mich	$0.52
Sioux Falls, S. Dak	.79	Parkersburg, W. Va	.49
Homestead, Pa	.72	Hutchinson, Kans	.46
Dubois, Pa	.70	*Elyria, Ohio*	.46
Meadville, Pa	.65	Piqua, Ohio	.45
Plainfield, N. J	.62	Mankato, Minn	.40
Boise, Idaho	.60	Henderson, Ky	.39
Chickasha, Okla	.60	Fargo, N. Dak	.23
Cadillac, Mich	.60	Selma, Ala	.21
Tonawanda, N. Y	.58	Marshall, Tex	.20
Braddock, Pa	.57	Greenville, Miss	.20
Helena, Mont	.55		

A further comparison is made with a group of cities of between 25,000 and 50,000 population, showing the tax rate on assessed and estimated real valuation for the city and the school corporation. The data, except for Elyria, are from the United States Census Report for 1915.

Tax rate on assessed valuation.

FOR SCHOOL PURPOSES.		FOR GENERAL CITY PURPOSES.	
Joliet, Ill	$3.75	Lincoln, Nebr	$3.80
Lincoln, Nebr	3.70	Cedar Rapids, Iowa	3.61
Cedar Rapids, Iowa	3.53	Sioux City, Iowa	3.04
Sioux City, Iowa	2.97	Joliet, Ill	2.02
Joplin, Mo	1.50	Butte, Mont	1.52
Springfield, Mo	1.12	Amsterdam, N. Y	1.51
Everett, Wash	1.15	Joplin, Mo	1.50
Pasadena, Cal	1.07	Austin, Tex	1.50
Terre Haute, Ind	1.04	Everett, Wash	1.36
Mount Vernon, N. Y	.99	Fresno, Cal	1.29
Amsterdam, N. Y	.95	Pasadena, Cal	1.09
Fresno, Cal	.90	Springfield, Mo	1.17
Butte, Mont	.70	Terre Haute, Ind	1.15
Little Rock, Ark	.70	Mount Vernon, N. Y	1.23
Wichita, Kans	.69	Wichita, Kans	.95
Flint, Mich	.62	Jackson, Mich	.90
Kalamazoo, Mich	.59	Flint, Mich	.90
Huntington, W. Va	.55	Muskogee, Okla	.74
Springfield, Ohio	.51	Lorain, Ohio	.68
Muskogee, Okla	.50	Colorado Springs, Colo	.67
Colorado Springs, Colo	.50	Huntington, W. Va	.64
Elyria, Ohio	.455	Springfield, Ohio	.63
Lorain, Ohio	.35	Kalamazoo, Mich	.60
Austin, Tex	.33	*Elyria, Okla*	.573
		Little Rock, Ark	.56

Tax rate on each $100 estimated real valuation.

FOR SCHOOL PURPOSES.		FOR GENERAL CITY PURPOSES.	
Joliet, Ill	$1.25	Amsterdam, N. Y	$1.17
Cedar Rapids, Iowa	.98	Austin, Tex	1.13
Sioux City, Iowa	.81	Cedar Rapids, Iowa	1.00
Mount Vernon, N. Y	.79	Mount Vernon, N. Y	.98
Lincoln, Nebr	.74	Wichita, Kans	.95
Amsterdam, N. Y	.73	Jackson, Mich	.90
Wichita, Kans	.69	Flint, Mich	.90
Terre Haute, Ind	.62	Sioux City, Iowa	.83
Flint, Mich	.62	Fresno, Cal	.78
Joplin, Mo	.60	Lincoln, Nebr	.76
Kalamazoo, Mich	.59	Pasadena, Cal	.73
Springfield, Mo	.56	Terre Haute, Ind	.69
Fresno, Cal	.54	Lorain, Ohio	.68
Pasadena, Cal	.52	Joliet, Ill	.67
Springfield, Ohio	.51	Colorado Springs, Colo	.67
Colorado Springs, Colo	.50	Springfield, Ohio	.63
Jackson, Mich	.48	Kalamazoo, Mich	.60
Everett, Wash	.46	Joplin, Mo	.60
Elyria, Ohio	.455	Butte, Mont	.61
Huntington, W. Va	.44	Springfield, Mo	.59
Muskogee, Okla	.38	*Elyria, Ohio*	.5575
Little Rock, Ark	.35	Muskogee, Okla	.56
Lorain, Ohio	.35	Everett, Wash	.54
Austin, Tex	.25	Huntington, W. Va	.51
		Little Rock, Ark	.25

From the foregoing table it will be noted that the tax rate in Elyria, both on assessed and on estimated real valuation, is low when compared with the rate in other cities.

When compared with these cities Elyria has a little more than the average amount of wealth for each dollar of tax raised for school purposes.

By means of a questionnaire addressed to some city superintendents in different sections of the country it has been made possible to present fairly accurate data for a few cities regarding the amount of tax raised for school purposes per child in average daily attendance. The following table shows these facts for a list of cities selected at random:

Amount of taxes raised for school purposes per pupil.

Missoula, Mont	$81.21	Plainfield, N. J	$45.91
Lakewood, Ohio	73.11	*Elyria, Ohio*	44.70
Sioux Falls, S. Dak	68.54	Parkersburg, W. Va	44.64
Trinidad, Colo	57.37	Hutchinson, Kans	41.46
Morristown, N. J	52.42	Adrian, Mich	42.46
Keokuk, Iowa	52.00	Melrose, Mass	42.05
Fairmont, W. Va	51.80	Beaver Falls, Pa	41.28
East Chicago, Ind	51.59	Piqua, Ohio	41.06
Fargo, N. Dak	50.65	Greensburg, Pa	40.40
Hackensack, N. J	47.20	Warren, Ohio	39.61
Sandusky, Ohio	46.64	Lawrence, Kans	39.47
Boise, Idaho	46.61	Middleton, Ohio	39.02
Muscatine, Iowa	46.36		

In this list Elyria ranks below the median.

Again Elyria may be compared with other cities as to the cost per pupil based on average daily attendance on current expenses.[1]

Cost per pupil, 1915-16, for elementary and high school compared with that in certain other cities recognized as having good schools.[2]

Hibbing, Minn	$108.86	St. Cloud, Minn	$51.47
Montclair, N. J	83.00	Solvay, N. Y	50.76
Alhambra, Cal	79.33	Lincoln, Nebr	50.45
South Orange, N. J	73.24	East Chicago, Ind	50.10
Eveleth, Minn	69.35	Ann Arbor, Mich	49.39
Boise, Idaho	65.50	Nutley, N. J	48.93
Stockton, Cal	60.80	Fresno, Cal	48.18
Everett, Wash	58.84	Lewiston, Idaho	46.90
Alameda, Cal	58.84	*Elyria, Ohio*	46.77
Houghton, Mich	57.72	Beverley, Mass	47.18
Lead, S. Dak	57.59	Richmond, Ind	44.04
Bloomfield, N. J	56.99	Kenosha, Wis	42.97

When compared with these 22 representative school systems the cost per pupil in Elyria is low.

More evidence might be presented to show that comparatively Elyria is spending less than other cities that maintain good schools. The table on page 34 shows that salaries paid to teachers in Elyria are not high when compared with those in other cities.

From these comparative data and from observations made of school conditions in Elyria, the committee believe that school expenses in Elyria are too low. As a result of the limitations imposed by the law the board of education has found it necessary to discontinue seven kindergartens, one special school for backward and defective children, one playground supervisor, special teachers of music, drawing, physical training, sixth-grade manual training, and to reduce the time of the supervisor of penmanship to one-half time. It has also

[1] Current expenses include cost of salaries, supplies, and expenses for instruction and operation, and maintenance of school plants.

[2] The cities were selected before it was known what was the cost per pupil in each.

been necessary to crowd some of the high-school work and to omit the appropriation formerly made by the board of education to the city library, which has been rendering excellent service to the schools and to the city.

It is doubtful whether there are many persons in Elyria who think the school board has been extravagant. Some have thought that the addition of the technical high school was a mistake. For a discussion of this phase of the school system see page —, vocational education. That chapter shows the schools should have more, not less, work in industrial subjects.

The school board, the chamber of commerce, and others deplore the fact that so many activities of the schools had to be discontinued. It was only a question of which to eliminate. The school board's estimate for the year was $40,000 more than was allowed by the board of estimate. This was not allowed, because the city had reached its taxing limit of 15 mills.

The question arises: Does the board of estimate apportion a fair share of the taxes to the schools? The following table presents the percentage of the city funds apportioned to the schools in certain cities, and the comparison shows that the board of education of Elyria receives its just proportion of the tax receipts, when judged by the standards of other cities of the same class.

Percentage of city funds apportioned to schools.

	Per cent.		Per cent.
Fairmont, W. Va	0.64	East Chicago, Ind	0.43
Muscatine, Iowa	.59	Missoula, Mont	.43
Dubois, Pa	.58	Winfield, Kans	.43
Homestead, Pa	.54	Goshen, Ind	.42
Hackensack, N. J	.54	Adrian, Mich	.41
Parkersburg, W. Va	.54	Emporia, Kans	.40
Beaver Falls, Pa	.52	Spartanburg, S. C	.40
Meadville, Pa	.52	Tonawanda, N. Y	.39
Bethlehem, Pa	.50	Fargo, N. Dak	.38
Lawrence, Kans	.49	Chickasha, Okla	.36
Greensburg, Pa	.48	Lewiston, Idaho	.36
Marietta, Ohio	.47	Boise, Idaho	.36
Trinidad, Colo	.47	Bloomfield, N. J	.35
Warren, Ohio	.46	Melrose, Mass	.30
Hutchinson, Kans	.46	Selma, Ala	.30
Piqua, Ohio	.45	Plainfield, N. J	.29
Braddock, Pa	.45	Athens, Ga	.25
Elyria, Ohio	.45	Mankato, Minn	.24
Ironwood, Mich	.45	Marshall, Tex	.23
Sioux Falls, S. Dak	.44	Greenville, Miss	.19
Morristown, N. J	.44		

In the median city 44 per cent of the city funds are for school purposes, in Elyria 45 per cent are for school purposes. It appears, there-

fore, that the schools in Elyria are receiving a fair share of the city funds.

The problem is, nevertheless, to obtain more money for the schools. The possible increase under the present law is only 0.045 mills. This slight increase, would, however, on the present valuation of $24,000,000 yield $10,800 additional. That would support the kindergartens or some of the other services of the schools that have been discontinued. A decrease of a half mill on the road tax would mean a few miles less of good roads, but if that half mill were applied to the schools it would mean much to the children of Elyria.

The question has been raised whether the attendance at the Elyria High School of pupils from outside the school district is not imposing a financial burden on the city. According to the laws of the State of Ohio no more shall be charged nonresident high-school pupils per capita than the amount ascertained by dividing the total expenses of conducting the school, exclusive of permanent improvements and repair, by the average monthly enrollment.

To arrive at the exact cost per pupil in the high school is difficult, since many items of expense for elementary and high schools have not been kept separate. Salaries for instruction and supervision, which constitute the greater portion of high-school expenditures, are known exactly, but the amount expended for fuel and supplies is not separately recorded. The total running expenses of the high school for the year 1915–16 was $34,923. The average monthly enrollment was 583. The cost per high-school pupil was therefore $59.90. During the past year the school board raised the high-school tuition from $50 to $59 per annum, or to approximately the cost per pupil based on average monthly enrollment. It is doubtful whether the board can legally charge much more. If elementary and high school accounts were kept separately, as they should be, the cost of running the high school might be known exactly.

The question may be raised as to whether property in Elyria is assessed at full value. If it is so assessed, values have not increased in nearly the same proportion as the population. In 1912 the average daily school attendance was 2,068, and in 1916 it was 2,595, or an increase of 25 per cent, which is probably the rate of increase in the population of Elyria. In 1912 the assessed valuation of the city was $22,315,460, and in 1916 it was $24,500,000, or an increase of only 9 per cent. In 1912 the amount of assessed wealth per child in average daily attendance was $10,790, and in 1916 it was $9,441, or a decrease of 12 per cent. These have been years of rapid increase of wealth throughout the United States and of great prosperity for Elyria. It is probable, therefore, that the wealth of the town has increased much more rapidly than the population. The assessment should be carefully examined to determine what properties are not

assessed at full value. If the assessed valuation were increased only $1,000,000, the schools could at the present rate obtain about $5,000 more revenue, which would pay the salaries of the special supervisors and of others whose services have been discontinued. If the assessed valuation were increased, the rate for the road district and the city might possibly be lowered and the rate for schools increased to its highest limit. One method of obtaining more funds is to increase the assessed valuation.

The logical solution, however, of the problem of financing the city and the city school districts in Ohio is to repeal the present tax law and permit cities to levy more than 10 mills for current expenses. If the State legislature considers that city officials should not be empowered to levy more than 10 mills, it should at least permit the electors of a city to vote whether the tax rate can be more than this amount. The people of any city can surely be trusted not to tax themselves beyond their willingness to pay and should be permitted to support as generously as they will the schools for the education of their children.

Costs within the system.—When compared with 25 other cities, the ratio of the cost per pupil in high school to cost per pupil in the elementary grades is about the average, as may be seen from the following table:

Cost per pupil in high school to $1 of cost in elementary school.

Virginia, Minn	$3.37	Champaign, Ill	$1.67
Bloomfield, N. J	2.67	*Elyria, Ohio*	*1.66*
Ironwood, Mich	2.58	Beverly, Mass	1.65
East Chicago, Ind	2.34	Moline, Ill	1.60
Kenosha, Wis	2.33	Leavenworth, Kans	1.58
Redlands, Cal	2.30	Hackensack, N. J	1.57
Wausau, Wis	2.18	Attleboro, Mass	1.51
Ithaca, N. Y	2.12	Alameda, Cal	1.41
Rome, Ga	2.11	Gloucester, Mass	1.37
Winston-Salem, N. C	2.09	Burlington, Iowa	1.36
Long Beach, Cal	1.94	Danbury, Conn	1.22
Owensboro, Ky	1.85	Muncie, Ind	1.16
Bristol, Conn. (median)	1.81		

The generally accepted ratio is 2 to 1.

Elyria is spending less for instruction and more for maintenance than the median for 44 other cities of between 10,000 and 25,000 population, as may be noted from the following table, which shows the per cent each item of expenditure is of the whole:

	Elyria.	In 44 cities.
General control	3.0	4.5
Instruction	76.2	80.0
Maintenance and operation of plant	17.4	15.0
Auxiliary agencies, libraries, etc	2.8	.5
Total	100.0	100.0

For comparison of cost per high-school subject see page 112.

That there may be more definite data in the office of the superintendent of schools regarding costs, it is recommended that the clerk of the board keep his accounts to show unit costs.

The cost of fuel per 1,000 cubic feet in each building should be known. If it is costing much more to heat 1,000 cubic feet in one building than in another, an investigation should be made to discover the cause. If the current expenditure is more per pupil in one building than in another, why? These are some of the problems that a unit cost accounting system would present.

The following table contains comparisons of certain fiscal items in 1912 and 1916:

Comparison of fiscal items for five-year period ending August 31, 1916.

	1912	1916	Per cent of increase.
School tax rate (mills)	3.76	4.95	32
Average daily attendance	2,068	2,595	25
Total expenditure	$125,005	$143,673	15
Conducting schools (current expenses)	$80,937	$121,373	50
Interest paid	$6,491	$21,539	232
Bonded indebtedness paid	$6,000	$7,500	25
Revenue from local taxes	$78,607	$116,004	47
Revenue from State school fund	$6,139	$8,499	38
Revenue from other sources	$8,962	$10,706	20
Valuation of property	$22,315,460	$24,500,000	9
Wealth per child in average daily attendance	$10,790	$9,441	[1]12
Cost per pupil for conducting schools based on average daily attendance, excluding capital outlays and debt service	$39	$47	19

[1] Decrease.

THE SCHOOL BOARD.

City boards of education in the State of Ohio are organized under a general statute which provides that in cities of less than 50,000 population the board of education shall consist of not less than three nor more than five members, elected at large. The law provides that members of school boards shall be elected in odd years for a term of four years. In Elyria the board consists of five members, the term of two members expiring at the end of one biennial period and three at the end of the next. County, State, and National elections are held in even years. The purpose is to divorce school and municipal elections, so far as possible, from the dominating influence of some strong State or National candidate or issue, so that the local offices may be filled with men selected because of their qualifications rather than because of their party affiliations.

A better provision would be for five members elected at large for a term of five years with a member elected each year at a special school election. Under the present provision it is possible for three new members to be elected at the same time who might at once en-

tirely reverse the policy of the board and of the superintendent. It usually takes about a year for a new member of a city school board to learn what the function of a school board is. By electing one member a year he will, if a new member, have an opportunity of becoming acquainted with school conditions by the time another new member is elected. This plan is considered safer, since it prevents sudden breaks in the policy of a board and makes continuous development more certain.

Powers and duties.—The State law gives the school board full and complete power over the schools. It has no power, however, to levy taxes nor to fix the amount of money to be appropriated; but after the funds have been appropriated to the school board, it has full power to use these funds for school purposes as in its judgment seems best.

Relation to the superintendent.—A most commendable feature in the administration of the Elyria schools is that the school board places full responsibility on the superintendent.

Until recently the school board has employed a director of schools, as the State law permits. This office was responsible directly to the school board and not to the board through the superintendent. The law empowered him to appoint, subject to the approval of the board, all employees except teachers, supervisors, principals, superintendent of instruction, and clerk of the board, to have the care and custody of all property of the school district, real and personal (except moneys), to oversee the construction of buildings in the process of erection and repairs, to advertise for bids, and purchase all supplies authorized by the board. By granting the director these duties and making him responsible directly to the board there were two executive officers—the superintendent of instruction and the director, or business manager.

When the office of director of schools was established the thought of the school board no doubt was that there is no relation between the educational and business matters of the board. There can be no such divorcement. The purpose of the school is to educate children. Every phase of the administration of the schools must have this end in view. The superintendent should have general supervision of even the purchase of supplies and the erection of buildings.

The Elyria school board has therefore wisely placed the entire management of the schools in the hands of the superintendent. There are no longer two executive heads. The director has been retained as clerk of the board and as business agent. His duties are still practically the same as they were as director, but he reports to the board through the superintendent and is subject to the orders of the superintendent in business matters, just as principals and supervisors are in matters of instruction.

The members of the school board say that they employ a superintendent to conduct the schools, that they give him much freedom, and hold him responsible. The minutes of the board for the past three years were examined, and this statement is borne out by the fact that the superintendent's name is frequently mentioned as making this or that recommendation. He has recommended the election of teachers, changes in the course of study, transfer of teachers, and the adoption of textbooks. This policy of the board in giving full power to the superintendent in these matters is in accord with the present tendency in school administration. It would be much easier for a superintendent who has no other interest than that of holding his position or of drawing his salary to permit the school board to select teachers and textbooks on its own initiative, but the superintendent who wants to secure results and to earn his salary is willing to assume all the responsibility.

A point worthy of commendation is that individual board members do not listen to the complaints of parents and others, but refer them to the superintendent. If the complainant is not satisfied with the decision of the superintendent, he may appeal to the school board as a board. This is the only workable policy for a school board to adopt. Individual members of school boards should never attempt to settle difficulties between pupils and teachers or parents and teachers, nor to dictate policies to teachers or principals.

The school board holds a regular meeting once a month. During the past three years there has been, on an average, one special meeting each month. The length of the board meetings is usually from one to two hours, sometimes more than two hours. Every important proposition is discussed at length. Often there occurs in the minutes of the board the sentence, "After a thorough discussion of the question the roll was called." Though there are several standing committees, the reports of these committees are usually discussed in board meeting.

There are on the Elyria school board the following committees: Finance, buildings and grounds, sanitation and hygiene, textbooks, advisory. It is doubtful whether a board of five members that employs expert executives needs any standing committees. However, from a study of the minutes of the board and from conversation with members of the board and its clerk, there is no evidence that these committees have undertaken to do the work for which the board employs an executive officer; nor is there any evidence that these committees have furnished the board with information that could not have been provided by the superintendent of schools.

The budget should be prepared by the superintendent and submitted to the entire board for its careful study. The clerk of the board should, of course, assist in preparing the budget. The su-

perintendent and the business agent should report to the board the condition of buildings and grounds and have authority to make all needed repairs without having to consult a committee. The superintendent should collect information through the school physician and the school nurse regarding the sanitation of the buildings and report to the board.

Textbooks should be adopted by the board only on the recommendation of the superintendent. He can recommend to a board of five as well as to a committee of three.

Every committee could be abolished without lessening the efficiency of the board as a legislative body. The school board is small and should act as a committee of the whole. Each member of the board should be informed upon every phase of the school work, and not only upon one phase, if he is to vote intelligently upon all measures. Though there has apparently been no abuse of the committee organization of the Elyria school board, there are no valid reasons for its continuance.

The electors of Elyria have, as a rule, elected men and women as school board members who are well known for their interest in public affairs or for their ability as business managers. The present board is composed of four men and one woman. They have shown their interest in education by giving their time and attention to the schools, often at a sacrifice of their own private business interests.

ELEMENTARY TEACHERS.

The generally recognized educational and professional standard for elementary teachers is four years' high-school work and two years' normal-school work. When measured by this standard the schools of Elyria fall short. The amount of schooling the elementary teachers of Elyria have had beyond the eighth grade averages only 4.8 years, including all attendance in high schools, State normal schools, city normal courses, summer schools, and extension courses.

The following table shows the number of years' attendance beyond the eighth grade on the part of the several teachers:

2 to 3 years	3 to 4 years	4 to 5 years	5 to 6 years	6 to 7 years	7 to 8 years
3	3	29	20	4	2

Only 10 elementary teachers have had two years' professional work beyond the high school, 24 one year's work, and 15 of the latter number have had but little more than the work offered in the one-year city normal course, a term at a summer school or an extension course. Those who have not had the city normal course or who have

not graduated from a regular normal school have usually had two or three terms of summer school work and several years' extension work.

The following table shows how Elyria ranks with 23 other cities in respect to the average number of years' schooling beyond the eighth grade:

Average number of years of schooling beyond the eighth grade.

Cities	Population, 1910.	Years' schooling beyond elementary grades.	Cities.	Population, 1910.	Years' schooling beyond elementary grades.
Norfolk, Nebr	6,000	6.5	Aurora, Ill	30,000	5.4
Bozeman, Mont	5,107	6.4	Leavenworth, Kans	19,000	5.4
Morgan Park, Ill	4,000	6.3	Webster Groves, Mo	7,000	5.2
Whiting, Ind	6,587	6.0	Mishawaka, Ind	12,000	5.2
Winnetka, Ill	3,000	6.0	Noblesville, Ind	5,000	4.9
Gallipolis, Ohio	5,560	6.0	Rockford, Ill	45,000	4.9
Boonville, Mo	4,252	5.8	Joliet, Ill	35,000	4.8
Clifton, Ariz	4,000	5.7	*Elyria, Ohio*	*14,000*	*4.8*
Douglas, Ariz	6,000	5.6	South Bend, Ind	53,000	4.8
Oak Park, Ill	19,000	5.6	San Antonio, Tex	96,000	4.6
Russell, Kans	2,000	5.6	Mount Carroll, Ill	7,000	4.7
East Chicago, Ind	19,000	5.5	Granite City, Ill	10,000	4.3

Measured by the standards maintained in a majority of these cities Elyria ranks low, falling in the lower fourth, or seven-tenths of a year less than the median and one year less than the upper quartile.

As a further comparison the following table, showing the per cent of years' attendance beyond the eighth grade on the part of the elementary teachers of Elyria and of 24 cities in Arizona is presented:

Per cent of attendance beyond the eighth grade by elementary teachers.

Teachers.	Less than 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 6 years.	6 to 7 years.	7 to 8 years.	8 years.	More than 8 years.
Per cent of Elyria teachers	0	0	4.9	4.9	47.5	32.8	6.6	3.3	.....	.....
Per cent of teachers in 24 Arizona cities	0.4	1.6	5.5	3.9	11.3	22.6	37.6	8.8	4.1	4.1

Only 9.9 per cent of the teachers of Elyria have attended school six or more years beyond the eighth grade; 54.6 per cent of the city teachers of Arizona have attended school that length of time. If it is possible for cities in a new State like Arizona to have standards so high that more than half the teachers have had six or more years' schooling beyond the eighth grade, the same should be possible for a city like Elyria in an old State like Ohio.

The old idea that teachers are born, not made, has nothing to justify it except the fact that some persons are born with an aptitude

for teaching just as some are born with an aptitude for law or medicine. No one would advocate permitting any person to practice medicine without special training. The teacher is no more "born" than the lawyer, the doctor, or the engineer.

Years of experience of Elyria teachers.

	Years of experience.													
	1	2	3	4	5	6	7	8	9	10	11–15	16–20	21–25	26 or more.
Number of teachers	0	6	7	4	2	2	0	2	2	2	19	9	2	4
Per cent of teachers	0	9.8	11.7	6.6	3.3	3.3	0	3.3	3.6	3.3	31.2	14.7	3.3	6.5

When compared with 27 other cities Elyria ranks high with respect to the experience of its teachers, as is shown by the following table, ranking third with 2.1 years more than the median.

Average number of years of experience by teachers of certain cities.

	Years.		Years.
Greensburg, Ind	13.0	Leavenworth, Kans	9.2
Morgan Park, Ill	12.5	Mount Carroll, Ill	8.4
Elyria, Ohio	*11.3*	Gary, Ind	8.2
Rockford, Ill	10.9	Harvey, Ill	8.0
Winnetka, Ill	10.8	Webster Groves, Mo	7.5
Oak Park, Ill	10.7	Norfolk, Nebr	7.0
Boonville, Mo	10.3	East Chicago, Ind	6.3
Junction City, Kans	10.1	Granite City, Ill	6.0
Joliet, Ill	9.9	South Bend, Ind	6.7
Russell, Kans	9.9	Noblesville, Ind	6.2
Mishawaka, Ind	9.7	Whiting, Ind	5.8
De Kalb, Ill	9.5	Maple Lake, Minn	5.2
Aurora, Ill	9.3	Bonner Springs, Kans	3.7

The following table shows the number and per cent of elementary teachers who have taught in the city of Elyria their first year, second year, etc.

Years taught in Elyria by elementary teachers of Elyria.

	Years of experience in Elyria.													
	1	2	3	4	5	6	7	8	9	10	11–15	16–20	21–25	26 or more.
Number of teachers	7	8	8	2	3	3	2	2	2	1	14	4	2	4
Per cent of teachers	11.4	13.1	13.1	3.2	4.9	4.9	3.2	3.2	3.2	1.6	22.8	6.4	3.3	6.5

Of the 61 elementary teachers, 24 have taught in the city of Elyria 11 or more years. The average tenure is 7.8 years. The power of the Elyria schools to hold teachers is good when compared with 24 other cities, as shown in the following table:

Average tenure of elementary teachers.

	Years taught in city.		Years taught in city.
Aurora, Ill	9.1	Junction City, Kans	3.8
Rockford, Ill	9.1	Noblesville, Ind	5.5
Joliet, Ill	8.7	Bonnerville, Mo	5.4
Leavenworth, Kans	8.0	De Kalb, Ill	5.2
Elyria, Ohio	7.8	Granite City, Ill	4.2
Greensburg, Ind	7.6	South Bend, Ind	4.0
Morgan Park, Ind	7.0	East Chicago, Ind	4.0
Mishawaka, Ind	6.6	San Antonio, Tex	3.5
Mount Olive, Ill	6.6	Webster Groves, Mo	3.2
Russell, Kans	6.5	Bonner Springs, Kans	2.4
Winnetka, Ill	6.4	Norfolk, Nebr	2.0
Mount Carroll, Ill	6.2	Maple Lake, Minn	1.4

The teachers of Elyria average two more years of experience in the same city than those in the median city of the group. The average amount of experience of teachers before entering the Elyria schools is 3.5 years.

This amount of experience may offset to a certain extent the lack of professional training. On the other hand, much experience may be a handicap to some teachers. Experience alone does not make a teacher. Experience counts for but little unless there is a background of knowledge of subject matter and of the best methods of presenting it. Then, too, experience gained by teachers in a rural school without supervision counts for but little in the improvement of teaching power. Such teachers may have succeeded as disciplinarians and classroom organizers. Some even without professional training may employ good methods of teaching; but the only safe plan is to engage teachers who have had professional training.

Salaries.—The salaries of elementary teachers in Elyria are not high when compared with those paid in 32 other representative cities in different sections of the country.

The following table shows the median salaries of elementary teachers in 33 cities of between 10,000 and 25,000 population (1912–13).

Median salaries of elementary teachers

Alameda, Cal	$1,110	Fargo, N. Dak	$713
Missoula, Mont	1,080	East Chicago, Ind	700
Fresno, Cal	950	Ansonia, Conn	700
Boise, Idaho	900	*Elyria, Ohio*	[illegible]
Great Falls, Mont	900	Ann Arbor, Mich	700
Reno, Nev	900	Sandusky, Ohio	675
Cheyenne, Wyo	840	Salem, Oreg	675
Phoenix, Ariz	810	Bellville, Ill	650
Gary, Ind	800	Muncie, Ind	640
Plainfield, N. J	800	Moline, Ill	630
Morristown, N. J	775	Marshalltown, Iowa	600
Aberdeen, Wash	770	Dunkirk, N. Y	600
Oak Park, Ill	750	West Chester, Pa	600
Hackensack, N. J	750	Kenosha, Wis	585
Kearney, N. J	750	St. Cloud, Minn	563
Trinidad, Colo	750	Alexandria, Va	550
Norwood, Ohio	740		

The median salary in Elyria in 1912–13 was $600; now it is $700. If the median salaries in the other cities have increased in like proportion, Elyria ranks low in comparison. The minimum salary paid at present is $500, the maximum $700, except teaching principals, who receive the salary of the grade they are teaching, plus $12.50 per room used.

When compared with salaries of city officials in Elyria the salaries of teachers are low, as may be noted from the following tabl :

Salaries of city officials in Elyria.

Chief of police	$1,500	Lieutenants, fire department	$1,150
Captain of police	1,120	Master mechanic, fire department	1,240
Patrolmen, class A	1,120	Engineers, fire department	1,180
Patrolmen, class B	1,000	Firemen, class A	1,120
Patrolmen, class C	1,000	Firemen, class B	1,060
Desk sergeant	1,000	Firemen, class C	1,000
Chief of fire department	1,500	City-hall janitor	840
Assistant chief, fire department	1,240	Cemetery superintendent	900
Captain, fire department	1,180		

Since these tables were compiled the salaries of city officials have been increased in some cases as much as $140 a year. Salaries of teachers have been increased $47.50 a year.

The salaries and wages paid the city officials and employees are by no means large. The point is that teachers are not paid enough in comparison. A teacher must spend five or six years preparing for her work and expend from $50 to $100 every few years attending school. She must attend educational meetings and purchase

[illegible] In 1916–17.

books and magazines. Her salary should be at least as much as that of a policeman.

The minimum wage of day laborers for city work in Elyria is $3 a day; counting 180 days to the year the minimum for teachers is $2.78; counting 300 days to the year it is $1.67. The maximum for day laborers is $5 per day; counting 180 days to a year the maximum for teachers is $3.87; counting 300 days to a year the maximum is $2.34.

It is also interesting and significant to compare salaries of teachers with those of janitors. The janitors are not overpaid, but the teachers are underpaid.

Salaries of schoolhouse janitors in Elyria:

Janitor A	$1,200
Janitor B	1,020
Janitor C	990
Janitor D	924
Janitor E	840
Janitor F	840

The median salary of janitors in the elementary schools is $975, or $275 more than for elementary teachers. The highest salary paid a principal of elementary schools is $887.50, or $372.50 less than the highest-paid janitor, and only $47.50 more than the lowest-paid janitor.

Promotion of teachers.—The plan of promoting teachers in Elyria is to give an increase of $50 a year until the maximum of $700 is reached. A teacher brought in from another school at a salary of $650, say, would receive but one increase. Teachers employed first at $500 a year would receive four increases. After a teacher has taught three or four years in a school system and there is but little or no prospect of further increase she is likely to become discontented and to seek a position elsewhere. If there is a tendency on the part of the teaching corps to seek other positions, the result will be that the better teachers will secure positions elsewhere and the poorer ones will be left.

A salary schedule should be prepared with a minimum salary sufficiently high to secure the services of the best normal-school graduates, or normal-school graduates with one or two years' successful experience. The maximum salary should be sufficiently high so that there may not cease to be an increase after three or four years' service in the Elyria schools. The salary schedule should provide for three or four classes, so that it will take anyone beginning in the lowest class from six to eight years to reach the maximum, and increase in salary should have some relation to proven ability in teaching.

Increase in pay should be based on experience, additional preparation, and merit. A teacher who attends summer school should, as a

rule, have a larger increase in salary than a teacher of equal ability and experience who does not. The attendance at summer school may fairly be taken as evidence of interest and of desire to improve. A teacher who does not improve after several years of experience should not be given a larger salary, and if she makes no effort to do better work, she should not be reelected. No teacher can afford not to attend school every three or four years, and no school board can afford to employ a teacher who does not attempt to improve. The board should, however, provide substantial salary increases for all teachers who are making further preparation and who are growing in efficiency. No others should be retained.

The teachers' training class.—"At the opening of each school year a class of high-school graduates is organized to secure the professional training and experience required by law of all who would become public-school teachers." Five girls comprised the class of 1916–17, although at the time of the survey only three were in attendance. These received instruction in school management, methods of teaching, agriculture, physiology, and physical culture; reviews in arithmetic, grammar, geography, and history; 10 lessons each in music, drawing, and penmanship; and practice teaching. This work, together with a six weeks' course at the Kent Normal School, entitles the students to a year's normal-school credit.

Two days a week are given to classroom work and three to observation and practice teaching in the schools. The students are also used as substitutes in the city schools, for which they draw regular pay. The work in agriculture is taken with the high-school class, the students attending on their classroom days. The pedagogical work is given by the supervisor of primary grades.

If this training class fed its graduates directly into the city schools, there would be no hesitation in recommending that it be discontinued; but as it does not, it must be judged merely as a teachers' training class, sanctioned by the State, for the purpose of preparing teachers for the rural schools. The education given is meager, to be sure, but it is better than nothing. The graduates usually do their first regular teaching in rural or small city schools, and some of them go on to complete the full normal-school course. Many, however, return to the Elyria schools as teachers before completing the normal course. This should be discontinued.

The classroom work could be strengthened by letting more teachers take part in giving it. One or two of the elementary-school principals and perhaps the superintendent might conduct classes. This would not only give the students more varied instruction, but would also react favorably on those who give the work.

SUPERVISION.

SUPERVISION OF INSTRUCTION.

One of the great problems in Elyria is how to provide effective and economical supervision of instruction in the elementary grades. The grade buildings have from 3 to 13 teachers. There are in the Franklin Building 13 teachers; in the Jefferson, 9; in the Gates, 10; in the Hamilton, 9; in the McKinley, 11; in the Ridge, 6; and in the Garford, 3. The principals of the Garford and the Ridge School teach all the time; the principals of the other schools have an hour a day for supervision of instruction and for matters of routine. A substitute teacher is employed to teach an hour a day for these principals.

It is evident that the principals can do but little supervising in one hour. Since each principal has the same period each day free for supervision, she can observe only the teaching of the subjects that are on the program at her free period, unless the teacher visited is requested to change her program. If the present plan of supervision is continued, the programs should be changed so that the principals may observe the teaching of different subjects.

Most of the time of the principals is, however, so taken up in routine affairs that supervision of instruction is a secondary matter. Among the details attended to by the principals are: Investigation of cases reported for discipline; talks with pupils who are delinquent in their work; reporting cases of illness of children to school nurse; reporting absentees to truant officer; talks with parents by telephone; answering telephone calls from main office and from parents; making out reports; ordering and distributing supplies; keeping savings-bank books; writing notes to parents; assisting parent-teachers' associations. The principals while teaching are often interrupted by children sent from other rooms for information regarding some phase of school work, by telephone calls, or by persons coming to the door to ask where a child or teacher may be found. One principal reports that she has had as many as 10 interruptions during a recitation. With all these details to look after, no time is left for supervision. Some of these details, however, could be attended to before and after school hours. Arrangements should be made so that a principal while teaching will not be interrupted by telephone calls. It is suggested that all calls be made through the superintendent's office, and that no principals be called while teaching.

Practically all the supervision of instruction must be done by the superintendent and the primary supervisor. Heretofore there have been supervisors of music, of art, and of penmanship. As stated elsewhere in the report, the services of the supervisors of music and art were discontinued, owing to a lack of funds; only the supervisor of penmanship is retained.

A supervisor of music and a supervisor of art are no doubt necessary in a school system of the size of that of Elyria, but it is very doubtful whether the school board is justified in employing a supervisor of penmanship. If results in this subject are to be obtained, the teacher must obtain them. A lesson once in two weeks by a supervisor who does nothing more than teach accomplishes but little, if any, more than the regular teacher can accomplish. Every child writes much of the time in school, and if the teacher does not require the child to write well in his regular work, a weekly drill by a supervisor will accomplish little. The principles of the system of penmanship used in the schools are easily acquired. It is then a matter of attention to the daily written work and to a few minutes of drill exercises.

The need of the following supervisors is recommended in other sections of this report: A supervisor of manual arts, teaching part time; a supervisor of home economics, teaching part time; a supervisor of home gardening, who should be the teacher of agriculture in the high school; a playground supervisor; a supervisor of music; and a supervisor of art.

Many teachers need instruction in the teaching of music and art. The position of supervisorship of these two subjects should be restored at once. If, however, the tax rate can not be increased or more funds provided, provision should be made for instruction in music and art by departmentalizing the work through the grades sufficiently to permit the teaching of music and drawing by special teachers and the other subjects by the regular classroom teacher. This plan saves the overhead charge for supervisors. The regular classroom teacher would have her subjects reduced by two, thus allowing her more time for the preparation of her lessons in other subjects. At present some teachers exchange work, teacher A, for example, taking teacher B's pupils for music, while teacher B takes teacher A's pupils for spelling. This plan could be extended so that one teacher in a building would teach all the music and another all the art.

The plan for general supervision provides for supervision by the superintendent of schools, a primary supervisor, and the building principals each for an hour a day.

With small buildings it is apparent that the cost of supervision would be excessive if each building were in charge of a supervising principal wholly relieved of teaching.

Two plans for more effective supervision may be suggested for Elyria: (1) A supervising principal for a group of buildings or (2) a primary and upper-grade supervisor with a head teacher or teaching principal in each building.

By the former plan three group principals would be necessary. The Hamilton and Franklin Schools would form one group with 22 teachers; the Gates and Jefferson Schools another group with 19 teachers; and the Ridge, the McKinley, and the Garford Schools the third group with 20 teachers. The additional cost for these three supervising principals, who should be trained supervisors, would be approximately $4,800 a year.

The latter plan—a supervisor of primary and of grammar grades—would require only two supervisors at a minimum cost of $3,200, or somewhat less for principals for a group of buildings. From the standpoint of the improvement of teachers in service, the latter plan is no doubt the better of the two, because supervising principals for groups of buildings often have so many petty problems that they fail to supervise. There is this advantage, however, they are in a position to be the leaders of the community interests in their respective districts. They would not, however, devote all their time to the improvement of teaching as the grade supervisors relieved from all trivial affairs would do, for the latter could devote all their thought, skill, and energy toward unifying and vitalizing instruction throughout the entire system. All teachers in every part of the city would be working with the same end in view. If there are supervising principals, there may be as many aims as there are principals. Standards will be higher in one district than in another, depending upon the ideas of the supervisor of the district.

It is recommended that the position of supervisor of primary grades be retained and that the position of supervisor of intermediate and grammar grades be established. These supervisors should be persons of good general and professional education and proven skill in teaching and special training for the work of supervision.

If, however, it is thought that financial conditions in Elyria will not at present permit the employment of both these supervisors, it is recommended that the position of primary supervisor be continued.

If the recommendation on page 122 that there be six years in the elementary grades and three years in the junior high school be adopted, one supervisor for both the kindergarten and the first six grades and a supervising principal for the junior high school would provide all the general supervision needed. It is recommended that this be the plan to be adopted.

The question arises, What would remain for a superintendent to do if a primary and an upper grade supervisor were employed? In a city the size of Elyria the duties of a superintendent are multifarious. He must decide upon the policies of the school, keep the community in touch with the schools, address different organizations in the city on educational or other topics, make a careful study of

textbooks, visit schools in other cities, study the qualifications of teachers employed, visit teachers who are applying for positions in Elyria, consult with teachers and others, hold teachers' meetings. These are only a few of the things that make demands upon the time of a superintendent in a city the size of Elyria. His visits to the classrooms of 100 teachers must necessarily be brief. Even if he were to give his whole time to supervision he could not spend more than five or six hours during the year in a teacher's classroom. In addition to classroom visitation there must be the personal conference after each visit.

If there were a primary and a grammar-grade supervisor or only one for all grades, the superintendent should not make any fewer visits to the classrooms. He would visit classrooms and if he noted any teacher that needed help he would assign the supervisor the task of improving the instruction of that teacher, or if the supervisor by means of objective tests or even by observation discovered that a teacher is not obtaining good results, the superintendent could by visitation ascertain the cause and suggest methods for improvement. Supervision would not be haphazard, but more nearly on a scientific basis than at present. There should be more than mere inspection and observation. There should be from time to time a careful testing of results. In a city the size of Elyria the superintendent himself can not do much of this kind of work—not enough to be effective.

In brief, the schools of Elyria are undersupervised, as the committee has found by observing and testing classroom instruction. As compared with other cities the cost of supervision in Elyria is low. For the year 1915-16 the cost of teaching in Elyria was $87,587, or 72.16 per cent of the total current expenses; supervision, $4,877.07, or 4.01 per cent of the total current expenses. In 44 cities of between 10,000 and 25,000 population the median per cent for teachers' salaries is 66.76; for supervision 9.17. For the present year, since the services of two supervisors have been dispensed with, less than 4 per cent will be spent in supervision in Elyria.

HEALTH SUPERVISION.

The school nurse.—An efficient school nurse is one of the admirable features of the school system in Elyria. Regular visits are made by her to each building and home visitations in case a pupil is out of school with illness.

Baths are fitted up in three buildings, and are used by the pupils under her direction. The children are weighed once a month, and careful records are kept by the nurse of their physical well-being. All pupils who need medical advice can consult the school physician, who is one of the city's leading practitioners. Operations at the

hospitals can be arranged for by him at the suggestion of the school nurse, and no charge is made for consultation or for treatment.

The following report of the school nurse shows the extent of the work done by her department:

Number of children examined since October 1, 2,220.
Number having physical defects:

Defective teeth	642	Defective vision	141
Enlarged tonsils	188	Anemia and malnutrition	85
Adenoids	202	Orthopedic defects	18
Defective hearing	69		

Parents are made aware of physical defects in their children by notices of physical defects, referring them to their family physician, dentist, or hospital dispensary. If no attention is paid, the school nurse makes home calls.

Defects corrected since October 1, 105. This does not include defective teeth corrections except indigent cases taken personally to the dentist. Other corrections will be noted on the pupils' health card at second examination.

According to my regular schedule each building is visited three to four hours each week, as soon as school opens. Teachers send in any children that may need treatment or dressings. Regular routine examinations begin afterwards. Each child is examined twice a year. Every child brings his or her health record card and observations are made while the child faces a good light, near a window. When the child opens his mouth the condition of teeth and mucous membrane are noticed. The tonsils are inspected. Mouth breathing or signs of nasal obstruction are noted. Ears are observed for impacted cerumen or any discharge. Eyes are inspected for any inflammatory diseases. The hearing and vision are then tested; the hearing by means of the whispered voice test and the vision by means of the Snellen test cards. Any defect found is noted on the pupils' health card for future reference. If the defect is a marked one, a cross is made after the defect and it is called to the parents' attention for correction. Health talks are frequently given in the classroom, especially on dental hygiene. Certain grades are inspected for head lice and skin diseases. Home visits are made in the afternoons when not at any school. One afternoon a week is usually set apart to take children to the specialist, physician, or hospital.

Enlargement of this department needed.—The nurse quite evidently had too many calls on her time to do full justice to all the children under her care. An assistant, trained in the service, is recommended for this department.

SCHOOL POPULATION AND PROGRESS THROUGH THE GRADES.

According to the school census[1] taken in 1916, there are in Elyria 4,561 children from 6 to 21 years of age. The enrollment in the public schools is 2,614, and in the parochial schools 651, making the total number of children between 6 and 21 years of age attending public and parochial schools 3,265. To this number should be added those who are attending business school, normal school, and college. Just

[1] The school census was made several months before the enrollment in this report was compared with the school census.

what this number is is not known, but a conservative estimate would place it at about 100. There are, therefore, approximately 1,200 children between the ages of 6 and 21 years not in school. Some of this number have graduated from high school and gone to work, others have left school to go to work at 16 or 17 years of age and before graduating.

According to the school census there are in the city 3,248 children between the ages of 6 and 16 years. There are 2,826 children of this age in the public and parochial schools, leaving 422 unaccounted for. The enrollment of children from 8 to 14 years of age is 1,848, while the census shows 1,825 children of this age in the city. It is therefore safe to assume that practically every child between the ages of 8 and 14 years of age is enrolled in school. There is no definite way of knowing whether this is the case without a continuous census and without comparing the school enrollment with the census.

The attendance of the children enrolled in the elementary schools is good, as is shown by the following table:

Number of children in each school who attended from 1 to 90 days during the first half of the school term.

Days.	Schools.							
	Gates.	Ridge.	Garfield.	Franklin.	Jefferson.	McKinley.	Hamilton.	Total.
1-10	2	0	1	2	1	6	7	19
11-15	2	1	0	3	2	6	3	17
16-20	6	0	1	4	2	4	0	23
21-25	2	2	0	4	4	3	2	17
26-30	0	0	1	4	3	5	0	13
31-36	6	2	0	5	2	2	1	18
36-40	2	1	0	4	2	1	2	12
41-45	3	4	1	8	1	5	6	28
46-50	2	1	0	2	1	2	1	9
51-55	3	4	0	5	1	4	0	17
56-60	11	7	1	7	4	3	1	34
61-65	7	2	2	12	4	6	3	36
66-70	4	3	1	12	8	8	10	49
71-75	11	7	3	41	15	17	9	103
76-80	29	16	2	53	17	31	24	172
81-85	72	35	21	89	54	54	47	372
86-90	187	113	56	208	187	257	210	1,218
Total	352	204	90	463	308	414	326	2,157
Per cent attending more than—								
80 days	73.5	72.5	85.5	64.1	78.2	75.1	78.8	73.7
85 days	53.1	55.3	62.2	44.0	60.7	62.0	64.4	56.5

Some schools maintain better attendance than others. The comparatively poor attendance at the Franklin school is explained by the fact that many foreign children attend that school. Unless there is sickness among them, the foreign children should attend as well as any others. It may be necessary to call upon the attendance officer oftener than the other schools do, but it is the function of an attendance officer to keep children in regular attendance. The law does not permit irregular attendance of foreign children any more than it does

of American children. The fact that the foreign population is continually shifting may account for the low percentage of children in Franklin school who attended more than 80 days during the first half year.

It is noted, too, that attendance in some rooms is almost perfect, while in other rooms in the same building with children from the same environment the attendance is poor. Evidently some teachers know how to secure attendance better than others. The teacher who keeps a live school has but little difficulty in securing regular attendance.

But there are always some parents who must be compelled to send their children regularly. An attendance officer is employed part time for this purpose. In a city the size of Elyria it is scarcely possible to enforce the compulsory law with only part-time service of one officer. This officer, when interviewed by a member of the survey committee, stated that there is enough work to keep one person busy the entire day for five days in the week. This does not mean that there is much truancy. The chief duty of an attendance officer is to visit parents who are inclined to keep their children out of school to run errands or for occasional work. If the attendance officer had no other duty than that of looking up cases of truancy, he would have but little to do. Though he reports 121 cases of truancy for a period of eight months, only 6 of these were serious enough to refer to the probation officer. The other cases may be classed as "hookey cases," a sort of lapsing for a day into freedom from artificial classroom restraint.

The following table presents the report submitted by the attendance officer for a year, the months of September and October being omitted because no attendance officer was employed during those two months:

Attendance officer's report.

Items.	January.	February.	March.	April.	May.	June.	November.	December.
Absence caused by—								
Sickness	6	5	7	15	16	14	12	14
Kept out by parents	8	6	10	12	31	49	17	7
Truancy	7	3	8	2	21	50	17	13
Late at school	2							
Left to work	2	6						
Poverty	2	1	4	1	1			
Left city			2	3	10	5		2
Working without permits				1	3	4	2	2
Referred to probation officer			5					
Visits	27	21	37	4 34	2 84	122	59	40

The enforcement of the attendance law would be made easier if the school enrollment at the beginning of the term were checked with the school census. No use is made of the school census as a means of locating children not in school. One of the most useful factors in a

compulsory-attendance law is the school census. This census should be taken by the attendance officer just before school opens in September. The enrollment list in public and parochial schools should, by the close of the first week of school, be compared with the census list to see what children are not in school. The attendance officer should then ascertain why those not in school have not enrolled and should take steps to secure the enrollment of all those who are of the compulsory school age.

The attendance officer should keep a permanent census, after he has once made up a complete list of all the children in the city. Whenever children move into the city their names and addresses should be placed in the census list, and whenever children move out of the city their names should be taken from the list. This can be done easily if a card system is used.

It is recommended that the school board employ an attendance officer on full time; that he take the school census, and that he compare the enrollment lists in public and parochial schools with the school census for the purpose of determining what children are not in school.

The Elyria schools hold children in school to a later age than many other schools do. The number enrolled at each age is practically the same up to 16 years, as may be noted from the following table:

Distribution of pupils by age, June 1, 1917.

Age.	Number of pupils.	Per cent of total.	Age.	Number of pupils.	Per cent of total.
6 years	190	7.2	15 years	182	6.9
7 years	233	8.8	16 years	183	6.9
8 years	243	9.2	17 years	117	4.4
9 years	258	9.6	18 years	63	2.3
10 years	242	8.8	19 years	27	1.0
11 years	221	8.4	20 years	3	.....
12 years	222	8.4	21 years	2	.....
13 years	228	8.6			
14 years	218	8.3	Total	2,632	100.0

The holding power by grades is comparatively good. The following table shows distribution of enrollment by grades:

Distribution of pupils by grades, September, 1916.

Grade.	Enrollment.	Per cent of total.	Grade.	Enrollment.	Per cent of total.
Elementary.			*High school.*		
1	378	14.2	IX	233	8.7
2	323	12	X	152	5.6
3	270	10	XI	135	5
4	280	10.4	XII	78	2.8
5	242	9			
6	218	8.1	Total high	598	22.1
7	185	6.9			
8	187	6.9	Total elementary and high	2,681	100.0
Total	2,083	77.9			

Data were collected to ascertain the number of children under age, of normal age, and over age for their respective grades. The ages were taken as of June 1, 1917. Children in the first B grade from 6½ to 7½ years of age are considered of normal age; all 7½ or more years of age in this grade, as over age; all less than 6½, as under age. In the first A grade, children from 7 to 8 years of age are classed as of normal age; all 8 or more years of age, as over age; and all less than 7 years of age, as under age.

This report on retardation[1] is not as complete as it should be, owing to the fact that it was impossible to procure data to show whether progress through the grades has been rapid, normal, or slow.

An attempt was made to collect data showing the number of years each child had been in school, but owing to a lack of records and to the inability of many children to furnish this information, this part of the study is omitted. To present statistics showing only the number of years a child is behind his grade does not show all the facts. A pupil may be old for his grade and be making normal or even rapid progress. If a pupil enters school late, he may be over age; but he may be making a grade a year. If so, the retardation of that pupil should not be charged to the school, nor should the pupil be considered slow.

The following table shows the age-grade distribution of elementary school pupils:

[1] The term retardation is used only in the sense of overageness.

Age-grade distribution of elementary school pupils, June 1, 1917.

Grades.	Ages.																						
	6 to 6½	6½ to 7	7 to 7½	7½ to 8	8 to 8½	8½ to 9	9 to 9½	9½ to 10	10 to 10½	10½ to 11	11 to 11½	11½ to 12	12 to 12½	12½ to 13	13 to 13½	13½ to 14	14 to 14½	14½ to 15	15 to 15½	15½ to 16	16 to 16½	16½ to 17	17 to 17½	Total.
1B	38	57	28	7	5	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	137
1A	2	93	72	24	15	6	4	1	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	221
2B	.....	.....	27	37	19	17	14	3	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	119
2A	.....	.....	7	37	48	32	20	5	10	1	.....	2	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	164
3B	.....	.....	.....	3	20	25	25	21	11	3	5	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	115
3A	.....	.....	.....	.....	9	44	51	33	24	19	11	7	6	1	2	.....	.....	.....	.....	.....	.....	.....	.....	207
4B	.....	.....	.....	.....	.....	3	16	29	17	17	10	7	6	6	2	2	2	.....	.....	.....	.....	.....	.....	117
4A	.....	.....	.....	.....	.....	.....	2	34	41	25	15	13	8	7	5	2	.....	.....	.....	.....	.....	.....	.....	152
5B	.....	.....	.....	.....	.....	.....	.....	4	6	23	18	24	14	7	4	4	.....	.....	.....	1	.....	1	.....	106
5A	.....	.....	.....	.....	.....	.....	.....	4	2	25	30	13	17	9	20	4	3	5	1	1	.....	1	.....	135
6B	.....	.....	.....	.....	.....	.....	.....	.....	1	11	9	26	14	11	12	8	3	6	2	.....	.....	.....	.....	103
6A	.....	.....	.....	.....	.....	.....	.....	.....	1	2	7	14	38	25	16	20	7	7	4	.....	.....	.....	.....	141
7B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	7	11	20	15	12	7	1	1	1	1	.....	79
7A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	4	25	17	17	19	11	8	7	5	3	2	113
8B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	5	7	15	10	9	7	1	1	.....	.....	56
8A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	4	24	25	20	15	15	4	4	.....	113
Total	40	150	134	108	116	127	133	135	116	126	109	112	116	109	110	111	81	58	36	26	11	10	2	2,078

Children under age, of normal age, and over age.

Grade.	Under age.	Of normal age.	Over age.
	Per cent.	*Per cent.*	*Per cent.*
1B	27.7	62.0	10.2
1A	43.0	43.4	13.6
2B	22.7	47.1	30.2
2A	26.8	42.8	21.4
3B	20.0	43.5	36.5
3A	25.6	40.6	33.8
4B	16.1	39.5	44.4
4A	23.6	43.4	32.9
5B	9.4	38.7	51.9
5A	22.9	31.8	45.2
6B	20.4	38.8	40.8
6A	17.0	44.7	38.3
7B	12.7	39.2	48.1
7A	27.4	30.1	42.5
8B	23.2	44.6	32.1
8A	26.5	39.8	33.7
Total	24.3	42.5	33.1

Children under age, of normal age, and over age in each school.

Schools.	Under age.	Of normal age.	Over age.
	Per cent.	*Per cent.*	*Per cent.*
Franklin	25.3	36.5	38.2
Garford	36.0	40.0	24.0
Gates	26.1	46.2	27.7
Hamilton	24.8	38.7	36.6
Jefferson	30.3	47.3	22.4
McKinley	26.9	38.9	34.2
Ridge	28.9	47.4	23.7
City	24.3	42.5	33.1

In a study[1] of retardation in 29 cities, in which the ages were also taken as of June 1, it was found that 29 per cent of the school children were under age, 34 per cent of normal age, and 37 per cent over age. In Elyria 24.3 per cent are under age, 42.5 of normal age, and 33.1 per cent over age. There is but little retardation in the first grade in Elyria, the greatest amount being in the fifth grade.

The table following shows by grade the number of children retarded less than one year, one to two years, two to three years, and three or more years.

[1] Identification of the Misfit Child. Ayres.

Retardation in the schools of Elyria.

Grades.	Number retarded.			
	Less than one year.	One to two years.	Two to three years.	Three or more years.
1B	12	1	1	.....
1A	21	6	3	1
2B	31	3	2	.....
2A	25	11	2	2
3B	32	5	2	.....
3A	43	18	7	2
4B	27	13	8	4
4A	28	15	7	.....
5B	38	11	4	2
5A	26	24	8	3
6B	23	11	8	.....
6A	36	14	4	.....
7B	27	8	3	.....
7A	24	12	12	5
8B	16	2	.....	.....
8A	30	8	.....	.....
Total	438	162	71	19

The 14 children below the seventh grade retarded three or more years should have special work. There is no doubt that many of the children retarded two years or more should be placed in what might be termed "opportunity classes."

Though the amount of retardation in the Elyria schools is not excessive when compared with other schools, there should be fewer over-age pupils in each grade.

From a study of promotions made in February, 1917, it is evident that too many children failed, the average promotion rate for the city being 86.9. Since the per cent of over-age children is small in the primary grades and large in the upper grades it is evident that few children enter school late and that they become over age, partly at least, because of failure.

The following table shows the per cent promoted in each grade in each school:

Rate of promotion.

Schools.	Grades.								Average.
	1	2	3	4	5	6	7	8	
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Franklin	71.8	81.6	85.9	83.3	80.4	81.4	94.3	84.5	82.3
Jefferson	86.6	92.5	93.8	93.8	93.8	90.0	96.8	93.5	92.9
McKinley	91.0	89.0	95.0	89.0	86.0	83.9	86.0	88.0	88.0
Hamilton	79.4	84.7	80.0	79.0	87.9	86.8	84.5	.....	83.2
Ridge	77.0	100.0	93.0	100.0	96.0	96.0	.....	.....	92.0
Cates	72.9	83.3	88.8	92.0	94.1	93.1	90.0	93.8	86.5
Garford	86.2	78.3	100.0	90.0	.....	.....	.....	.....	88.6
Average	78.3	86.0	88.9	89.4	88.4	84.1	88.9	88.4	86.9

With an average annual promotion rate of 78.3 per cent for the first grade, only 783 children out of 1,000 entering the first grade

would be promoted to the second. That the average promotion rate of 86.9 per cent for all the grades is low is evident from the fact that, out of 1,000 children entering the first grade, only 325 would complete the eighth grade without failing. A promotion rate as high as 95 per cent permits only 663 children to complete the grades without failure. Of course some of the children who fail repeat and graduate in spite of failure, but why should 675 of 1,000 children in Elyria fail while going through the eight grades? This is based on the supposition that the average promotion rate for the past eight years has been 86.9 per cent.

Other causes it is true operate to produce failures, as irregular attendance and sickness. The former can be a charge against the school unless caused by sickness, and it is unfortunately true that sickness may frequently be charged to the school. The cause of a large amount of failure must be charged to the school. It may be due to a poorly prepared course of study or to poor teaching. If 25 per cent of a class fail there is evidently something wrong with the teaching or with the course of study. Whenever a teacher says that her pupils fail because they take no interest in school that teacher is acknowledging her inability to arouse interest or possibly the teacher is held to a threadbare course of study to such an extent that it is impossible to awaken interest in the class. From observations the committee is of the opinion that some of the failures are due to poor teaching, and that there would be fewer failures if the course of study were better suited to the needs of the pupils.

The following table shows the per cent of failures in six subjects in each of the eight grades:

Failures in six subjects in each of the eight grades.

Subjects.	Grades.								Average.
	1	2	3	4	5	6	7	8	
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Spelling	0.3	0.7	4.8	1.5	2.8	6.2	3.3	4.0	2.6
Language	.0	.0	2.6	3.1	5.0	5.5	12.7	13.3	3.9
Reading	20.3	10.1	5.1	1.6	1.4	3.2	1.1	.0	6.6
Arithmetic	17.7	6.8	11.5	11.7	12.0	13.2	17.2	9.8	12.0
Geography	.....	.....	.....	10.6	8.7	11.6	8.3	.....	9.6
History	.....	.....	.....	.....	.....	.....	8.0	7.5	5.9

There is an excessive number of failures in arithmetic in most of the grades. In the first grade 17.7 per cent fail in this subject. No child in the first grade should fail of promotion because of arithmetic. It is generally agreed that arithmetic should not be taught formally below the second grade. Many authorities would not have it taught except incidentally below the third grade.

The following tables show the per cent of failures in six subjects in each grade for the different schools:

Failures in reading.

Schools.	Grades.								Average.
	1	2	3	4	5	6	7	8	
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Franklin	26.7	16.7	4.7	1.3	4.0	0.0	0.0	0.0	7.02
Jefferson	13.0	7.5	3.0	.0	.0	.0	.0	.0	3.5
McKinley	8.0	6.0	5.0	.0	.0	.0	3.0	.0	3.1
Hamilton	23.0	13.5	11.12	4.7	.0	15.8	.0	.....	11.7
Ridge	22.0	.0	2.0	.0	.0	.0	.....	.....	5.8
Gates	27.14	13.0	2.2	2.8	3.0	3.4	.0	.0	8.9
Average	20.34	10.14	5.1	1.6	1.4	3.2	1.1	.0	6.6

Failures in arithmetic.

Schools.	Grades.								Average.
	1	2	3	4	5	6	7	8	
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Franklin	25.3	15.00	15.00	14.00	13.00	18.6	5.7	10.7	14.3
Jefferson	4.0	1.5	6.0	6.25	2.0	20.0	3.1	9.6	6.05
McKinley	8.0	6.0	9.0	7.0	10.0	13.0	14.0	11.0	10.6
Hamilton	21.4	13.5	15.56	28.0	21.21	0.0	11.5	.....	15.83
Ridge	22.0	.0	7.0	.0	4.0	.0	.....	.....	7.3
Gates	20.0	2.2	5.5	8.1	18.0	20.0	26.6	6.2	14.7
Garford	13.8	21.74	.0	10.0	.....	.....	.....	.....	11.39
Average	17.66	6.8	11.45	11.7	12.0	13.2	17.2	9.8	11.98

Failures in spelling.

Schools.	Grades.								Average.
	1	2	3	4	5	6	7	8	
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Franklin	1.3	0.0	7.8	0.0	10.0	8.4	0.0	4.0	4.2
Jefferson	.0	.0	.0	6.25	.0	.0	.0	.0	.7
McKinley	.0	2.0	9.0	.0	.0	.4	7.0	6.9	3.6
Hamilton	.0	1.8	2.2	2.4	3.04	10.55	.0	.....	2.6
Ridge	.0	.0	2.0	.0	4.0	3.0	.....	.....	1.6
Gates	.0	.0	4.5	28.0	.0	.0	6.6	.0	1.5
Garford	.0	.0	.0	.0	.....	.....	.....	.....	.0
Average	.3	.7	4.8	1.5	2.8	6.2	3.3	4.0	2.6

Failures in geography.

Schools.	Grades.				Average.
	4	5	6	7	
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Franklin	7.0	10.0	13.5	8.5	10.4
Jefferson	6.25	2.0	3.0	.0	3.0
McKinley	10.0	9.0	14.0	12.0	11.3
Hamilton	23.0	12.2	7.9	7.6	13.9
Ridge	.0	4.0	5.0	.....	4.6
Gates	8.1	8.0	17.3	10.0	10.3
Average	10.6	8.7	11.6	8.3	9.6

Failures in history.

Schools.	Grades.		Average.
	7	8	
	Per ct.	Per ct.	Per ct.
Franklin	5.7	7.7	7.0
Jefferson	.0	3.2	1.5
McKinley	1.0	8.0	5.0
Hamilton	.0	.....	.0
Gates	16.6	9.3	12.7
Average	3.0	7.5	5.9

Failures in language.

Schools.	Grades.						Average.
	3	4	5	6	7	8	
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Franklin	0.0	5.5	4.0	8.4	5.7	13.8	4.7
Jefferson	.6	.0	.0	6.0	3.1	6.4	1.8
McKinley	1.0	.0	6.0	9.0	16.0	13.0	3.2
Hamilton	11.12	6.0	15.16	5.3	11.5	.....	5.9
Ridge	2.0	.0	.0	.0	.....	.....	.6
Gates	2.2	2.8	3.0	6.8	26.6	18.7	5.8
Average	2.6	3.1	5.0	5.5	12.7	13.3	3.9

It may be noted that there is a wide variation among the schools in the proportion of failures in several subjects. In the Jefferson School only 4 per cent of the first grade failed in arithmetic, while in the Franklin School 25 per cent of the first grade failed in that subject. In the Jefferson School 3.1 per cent of the seventh grade failed in arithmetic, while in the Gates School 26.6 per cent of the seventh grade failed. In the Hamilton School 15.8 per cent of the seventh grade failed in reading, while in four other schools there were no failures in reading in that grade.

Among the remedies to reduce the number of failures and the amount of retardation, the following may be suggested:

1. A course of study better adapted to the needs of the children.
2. The elimination of formal arithmetic in the first grade or the adoption of a better and more concrete method of teaching it.
3. The reduction of the amount of technical grammar in the seventh and eighth grades.
4. More and better supervision.
5. The advancement of the teacher with the class for three or four years. Much time is wasted by teachers at the beginning of each term in getting acquainted with new pupils. Few of the teachers know what the children in the grades below study, or how well. If teachers were advanced with their classes for three or four years they would become intimately acquainted with each pupil, and would not be teaching merely first grade or second grade, but teaching children.[1] This plan also would permit children to be grouped differently in different subjects.
6. The organization of a summer term for children who have failed in one or two subjects. In cities where summer schools are maintained about 75 per cent of the children who fail in one or two subjects at the close of the term and attend summer school make up the work.
7. Children in the primary rooms should be divided into three or four groups instead of two. The slow-moving pupils should be in one group, more rapidly moving pupils in another, and so on until about four groups have been formed. If there are two first grades in a building, eight groups can be formed, so that there will be only an interval of about a month between each group. A child need not then be held until the end of the term and required to repeat a half year's work. He can be dropped back to the next lower group when he shows that he can not keep up with the group that he is in, or if he shows special ability, he can be advanced to the next higher group. This plan does not cause a collection of the dull pupils into a class by themselves from the fact that the best pupils from below are allowed to rise as fast as their ability can carry them. Bright pupils are continually added to the different groups. In every group there will be its quota of bright pupils, some leading the class and some just sustaining themselves in it, having recently joined it.

[1] See U. S. Bureau of Education Bulletin, 1915, No. 42, The Advancement of the Teacher with the Class.

RECORDS AND REPORTS.

One of the fundamental principles of school management is that only those records and reports that contain data usable for administrative purposes should be made. If the teachers are required to record too much, they tend to become mere clerks and to lose sight of the art of teaching. In Elyria, however, there is too little rather than too much attention given to records. No permanent records are kept in the elementary schools to show the entire school life of each child. Steps should at once be taken to prepare a card-record system to show for each child the number of days attended during the year, scholarship, etc. The following form, which was recommended by the department of superintendence of the National Education Association, is suggestive:

[Face.]

1. Last name	2. First name and initial	ELEMENTARY SCHOOL RECORD SYSTEM—ADMISSION, DISCHARGE, AND PROMOTION CARD.
3. Place of birth	4. Date of birth / 5. Vaccinated	To be kept for every pupil and sent with the pupil when he is transferred to any school, either public or private, in the city or outside the city. Great care should be used to have the names COMPLETE and CORRECT. Write all dates as follows: 1912-9-25.
6. Name of parent or guardian	7. Occupation of parent or guardian	

8. RESIDENCE. (Use one column at a time. Give new residence when pupil is transferred.)	9. Date of discharge.	10. Age. Yrs.	Mths.

When a pupil is permanently discharged to work, to remain at home, or because of death, permanent illness, or commitment to an institution, this card is to be returned to the principal's office and a full statement of the cause of the pupil's discharge is to be made in the blank space remaining above.

(over)

[Reverse.]

ELEMENTARY SCHOOL RECORD SYSTEM—PROMOTION RECORD.

This card is to pass from teacher to teacher or from school to school as the pupil is promoted or transferred. It is to be filled out and sent to the principal's office when any change is made requiring a change in the office records. It is then to be sent to the teacher who has the pupil.

a School	b Date of admission.	c Age Sept. 1. Years	Months	d Grade	e Room	f Days present	g Health	h Conduct	i Scholarship

(over)

The card would be improved if it contained on the reverse side a scholarship record by subjects.

In the high school a permanent record for each pupil has been kept in a large book. A card system or a loose-leaf ledger would be more convenient. This card or ledger should show essentially the same facts as the card for elementary schools.

In the grades and in the high school it is the custom to send monthly report cards to parents, showing days attended, times tardy, grades made in each subject, etc. A bimonthly report would be as effective as a monthly report. Special reports asking cooperation should be sent parents whose children are showing signs of weakness. This special report should state causes of the pupils' falling behind in their work. Or, better than a written report in serious cases, would be a personal visit. If reports are sent out each month, much time is wasted by the teachers in compiling them. A teacher no sooner has one set of reports made out than she must begin another. There should be a breathing spell between reports. There should be fewer reports, or some one should be employed to record the grades. In a large high school it is a difficult problem to keep track of pupils during the day. There must of necessity be some way for teachers to

report to the principal's office whenever a pupil is absent from her class. The Elyria High School seems well supplied with blanks and cards for this purpose. Each teacher is provided with a blank on which she reports the hour a pupil is absent from her class. If a pupil "cuts a class" he is discovered. A form is used for pupils who wish to consult with the librarian or with a teacher in another room. By the use of this ticket it is definitely known whether a pupil has loitered on the way to or from the library or other room.

There should be more data regarding the children of Elyria in the office of the superintendent of schools. At the close of each term there should be sent him from each room the number of failures by grades and by subject and causes, distribution of leavings and withdrawals by ages and grades and causes, and distribution of attendance.[1]

For the teacher to furnish the superintendent with the data needed will require but little time. All tabulation should be made by clerks in the superintendent's office. He and his assistants should then interpret the data for administrative purposes.

The attendance officer should keep a file of the school census cards, as recommended in another part of this report.

It is also recommended that the superintendent each year issue a report covering the work of the year. In this report he should have data showing the exact conditions as regards attendance, progress of pupils, costs, etc.

SUPPLEMENTARY CLASSES.

Provision for exceptional children.—Provision for exceptional children is made in three special schools or classes: One for crippled and convalescent children, one for subnormal children, and one for motor-minded boys who do not take sufficient interest in the academic work alone.

A school for crippled and convalescent children is conducted in the city hospital. Seven children of varying ages and attainments were in attendance when the survey was made and the city course of study was followed. An experienced primary-school teacher was in charge. The children took great delight in their work and were making commendable progress. This school is obviously a boon to children who are either temporarily or permanently kept from attending the regular schools by their afflictions, and the city and State deserve high credit for maintaining it.

The schools for backward children and for motor-minded boys are both conducted in the old high-school building. The backward children, of whom 12 were in attendance, are in charge of a woman who has had special training for her work. She teaches the children in

[1] For a full discussion of records and reports, see U. S. Bureau of Education Bulletin, 1912, No. 8, Report of Committee on Uniform Records and Reports.

small groups and adapts the work well to their capacities. While some are receiving instruction in reading, writing, spelling, language, arithmetic, or geography, others are engaged in studying or in sewing, knitting, weaving, crocheting, making baskets, or caning chairs.

The school is in session from 8.30 to 11 a. m. and from 1 to 2 p. m., with a recess from 9.45 to 10. On the program all the forenoon time is set apart for work in the academic subjects and only the one hour in the afternoon for handwork. Although some handwork is done incidentally in the forenoon, it seems clear that too much time is spent on the academic subjects, in which the pupils are but little interested, and not enough on the handwork in which the pupils are much interested. Shopwork in manual training for the older children comes only once a week and can not now come oftener because the shops are occupied by the high-school pupils and by the vocational class.

The teacher in charge realizes that the facilities for manual training and handwork are inadequate and has requested more. Her request should be heeded.

This class not only does good work for the pupils that are in it, but it assists the schools generally by relieving the teachers of those pupils who can not keep up with the regular work. In this respect the class does not reach far enough. Unduly backward children were observed in a number of schools, and some of the teachers voluntarily spoke of their presence. These were usually remote from the building in which the special classes are housed. Elyria should provide an additional class for backward children.

An elementary school population of 2,100, such as Elyria's, would ordinarily be expected to furnish about 30 children sufficiently backward to require special instruction. Not more than 15 of such pupils should be assigned to one teacher.

Chapter IV.

SCHOOL BUILDINGS.

THE WASHINGTON SCHOOL.

The Washington or Old High School building was very badly planned, but apparently was well constructed as measured by the standards of its time. It is now in many respects unfitted for school purposes and should either be put in a more sanitary condition by thorough renovation or reconstruction or in part abandoned. If it is decided to reconstruct the building the roof should be taken off, all the inner walls should be taken down, and a competent architect familiar with school needs should be asked to replan and reconstruct it. The lighting in most of the rooms is bad, the rooms are impractical in size and shape, and the curiously constructed assembly room is dark. Any plan of reconstruction which will retain the outside walls will necessitate the disuse of the space in the center of the building except for halls, and these will be of necessity unnecessarily wide. The building is too wide in either of its main axes for two classrooms and a hall between; but an inner room could not be properly lighted and ventilated, and this waste will be necessary. Under the laws of Ohio, if a general reconstruction is undertaken which would affect or change the vital features of the building, it is necessary to comply with the present law in full. The statute says:

> It shall be unlawful for any owner, officer, board, committee, or other person to construct a * * * schoolhouse * * * or to make any addition thereto or alteration thereof, except in case of repairs without affecting the construction, sanitation, safety, or other vital feature of said building or structure, without complying with the requirements and provisions relating to this act.[1]

Because an unusual number of heavy brick walls were built from the basement to the attic and the support of the roof distributed rather irregularly in certain parts, it would be a difficult task, though possible, to support the roof when some of the supernumerary walls are taken down to make a greater number of classrooms. Furthermore, the location of the windows in the outer walls is bad, and if the proper lighting were provided, the appearance of the build-

[1] Laws of Ohio, vol. 102, 1911, p. 580.

ing from the outside, which is now pleasing, would be marred. The best thing to do is to tear the whole building down and use the stone, brick, and other salvage materials to construct an entirely different type of building. If this can not be done now and it is desired to get the most service out of the building at the least cost, the present hot-air heating system should be taken out and the classrooms and offices should be fitted with indirect-direct steam radiation, steam for which can possibly be supplied from the new technical building. The laws of the State demand, when steam heating is used, that what is known as the "split system" shall be used; that is, a part of the radiators shall be situated in the classroom and a part in the basement, through which fresh warmed air may be forced through ducts leading to the rooms.[1] In case this would overtax the boilers in the latter building, it would be necessary to install an independent heating system in the old building, and this would introduce the difficulty and the necessity of reconstructing a part of the basement, which is now in a very bad and insanitary condition. It would be poor economy to install in this damp basement an expensive heating plant, and the State laws would not permit the installation except in a thoroughly fire-proofed room.[2]

Whatever plan is adopted, it will be necessary, both for the health of the children and the safety of the building, to render this basement dry and to throw into it more light and sunshine.

There is another plan which might be considered to make this building further useful. The room immediately back of the stage can easily be made into a serviceable recitation or laboratory room, and one or two of the small rooms on the east side could be transformed at small expense into recitation rooms, which would always be useful for the advanced classes in more or less specialized work. It is possible also to fit up at comparatively slight expense, if the authorities of the State will permit, a room in the attic in the central part of the building. This would be especially adapted for mechanical or free-hand drawing. If this is attempted it would be necessary to make a safe passageway from the top of the steps to this room mentioned, as well as to render the room safe and warm in cold weather.

There is only one effective way to make the basement of this building or that of any other school building dry, and that is to surround it with an open-jointed farm-tile drain, set lower than the foundation walls, and at a distance of approximately 6 feet away. Naturally this drain must have a clear outflow either to the surface of lower ground or else, where permitted, trapped into a sewer. The method of placing this drain is as follows:

[1] Laws of Ohio, vol. 102, 1911, p. 630.
[2] Sec. 12600-48, p. 622, Laws of Ohio, 1911.

1. Dig a trench about 6 feet from the outside walls and at least 6 inches deeper than the foundation walls—a foot would be better. The purpose is to conduct all ground waters away from the building and to keep the footings of the walls from standing in water-soaked ground from which moisture would be carried by capillarity into the walls above. Once the ground under the walls and basement floors is thoroughly dry no more trouble will be experienced if the drain is set properly. Naturally the tiles must be set carefully, so that the water which will gather in them will be carried off immediately.

2. Well-burnt 4-inch farm-drain tile, which should cost from 3 to 5 cents a foot, will be large enough.

3. If a shovel full of medium coarse gravel be carefully poured over each joint after the tiles have been set and fastened on the bottom of the drain, no broken stone or cinders need be put over the tiles.

4. In undertaking to drain deep basements it will be found necessary to run a level from the proposed outlet of the tiles to all points in the coarse of the drain about the building so as to be sure that it can be deep enough and have sufficient fall in all parts to cause the water to flow away readily.

5. It is far better to put a drain around a building than to put it under the floor or against the walls. By the use of the former method the water is caught before it is forced under the building and the dangers of damp walls and floors are greatly lessened.

6. The joints between the tiles must not be cemented together or joined any closer than necessary to prevent the infiltration of sand or silt.

WORKMANSHIP.

The newer buildings, with perhaps the exception of the Gates School, show in various parts that the workmanship was not of a high grade. The cement work, plastering, finishings, and plumbing in many instances do not show good work. It is difficult at times for boards of education to command the means to do what they are both willing and anxious to do; but great care should be taken in drawing specifications, and then it should be demanded unflinchingly that the work when completed shall be an exact fulfillment of the contract. Furthermore, the best economy in permanent school buildings demands good material and the best of workmanship, for where hundreds of children spend a great part of their working hours there is bound to be hard usage.

As an example of poor workmanship or improper specifications, or both, the cement floors in the McKinley School and the cement work in the Technical High School may be cited. Other buildings show the same defects. There is a great wear and tear on basement

floors, especially when the only toilets available are located there. The Technical High School gets harder usage than any hotel in Cleveland, for its daily attendance is greater and the expense for its care is small in comparison; hence the need for great care in construction. An example of bad planning occurs in the plenum chamber of the Technical High School building. That plenum chamber consists of a set of large tunnels and passageways under the lowest floor of the part of the building devoted to classrooms. Into this set of caverns a medium-sized fan delivers tempered air, and is supposed to put it under sufficient pressure to force it equally into the classrooms without the loss of its heat. Theoretically and practically this is not possible in cold weather. There should have been built at a suitable place under the building a plenum chamber of the proper dimensions to receive the air, and from this all the ducts leading to the rooms should emerge. The ducts should be properly covered to prevent the loss of heat, and the plenum chamber should be air-tight to keep the air within it under pressure and to insure its rapid exit into the rooms. As it is, the space under the lowest floor is absorbing most of the heat in cold weather, and it seems certain the fan is unable to meet the demands on it. Adequate tests should be made during cold weather to determine the best method of correction. Perhaps the least expensive and most practicable plan would be to install additional radiators in rooms and halls and depend on the windows for some of the ventilation. This would be theoretically erroneous advice if the rooms were supplied with sufficient fresh warm air, but since this is not true some other method of heating and ventilation must be provided.

The down spouts from the eaves troughs should have been set in the walls to prevent them from filling with ice when the snow partially melts on the roofs in midday and freezes in the night or afternoons. The drains from outside areaways and stairways are improperly constructed and are doubtless overtaxed during heavy rains or thaws. These and many other details show the lack of careful planning or poor construction. Such faults should be prevented in future building.

THE SELECTION OF SCHOOL GROUNDS.

The selection of a good site for a school building is extremely important. Comparatively few boards of education realize how intimately the size, shape, position, orientation, and contour of a school lot may affect not only the sort of building it is to carry, but somewhat intimately the whole educational usefulness of the building. Satisfactory lighting for classrooms can only be had when the windows face either east or west. Suppose, therefore, that a lot is chosen fronting a street or roadway running north and south.

The lighting could be properely arranged under these conditions only if the broad sides of the building should front east or west; hence a whole side of the building should open toward the street. This might be all right provided the lot were deep enough from east to west to set the building well back from the street, otherwise the noise and dust from the street would be a constant menace to the quiet and healthful condition of the classrooms. If, on the other hand, a lot be selected fronting a street running east or west, then the end or narrow part of the building would have to face the street and the windows on the broad sides of the building face east or west. Generally speaking, this is the best direction in which to face a building. It permits the main entrance to be situated in one end of the main hall so that the classrooms may be located on either side of this, opening to the east and west for their light. This, then, would shield the rooms somewhat from the noise and dust of the street and allow the long axis of the building to run at right angles to the street. Furthermore, it is advisable, if possible, to select a lot on the south side of a street running east and west rather than the north side. The reason for this preference is that the playground back of the building will receive the sun better and be drier and more acceptable as a playground than if it were in shadow of the building.

The necessity of selecting a lot which can be easily drained is illustrated by the location of the high-school building. Here, because the basements are deep and the ground nearly level, the difficulty of placing the tile drain about the buildings sufficiently low to keep the foundations and basements dry is evident. If a playground runs off into low ground which receives the drainage from contiguous territory, another difficulty is encountered. All considerations, therefore, demand a lot which lies higher than the ground about it at least in one direction, with ample opportunity for thorough subsoil drainage.

Large grounds for school buildings are important, even though the children must walk for a greater distance. Play is one method of teaching children, and it is their legitimate right. The games of children meet the instinctive needs of child life. Through their variety they have given the children almost an unlimited opportunity for exercise which tends to develop all parts of the body. Instinctively boys have taken to those games which demand strength and fleetness, while girls' games are more individualistic and less strenuous, especially upon the muscles of the shoulders and back. Besides, games are the most democratic institutions about our schools. The hero of the playground is not measured by any family or social relations, but by his ability to surpass in playing the game according to rule. They learn to work together, to cooperate as a team, and to

adjust their tempers. It is poor economy to stint children with scant playgrounds and to fail to give them the needed opportunity for cooperative effort. The problem in America is to learn to subordinate individual desire when this runs counter to the best institutions of the group. Well-regulated and well-ordered playgrounds are fundamentally necessary for an education in a democracy which we are striving to attain. It is better to economize in many other things rather than in spaces for playgrounds. Five or six acres of ground around the high-school group of buildings would afford space for tennis courts, baseball diamonds, and football grounds, and would add greatly to the educational poportunites. A playground at a distance from the school building is better than none, but the lack of necessary supervision and care always detracts from the value of such games as may be organized. Furthermore, shower baths, lavatories, and drinking water are more easily supplied at the school building than at a detached playground. All successful democracies have counted heavily on games and plays as a fundamental part of the preparation for citizenship. A boy who has no opportunity to learn to play at school is deprived of one of the essentials of education, both physical and social.

A school lot, if possible, should always be away from busy thoroughfares, from business houses, from railways and noisy car lines of any description. It should be a quiet, clean, safe spot where children can be gathered together, free from disturbance and from the dirt and dust of modern commercial life.

The Elyria school board is to be commended for its policy of making a careful study of the city and anticipating as far as possible the needs in its several districts by going into the market early and selecting the best locations, and thus forestalling exorbitant prices usually demanded for school grounds.

By way of recapitulation it may be said that school grounds demand the following conditions:

1. They should be large enough for ample playgrounds.
2. They should be dry and capable of thorough underdrainage.
3. They should preferably face a street running east and west and situated on the south of the street.
4. They should be away from busy thoroughfares, manufacturing places, street railways, steam railways, and any other disturbing or injurious environment.
5. The soil should be capable of producing lawns, flowers, and trees, and suitable for playgrounds.

PLANNING SCHOOL BUILDINGS.

When new buildings are to be constructed it is desirable that a committee of teachers, with the superintendent as its chairman, be selected to cooperate with the architect in working out every detail of the plans. The architect should make pencil sketches for preliminary studies until full agreement is reached between the committee, the board, and the architect. Before final plans are made it would be well to submit the preliminary plans to specialists in this field, and then, of course, to the State authorities for approval. The architect should never be allowed to make final drawings until these preliminary studies are carefully made and approved by all concerned. Teachers know, or should know, what conditions are demanded for comfort, convenience, and health in school buildings, and they have a perfect right to be heard. They know more about schoolhouses from the standpoint of function than architects do. Architects should be held responsible for safety in construction, for honesty in workmanship, for wise specifications, and for knowledge of markets and labor, and for planning to meet a given budget and to eliminate waste space. An honest and capable architect can always save more than the amount of his fees. School architecture is unlike any other line of building, and demands special preparation and a true conception of the purpose of education.

SIZE OF CLASSROOMS.

The classrooms in many of the older buildings of Elyria are unnecessarily large. The policy seems to be to set the number of pupils for classes in the elementary school at about 40. Naturally, high-school classes will vary with the subjects taught and with the advancement of the classes. A classroom 31 feet long, 23 feet wide, and 12½ feet high is large enough for a class of 40 elementary pupils; to make it larger than this not only increases the initial cost, but adds to the expense for upkeep, heating, and cleaning. A room of this size is easily lighted from one side, brings the teachers and pupils sufficiently near together for easy instruction and good control, and tends to prevent the mistake sometimes made of burdening the teacher with too large a class.

Classrooms in high-school buildings should be of varying sizes, for it is poor economy to teach a small class in advanced Latin, for example, in a large room. On the other hand, classes in first-year English, mathematics, and history require a room large enough for from 20 to 30 students, which should be the maximum size of a class. High-school children usually pass from room to room for their recitations, and programs can be made so that the smaller rooms can be used for the smaller classes and the large rooms for the larger classes.

It is a mistake to make classrooms higher than 12½ feet from finished floor to finished ceiling. With rooms of the size indicated good light and ventilation can be obtained with a ceiling of that height, money can be saved in construction, and the fewer steps in the stairways would lessen the danger in case of fire and relieve adolescent girls in a measure from what might be a severe strain. The newer buildings are approximately correct in this particular, and no further emphasis need be placed on this point.

CLOAKROOMS.

The various methods employed in providing cloakrooms are in general satisfactory and no suggestion or criticism seems necessary. Usually it is better to open cloakrooms for the elementary classes into the classroom only. Where fans are used, an exhaust duct should be set well above the clothing, so that these rooms may be ventilated directly outward and not into the classrooms. The plan of opening cloakrooms into classrooms makes it possible for teachers to prevent many mistakes in clothing, umbrellas, lunch boxes, etc. It must be remembered that moral standards of children are in the making, and unnecessary temptation, to say the least, is a useless risk.

COLOR OF WALLS.

Walls or wainscoting below the level of the children's eyes when seated should be of some nonreflecting color, as a neutral brown. This harmonizes well with any other coloring and is unoffensive and not easily marred. The walls above the level of the eyes of children, save, of course, the blackboard spaces, should be a light shade of gray or slightly buff gray. The color of the ceiling should be somewhat lighter, but so applied as to eliminate blotches of high light that might cause trouble. Hallways should always be of a lighter color, in order to prevent the absorption of light. A good plan is to use white-enameled brick for a rather high wainscoting and white plaster for the walls and ceilings above. The halls of the McKinley School are too dark. The wainscoting is made of glazed brownish brick and the ceiling and walls of other shades of brown or green. The small rooms back of the landings of the stairways shut out much of the light. The condition would be improved at little expense by painting the walls and ceilings a clear white. If that is not sufficient, more windows should be placed in the wall between the landings and the small rooms back of them. It is not advisable to use wall paper, especially dark paper, in classrooms. Such rooms are more wholesome with the proper plastering, refinished when necessary with a good quality of kalsomine. Most wall paper absorbs too much light, is easily defaced or soiled, and in a short time will present an unkempt appearance.

FLOORS.

In the main the buildings of Elyria, especially the newer ones, have good maple floors, and with proper care they should prove entirely satisfactory for an indefinite period. Such floors ought to be scrubbed rarely, and then with as little water as possible. If these floors are frequently scrubbed, as now seems to be the practice, the alternate shrinkings and swellings will cause cracks to open and fill with dirt, the boards to cup and to loosen from the joists below. The pores of the wood should be closed with some unobjectionable filler and the floor should be surfaced with floor wax to prevent undue wear and tear. It appears that the Ohio law does not prohibit the use of hot linseed oil in such quantity as the floors will fully and readily absorb. After this is dry the floor should be waxed and polished and daily swept with some acceptable sweeping compound or with a combination of clean, fresh sawdust properly dampened with water and wax or a light nonodorous oil. To this mixture may be added also a portion of salt or clean, white sand. Good brushes should be supplied to all janitors with which to do the sweeping. They are now complaining of lack of these. Sticky oil as a floor dressing is objectionable in many ways and it is not to be recommended. The wood floors in general, under the present method of treatment, are rapidly deteriorating and will soon be unsightly and more and more difficult to keep sanitary. It is always poor economy to neglect the floors of school buildings, for they at best receive hard usage and are a vital element in the health of children as well as in the general appearance of the building.

The method of treatment which has been suggested will not only preserve the floors but will prevent much of the fine dust from lifting into the air and falling again on desks, books, and all the furnishings of a schoolroom. While it is impossible to keep down all dust, it is very important to reduce this menace to health to the lowest possible point. Dusting should be done with so-called dustless mops and brushes, rather than with rags or any sort of a feather duster; for these latter only scatter the dust, again to cause trouble.

Much wear and tear on floors can be prevented by well-cared-for playgrounds, especially if cement walks are constructed all about school buildings. The children would gather less mud on their shoes and carry in less sand and fine gravel to cut and grind out the floors. Plenty of scrapers should be furnished, and the children should be trained to clean their shoes carefully. This habit will be useful through life. Without some device to hold and balance themselves, children can not clean their shoes well. Stakes or rods or a pipe railing properly placed for the children to hold would be very useful.

LIGHTING OF SCHOOL BUILDINGS.

The best natural illumination for classrooms is obtained through windows opening toward the east or west. Offices, libraries, laboratories, manual training rooms, domestic science rooms, and other rooms for similar purposes may have south light, while drawing-rooms and art rooms in general are well situated when receiving north side light or north skylight.

There are several reasons for preferring east or west light for classrooms, and two of the most important of these may be stated as follows:

East exposure on clear days affords opportunity for the warming and purifying influences of sunshine in the rooms before school time, and also allows shades to be completely rolled up as soon as the sun is high enough for the direct rays of the sun to leave the desks nearest the windows.

A west exposure receives the direct rays in the afternoons for only a short time before school closes and on sunny days shades will have to be used at most about an hour and a half. Immediately after school adjourns for the day these shades should be rolled up and left so until the direct rays of sunlight come the next day. Such management of shades will greatly aid in keeping classrooms wholesome.

In this discussion it has been assumed that classrooms are provided with unilateral lighting; that sufficient glass area is provided; that the windows are set in the correct place, and that the classroom is of the proper size and proportion. Most of the old buildings were constructed with windows on two sides of classrooms, and this was done more for the sake of outward appearance than for the comfort and health of pupils and teachers. Architects have been compelled to set themselves to the task of planning, first for usefulness and for the best outside appearance afterwards. A good illustration of unilateral lighting is the Gates School. Unfortunately, the windows in this building while properly grouped are set so low that in most of the classes the children's eyes are in a strain because the reflected light from without shines directly into their eyes. The lower part of the sash of all classroom windows should be above the level of the eyes of the children when they are seated at their desks. The windows in the rooms for the first grades should never be set lower than 3½ feet above the floor, and those for all the higher classes should be set at least 4 feet above the floor.

The windows of most of the buildings are long enough to reach near the ceilings, and this plan should be consistently followed. In unilateral lighting the ratio of glass to floor surface is usually stated as one to four, one to five, or one to six. The variation is dependent on latitude, local environment, and general weather condi-

tions. In Elyria where there is apparently not enough smoke to be troublesome and no hills to raise the horizon line, properly set glazing in the ratio of one to five ought to be sufficient. We suggest that a room 31 by 23 by 12½ feet, which is large enough for 40 elementary school pupils, would be well lighted by five windows 8 feet long and 3½ feet wide, set 4 feet above the floor.

SEATING.

Bilateral lighting of classrooms makes the problem of seating much more difficult than with unilateral lighting. The law of Ohio specifies the width of the aisles, both next the window side and between desks. Possibly this is in general a wise precaution, and yet the specification for the aisles next the window seems to be unnecessarily large. When buildings are properly constructed and windows set as they should be, an aisle 18 inches wide next the windows, free from all obstructions, is sufficient. Of course if buildings are poorly constructed and the windows are badly fitted, so that much cold air blows through, it is better for the children to be at a greater distance from the windows. It is better to arrange the desks in rows parallel to the longer axis of the room, provided, of course, this does not compel the children to face the windows. The reason for this demand is to prevent the children furthest from the windows from having to work in poor illumination. The main light should come from the left of the children when seated at their desks, so that they will not be troubled with the shadows of their own bodies or hands on their books or paper. If children were generally left-handed, it would be proper for the light to come from the right side. In a corner room with windows on both outer walls, it is extremely difficult either for the teacher or the pupils to be placed so that one or the other will not be forced to face glaring windows, for usually in such rooms the windows on one side are insufficient for light when the others are closed. Moreover, cross shadows are produced, and these are unnecessary distractions. Generally speaking, no seat should be further from the main source of illumination than a distance equal to twice the height of the top of the window above the floor. For example, if windows 12 feet high are placed in one side only and with the longer axis of the room, then the room may be 24 feet wide. It is better, however, to group the desks as close to the window side of the classroom as possible, taking into account all conditions. Where 40 children are to be accommodated in one classroom, usually the best arrangement is five rows of desks with eight in each row. This will give sufficient space near the blackboard for workers and will also bring the children into the best light available.

In some of the primary classrooms where the desks are small they are grouped far to the rear of the classroom, with a very large

space in front for the teacher's desk. There are some advantages in this plan, but there are also some serious disadvantages. One of these is that it removes the children so far from the teacher's blackboard that it may be very difficult for some of them to see and understand the work she places there. A more serious difficulty is that when the children are so far in the rear, even with unilateral lighting, too much light shines into their faces. It is sometimes difficult, too, for the children to understand what the teacher says and for the teacher to understand the children. Of course, there is some advantage to the teacher to be able to bring the children before her in groups for certain exercises or recitations. This, however, does not fully offset the difficulties enumerated.

Those who set the desks should be directed to put them at a minus distance apart; that is, if a vertical line is dropped from the edge of the desk toward the floor it should cut the seat about 2 inches from its front edge. This, of course, should vary somewhat with the style of desks used. The purpose of this is to give the children the use of the back rest while they are busy at their work.

In the study room of the Lincoln School the desks should be turned toward the north end of the building with the left side to the west. This would necessitate closing the windows on the north side by opaque curtains and keeping them closed; but this arrangement would certainly bring great relief to the students, especially to those students who are farthest from the light and have to work in their own shadows. The desks are now placed so that the backs of the pupils are to the west, which is the main source of light.

BLACKBOARDS.

There is comparatively little to be said regarding blackboards except to commend the wisdom of the board in installing a good quality of slate. In certain buildings, however, the blackboards are not set at the proper distance above the floor. Generally speaking, blackboards for the first and second grades should be not lower than 26 inches from the floor; for the third and fourth, 28 inches; for the fifth and sixth, approximately 30 inches; and for all other grades, 3 feet. If blackboards are set too low the children must kneel on the floor or else their writing is done under great difficulty.

Some of the slate panels were badly set and have loosened from their backing, thereby making uneven joints. Such a condition is troublesome, because in the hands of children erasers are likely to strike the uneven joint, fall to the floor, and scatter dust in the room. Very careful supervision should be given to workmen who are engaged in installing blackboards to see that the panels are all fastened securely to the backing and that the joists are true and smooth.

Some of the buildings are still using composition boards, and these seem to be in a fair condition, but in the long run such boards are more expensive than good slate, for they will constantly need repairs. Besides, composition boards after use for a time wear sleek, and are liable to reflect light in such a way as to make the work on the board illegible from some parts of the room. Good slate is free from this defect, and if properly cared for will last indefinitely. It is good economy to use the quality of slate that is installed in most of the new buildings.

HEATING.

By reason of the fact that the buildings were examined when no heat was needed the only information we are able to get concerning the effectiveness of the heating systems was derived from janitors and teachers and from a general examination of the apparatus. All the newer buildings are supplied with steam-heating systems, while some of the older buildings use hot-air systems. This was to be expected, for much progress has been made since the old high school or the Ridge Street building was constructed. Certainly the low-pressure steam heating is best for winters as cold as those at Elyria. With good boilers well set, sufficient radiators properly placed and equably balanced, and with a satisfactory system of thermostats kept in good repair, there should be little trouble in getting sufficient heat.

It may be of some use to suggest that since the water pressure in the city is not very high at times the air pumps supplying the pressure tanks for the thermostats may not give the pressure needed to handle the dampers effectively. It is easy to learn if this is true.

Complaint was made by the janitors at several buildings that some rooms were insufficiently supplied with radiators. This was true especially for the Technical High School, the Gates School, and one or two others. Sometimes ineffective heating is due to insufficient discharge of condensations rather than to a lack of radiating surface. At the Gates building are some very long wall-type radiators, which at best are not very effective. They are so set as to suggest slow drainage, and that would, of course, result in smaller steam capacity. If this be the source of the trouble there, it can be easily remedied. The deficiency at the high school seems to be lack of sufficient radiating surface, especially in the halls and assembly room, because the heat from the tempering coils in the basement is largely absorbed in the cavernous plenum chamber below. It would be possible to meet the deficiency by adding to the indirect radiation by multiplying the tempering coils, but this would be losing much of the heat under the floors without effect in the rooms, and also of increasing the load of the fan through added friction.

If the heating problem is serious, the best thing to do is to employ a competent engineer and let him make a thorough examination during very cold weather and report the best means of correction.

None of the buildings is supplied with humidifying devices. A higher temperature, therefore, is required in the classrooms than would be required if the percentage of saturation were raised by introducing moisture. For example, in zero weather, when air outside has a high degree of saturation, if it is heated to 68 or 70° F., it expands to such an extent as to reduce the saturation to a very low degree. The air is dry and harsh and will quickly absorb moisture from the skin and respiratory tracts. As evaporation is always a cooling process, children and teachers are chilly in a room supplied with such air, when with more moisture they would be comfortable at the same temperature. In all future buildings some inexpensive and yet effective humidifying device should be installed; it would not only save expense, but it would add to the health and comfort of all concerned. A temperature of 66° when the saturation is as high as 51 per cent is more comfortable than 70° when the percentage of saturation is as low as 25, which is not at all infrequent in classrooms in cold weather.

VENTILATION.

Under the topic "workmanship," attention was called to the defects in the plenum-fan system of the main part of the Technical High School building, and no further discussion of the ventilation of that building is necessary here. Attention should be called, however, to the general need of more careful ventilation in the other buildings, especially when the fans are not running. At the time of the examination the weather was mild, and since little or no heat was needed the fans were not running. The ventilation of the classroom depended on the thoughtfulness of the teacher, and her knowledge of handling the windows. Most of the classrooms visited were badly ventilated, and the air was foul and unfit to breathe. Both teachers and janitors should be carefully instructed on the best methods of managing windows for ventilation. One of the difficulties incident to the use of windows for supplying the classrooms with fresh air is in the kind of shades used. Those teachers who have classrooms with a southern exposure are compelled to draw down the shades during all sunny days to protect the children from the glare of direct sunshine on their desks; hence they must open the lower half of the windows for ventilation, and the pupils are subjected to drafts. Those rooms with windows on the north have no need for shades, and those supplied ought to be removed, unless the teacher is compelled to face the windows. Rooms depending wholly upon east windows have need for shades in the early part of the day only, and after the

direct sunlight passes, the teachers should be instructed to roll up the shades, both for the sake of light and in order that the sash may be drawn down from the top for ventilation. Classrooms with west windows only should have the shades rolled up until the sunshine begins to be troublesome, and as soon as school closes they should be again rolled up until the next afternoon. This will not only insure better light during school hours, but will also afford an opportunity for the sunshine to sweep the room and purify it after school has closed for the day.

Many of the top sashes have no catches into which window sticks may be inserted to raise or lower the sash. This defect should be remedied at once and all the windows made easily manageable. Teachers are very busy people, and women are not able to handle windows as easily as men can. Either a type of shade should be used which permits easy adjustment to all parts of the window openings, or else those now in use should be fastened to the bottom of the casings so that they may be pulled up from the bottom rather than down from the top. At any rate it is essential to the health of teachers and pupils that the ventilation should be better than it was when the buildings were examined.

Much has been said recently regarding the value of fans for driving fresh air into classrooms. The State code specifies or permits the use of fans and presumably assumes that sufficient fan power will be supplied.

Unfortunately, many school boards throughout the country have failed to supply sufficient fan power to meet the theoretical requirement, not to mention practical demands. In the main, and especially in the larger buildings of Elyria, the fans are too small to drive in sufficient fresh air and keep it in motion in the classrooms. Under these conditions teachers must either keep the children in impure and often superheated air, or else resort to open windows for help. If some teachers do this and others do not, then the balance in pressure is destroyed, and some rooms are profiting at the expense of others. If fans are to be used, by all means put in fans too large rather than too small, for the latter endanger the health and comfort of the children. The most expensive thing in school work is bad air.

DRINKING WATER.

The board of education is to be commended in supplying sanitary drinking fountains easily accessible to the children, where they may have good water without danger of contamination. The only suggestion to be made with regard to this service is that fountains for the smaller children be set at the proper height, so that they may drink without climbing on boxes or stools and without having to stand too erect. Thoughtful care of the little folks demands adapta-

tions to suit their needs. Appliances are frequently purchased without this care.

TOILETS.

The boys' toilet in the Lincoln School is in a very bad condition and should be remedied at once. One plan would be (1) to move the partition between the girls' and boys' rooms farther south, so as to add another window to the boys' room, and (2) to set the seats so as to face the windows and place the urinals under the windows, so that both the seat stalls and the urinals may have light and sunshine. The best of fixtures should be installed in both rooms, and the floor should be set with white tile or made of terrazo. Back of the stalls in the boys' room, if they are set as recommended, a small storeroom can be made, and a door into the boys' toilet should be opened from the passageway leading to the space where bicycles are now kept. All the walls should be thoroughly cleaned and either painted with white water-proof paint or set with white tiles. If another and larger room can be found in a convenient and private place in the building and supplied with sunshine, it would be far better to install new fixtures for the boys' toilet there, for, with the best adjustment possible in the room now occupied, and even with the enlargement suggested, it may be too short for a sufficient number of seats and urinals.

The partitions between the stalls are, in both the boys' and girls' rooms, unnecessarily high: they impede ventilation and make the rooms dark. Five feet is high enough for the partition in the girls' toilets and 5½ feet is high enough for those in the boys' room. They can be braced by teeing together rods from the front corner post to a rod or pipe running across the front, sufficiently high to give head room for the tallest students. This method is now in use in some of the buildings.

These rooms should be put in better condition, for they now invite defilement and careless usage. The toilet rooms in the Ridge School building and in the Jefferson building are also in bad condition and need remodeling and refitting. The rooms at the Franklin School, while not in such bad condition as those in the other buildings mentioned, are supplied with old-style furniture, set back to back, and the light and ventilation are insufficient. All these rooms should be renovated at the earliest possible date, and modern fixtures should be installed.

At this point it may be well to make some suggestions touching the proper location of toilet rooms and the best method of equipping them. First, the toilet rooms should have direct sunshine, and plenty of it, to keep them sanitary and light. Second, the stalls should face the light and never be set back to back; all parts of the room should

be open for quick inspection. Third, the best sanitary fixtures should be installed under guaranty, preferably direct individual washouts for the seats, and white porcelain urinals. Fourth, the rooms should be set in tile or terrazo and should drain to an outlet, so that the floors may be washed out every day after the close of school. Fifth, either an exhaust fan should be installed to discharge the air from the seat and the rooms as a whole into an independent duct leading to the outside through the roof, or else ample window ventilation should be afforded. Sixth, the sides of the stalls should be as low as privacy will permit and braced as indicated before. Seventh, the fixtures for the little folks should be of juvenile size and so placed that automatic segregation of the younger pupils from the older would take place. Eighth, a mechanic should be charged with the duty of keeping the closets in repair, and the janitor should be required to keep them in good sanitary condition at all times. Ninth, a private room should be supplied for the older girls, and in this a self-closing sanitary receptacle should be placed. For high schools, a nickel-in-the-slot machine from which sanitary napkins can be had has proved very acceptable. Tenth, toilet rooms need not be over 12 feet wide, for large rooms invite congregation, tend to prevent the sunshine from reaching all parts, make unnecessary labor in keeping them clean, and increase the initial cost. Eleventh, if proper privacy can be had, toilets should be installed on all the floors and not in the basements only. Twelfth, long narrow rooms with windows at one end, such as those in the Technical High School building, are not satisfactory. Finally, in order to set high standards of decency and decorum, especially amongst the boys, turn in the light and keep these rooms above reproach.

VACUUM CLEANING.

Vacuum cleaning devices for school buildings, properly installed and regularly used, are of great service in keeping floors clean, preserving them from the wear of sand and grit that are difficult to sweep up, and preventing the rise of dust in the air to settle again on desks and other school furniture. If, however, the attempt is made, as it has been in many places, to install a vacuum engine in the basement with ducts leading to hallways only, and depending on long hose connected with these to clean the classrooms, they prove unsatisfactory for the simple reason that the hose is so long and heavy that janitors can not or will not handle it. Besides, a long hose offers so much friction to the passage of the air that its suction power is greatly reduced and it is much less effective. The only proper way to install a vacuum cleaning device of this type is to put an opening in front of each room, so that a short hose will be sufficient. Under this condition the floors can be kept in almost perfect sanitary condi-

tion. When such a system is used regularly, school children suffer less from colds and are less liable to other forms of contagious troubles. Unless vacuum systems are correctly installed, strong enough to give vigorous suction, and used consistently, it is scarcely worth while to go to the expense of installing them. When they have failed to meet expectations, the failure has been generally due to false economy in installing apparatus too small and with inefficient piping.

JANITOR SERVICE.

The janitor service of the Elyria school department is properly on a civil-service basis. This means security of position so long as the service is of standard quality, and advance in wages when the work done either in quality or quantity increases. One of the most important officers connected with a school, especially an elementary school, is an intelligent, careful, and pain-taking janitor. His work is not confined to sweeping, dusting, and providing heat and ventilation, but there are literally scores of duties for him to perform which are not usually considered by those who employ him. Moreover, the machinery in a modern school building demands intelligence and initiative of a high degree. A janitor who is skillful with tools and has ability to construct needed devices, to repair minor defects in equipment, and meet all sorts of emergencies is a public servant who deserves appreciation and commendation. There are daily opportunities also for moral service which must be tactfully and wisely performed. No teacher in a school comes into more vital moral contact with the boys than the janitor. The janitor has a profession which should offer incentive for promotion and progress. It would be well to have regular meetings of janitors, for which specified professional programs should be arranged and better ways of doing their work discussed. Such a series of meetings might be organized into a sort of janitor school, to improve those who are in service, and to prepare candidates to enter the service. There are always better ways of doing things, and as new conditions arise new adjustments must be made. The programs should include lectures from the school superintendent, the inspector of buildings, health officers, plumbers, engineers, and also opportunities for the janitors themselves to set forth the special devices or methods which they find useful. They should have books and magazines relating to their duties, and a consistent effort should be made to develop a real professional spirit. Some janitors use more coal than necessary, through lack of understanding of combustion and stoking; others waste water, gas, and electricity; some are skillful in saving, and in making the most of conditions. If all such experiences were brought to light and examined intelligently and sympathetically, saving and better service

would result. Besides, a trade or profession which does not command intelligent interest will degenerate into a mere task, more or less loathsome.

During the time the buildings were inspected the janitors were uneasy and many of them were complaining of this or that. It is impossible to say whether these complaints were well founded or not. The janitors repeatedly volunteered the statement that it was very difficult to get the supplies they needed, or in case repairs were imperatively needed that relief came very slowly. There were no outward signs of disloyalty, but there can be no doubt of the uneasiness. Whether as a result of this general state of mind or other conditions we found the janitor service in some instances not of the hightest standards. In a number of buildings, for instance, we found the fresh-air intake dirty and used as a storage place for oil cans, brooms, mops, and the like. It should be clear even to the most thoughtless that this space should be kept scrupulously clean, for through it the fan is drawing the air for the classrooms. Any dust or odor allowed to gather there will be driven into the classrooms to the detriment and discomfort of the teachers and children. Besides, any material stored in these intakes will be an obstruction to the passage of the air and hence lessen the effectiveness of the fans. Lack of storage room was frequently given as the reason for thus using this space, and there seemed to be in some buildings a real lack of storage space for necessary supplies.

It would be well to provide some central storage place where all unused or broken furniture supplies in use might be stored until needed. Furthermore, a good deal of combustible material would thus be removed from basements and fire hazards would be reduced. In every new building a fireproof closet should be provided in the basement for the storage of paints, oils, and mops which are more or less saturated with oil or wax. It was observed that a fire had started from such materials in one of the closets in the Technical High School. Caution in all things of this sort is of more value than fire escapes.

The grounds about the school buildings were not in good condition. It is hard to understand why ash piles should be banked up against the west side of the old high-school building or in the court of the new Technical High School building. These piles keep the ground and walls damp and are not in keeping with the neatness for which the schools strive. Some of the playgrounds look ragged and unkempt. A systematic attempt ought to be made to put them in order immediately. A number of the buildings leak and need repairing. A janitor can not keep a neat building when leaks mar walls, ceilings, and floors. The roof on the Jefferson building is in poor condition. It not only leaks, but seems rather weak and unsteady. It should be examined for the sake of safety.

Chapter V.

HIGH SCHOOL.

I. PROGRAM OF STUDIES.

The program of the studies of the high school at Elyria, Ohio, is divided into three curricula—the classical, commercial, and industrial. The classical curriculum is described as "a straight road to the college of arts. Colleges generally require four to six credits of foreign languages, Latin or German, or both, one or two of history, two of science, two or three of mathematics and three of English: the remaining units may be elected, as shown below, making a total of 15." The commercial curriculum aims "to give a practical business course and to broaden the mental horizon by valuable supplementary academic studies." The industrial curriculum, according to the printed course of study, leads "directly to such technical schools as Case, Ohio State, or Boston, which will accept four credits in manual training. Without looking forward to the university, it fits the student for more effective work in various industrial lines." The three curricula follow:

CLASSICAL.	COMMERCIAL.	INDUSTRIAL.
English, general history. Latin. Elect one: General science, manual training, or arts and crafts.	English, general history, general science, and manual training, or arts and crafts.	English, general history, general science. Boys: Mechanical drawing (½), pattern making, and molding (½). Girls: Arts and crafts (½), drawing, pottery, modeling, basketry, and cooking (½).
English. Algebra. Latin. English history.	English. Business forms (½). Bookkeeping (½). Typewriting. Business arithmetic. Industrial history.	English, algebra, horticulture. Boys: Architectural drawing (½); forging, pattern, and founding; elect as an extra (½); electricity or pipe fitting. Girls: Cooking (½), drawing (½), sewing (½).
Plane geometry. Latin or German or both. Elect: Physics or horticulture.	Stenography. Bookkeeping. Commercial geography. English (commercial).	Plane geometry, physics. German. Boys: Machine design, pattern and founding. Girls: Metal work, jewelry, house designing, interior decorating, bookkeeping, or printing, or horticulture.
English. Latin or German or both. Solid geometry and algebra, if preparing for college. Elect: American history or civics or chemistry or physics.	English. Stenography. Commercial law (½). Bookkeeping (½). Elect: German or civics or physics.	English, German, solid geometry, and algebra (for college) or chemistry. Boys: Drafting, machine shop, pattern, and founding, cabinet or agriculture. Girls: Household economy, metal work, jewelry, posters, nursing, care of children, making of children's clothing, or agriculture.

The distribution of the pupils among the several curricula is as follows:

Percentage of pupils enrolled in various curricula.

Curricula.	Total.	Boys.	Girls.
	Per cent.	*Per cent.*	*Per cent.*
Classical	43	31	51
Commercial	18	11	23
Industrial	38	54	23
Mixed	1	1	1

The principle upon which these curricula were formed is obviously a good one. There is not a wide elective system, trusting the work of the pupil to the varied whims and unfounded choices of the pupils. An effort has been made to group the courses of study in an organized series leading to certain specific types of work to be followed after leaving school.

To test the efficiency of this distribution certain questions must be answered: (1) Are too many curricula offered, dissipating the energies of the school? (2) Are too few curricula offered, sacrificing the interests of any considerable numbers of pupils? (3) Are the curricula as they are arranged at present composed of the wisest selection of courses possible under present conditions? (4) Are the pupils receiving adequate guidance in their selection of the particular curriculum which they wish to pursue?

1. Are too many curricula offered?

There are two valid reasons why, under certain circumstances, a very few curricula should be offered. In a small school where there are very few teachers the multiplication of sections dissipates the energies of the school. In a school where all the children come from families of the same class and are bound for similar occupations, multiplication of sections and curricula is unnecessary. Elyria High School fulfills neither of these conditions.

(a) *The school is large enough to give many more curricula without dissipating its energies.* In the fall semester, 1916, 129 sections were offered, with the following distribution:

Number of sections offered in the several courses of study.

	Sections.		Sections.
Agriculture II	3	Mathematics I	7
IV	2	II	7
Drawing I	3	III	5
English I	9	IV	1
II	6	Commercial arithmetic II	1
IV	5	German III	4
History I	9	IV	3
III	3	Music I	1
IV	2	II	1
Commercial geography III	1	III	1
Home economics I	4	IV	1
II	8	Science I	3
III	4	III	4
IV	3	IV	2
Latin I	5	Industrial arts I	3
II	3	II	2
III	2	II and III	1
IV	1	III	2
		IV	1

(b) *The school draws its pupils from such a variety of homes that wide variation in its program of studies is highly desirable.* A questionnaire was addressed to the pupils of the high school, asking each for the occupation of his father. Replies were received from 590 pupils, with the following results:

Occupation of parents of children in the Elyria High School.

Professional	52
Civil engineer	14
Lawyer	8
Minister	7
Teacher	6
Dentist	6
School administrator	2
Electrical engineer	2
Mechanical engineer	2
Chemical engineer	1
Experimental engineer	1
Vocational engineer	1
Probate judge	1
Doctor	1
Trade	109
Merchant	15
Traveling salesman	14
Manager	10
Real estate agent	7
Contractor	5
Tailor	5
Bookkeeper	5
Superintendent	5
Live stock broker	4
Grocer	3
Junk dealer	2
Jeweler	2
Miller	2
Florist	2
Purchasing agent	2
Lumber yard man	1
Shoeman	1
Monument dealer	1
Road builder	1
Meat cutter	1
Shipper	1
Tie dealer	1
Stock and bond dealer	1
Hide dealer	1
Wholesale confectioner	1
Branch manager	1
Infirmary superintendent	1
Leather inspector	1
Automobile agent	1
Gas and electric company	1
Trade—Continued.	
Insurance agent	1
Paymaster	1
Manufacturing and mechanical industries	185
Machinist	36
Carpenter	25
Foreman	20
Mechanic	9
Toolmaker	8
Electrician	8
Factory worker	7
Millwright	6
Molder	6
Blacksmith	6
Plumber	5
Painter	5
Steam engineer	4
Pipe cutter	4
Laborer	4
Stonecutter	3
Baker	2
Automobile tire mender	2
Garage man	2
Lacemaker	2
Pattern maker	2
Roll grinder	2
Inspector	2
Superintendent machine company	1
President foundry company	1
Case hardener	1
Steel mill foreman	1
Motor assembler	1
Roll turner	1
Mason	1
Foundry manager	1
Metal mixer	1
Timekeeper	1
Motor tester	1
Inner tube inspector	1
Polisher	1
Steel range manufacturer	1
Shoe repairer	1

Occupation of parents of children in the Elyria High School—Continued.

Transportation	55
Conductor	10
Drayman	8
Motorman	3
Car inspector	3
Dispatcher	2
Chief clerk	2
Agent	2
Porter	1
Brakeman	1
Lineman	1
Section foreman	1
Freight agent	1
Express, postal, telegraph, etc	18
Railway postal clerk	8
Mail carrier	3
Telephone operator	2
Public service	6
Fireman	1
County officer	1
Fire warden	1
Probation officer juvenile court	1
Public service—Continued.	
Deputy sheriff	1
Member industrial commission	1
Domestic and personal service	24
Barber	6
Saloonkeeper	5
Watchman	4
Janitor	3
Chef	1
Owner dance hall	1
Owner theater	1
Owner sample room	1
Owner lunch counter	1
Owner hotel	1
Clerical service	10
Clerks	10
Agriculture	116
Farmers	111
Gardener	3
Horse trainer	2
Others	49
Dead	46
Retired	3

The children in the Elyria High School come, then, from all sorts of homes. The types of occupations rank in the following order:

	Per cent.		Per cent.
Industry	31.2	Transportation	6.0
Agriculture	19.8	Personal service	4.1
Trade	17.1	Express, etc	2.2
Professional	8.9	Clerical service	1.7
Others	8.7	Public service	1.0

2. Are too few curricula offered, sacrificing the interests of any considerable number of pupils?

It is of course out of the question to provide under a system of group instruction the very best possible curriculum for every student. The question is whether or not the classical, commercial, and industrial curricula as they now stand are taking care in the most efficient way of all the large groups of pupils who are likely to engage in similar work after leaving school. The ideal way to test this would be to procure the history of all the children who had entered the high school during the past 10 years, trace their experiences after leaving school, and upon that as a basis obtain an idea of the experiences which it is probable the pupils now in school will have after they leave. So far as the investigator was able to

determine, no such information is available. The following data were procured, however, which will serve almost as well:

Occupations which the boys of Elyria High School plan to follow.

Professional	86
Electrical engineer	13
Doctor	13
Lawyer	13
Mechanical engineer	9
Civil engineer	6
Engineering	5
Architect	4
Chemist	4
Musician	3
Journalist	2
Y. M. C. A. worker	2
Actor	1
Radio engineer	1
Mining engineer	1
Music teacher	1
Violin teacher	1
Financier	1
Vocational engineer	1
Minister	1
Forester	1
Army officer	1
Dentist	1
Cartoonist	1
Trade	23
Pharmacist	6
Contractor	4
Merchant	3
Advertiser	2
Clothing business	2
Banker	2
Lumberman	1
Business	1
Oil man	1
Salesman	1
Manufacturing and mechanical industries	33
Draftsman	12
Master mechanic	5
Electrician	3
Machinist	2
Engineer	1
Wireless operator	1
Inspector	1
Printer	1
Pattern maker	1
Tool maker	1
Transportation	2
Railroad man	1
Railroad engineer	1
Clerical occupations	9
Bookkeeper	6
Office boy	1
Stenographer	2
Agriculture	22
Farmer	21
Market gardener	1
Undecided	100
Seniors	16
Juniors	18
Sophmores	29
Freshman	37

Summary of preceding table.

Boys planning to—	Per cent.
Enter professional life	31.1
Enter trade	8.4
Enter industry	12.0
Enter transportation	.7
Engage in clerical work	3.8
Farm	8.0
Undecided	36.2

16 out of 34 seniors, or 47 per cent are undecided.
18 out of 54 juniors, or 33 per cent are undecided.
29 out of 82 sophomores, or 35 per cent are undecided.
37 out of 118 freshmen, or 31 per cent are undecided.

Occupations which the girls of Elyria High School plan to follow.

Professional	101
Teaching	82
Missionary	1
Illustrator	2
Author	1
Lawyer	1
Musician	14
Trade	7
Business woman	1
Milliner	6
Manufacturing and mechanical industries	1
Garage repair work	1
Domestic and personal service	32
Nurse	21
Settlement worker	6
Home maker	3
Social secretary	1
Costume designer	1
Clerical service	75
Stenographer	60
Bookkeeper	9
Librarian	5
Reporter	1
Undecided	107
Seniors	19
Juniors	19
Sophomores	24
Freshmen	35

Summaries of preceding table.

Girls planning to enter—

	Per cent.
Professional life	32.2
Trade	2.2
Industry	.3
Personal service	1.0
Clerical service	23.9
Undecided	30.9

19 out of 45 seniors, or 42.2 per cent, are undecided.
19 out of 82 juniors, or 23.2 per cent, are undecided.
24 out of 70 sophomores, or 34.3 per cent, are undecided.
35 out of 117 freshmen, or 30 per cent, are undecided.

Present occupation of the boys who graduated in 1915 and 1916.

Professional	18
Engaged in further study	16
Working with a dentist	1
Lawyer	1
Trade	4
Working in a bank	4
Manufacturing and mechanical industries	19
Draftsmen, National Tool	4
Willis factory	3
Standard Oil	2
Steel plant	3
Garford	3
Rubber factory	1
Working in shop	2
Carpenter	1
Transportation	0
Express, etc	1
Mail clerk	1
Personal service	0
Clerical occupations	5
Clerks	5
Miscellaneous	5
At home—ill	1
Dead	1
Farming	1
Surveyor	1
Soldier and pugilist	1

Summary of preceding table.

Boys engaged in—	Per cent.
Professional life or in further study	34.6
Trade	7.7
Industry	36.4
Clerical occupations	9.6
Other occupations	11.9

Present occupations of girls who graduated in 1915 and 1916.

Engaged in further study	33
At college	17
Business college	9
Teacher training course	4
Studying music	3
Professional	22
Teaching	22
Trade	2
Milliner	2
Factory worker	2
Telephone operator	1
Domestic and personal service	18
At home	13
Married	5
Clerical helpers	19
Stenographers	17
Office work	1
Clerk in a store	1

Summary of preceding table.

Girls engaged in—	Per cent.
Further study	34.0
Professional work	22.7
Trade	2.0
Factory work	2.0
Telephone operating	1.0
Domestic service	18.0
Clerical work	19.5

Present occupations of older brothers who at least entered high school.

In college	28
Professional	11
Architect	5
Teacher	2
Artist	1
Civil engineer	1
Chemist	1
Minister	1
Industry	99
In industry	84
Electrician	6
Surveyor	4
Carpenter	2
Radio-operator	1
Plumber	1
Printer	1
Trade	20
Business	10
Salesman	5
Banker	2
Broker	1
Insurance	1
Druggist	1
Transportation	4
Public service	13
Public service	7
Army and Navy	6
Clerical occupations	26
Agriculture	22

Summary of preceding table.

Older brothers engaged in—	Per cent.
Further study	12.4
Professional	4.9
Trade	9.0
Industry	44.1
Transportation	1.7
Public service	5.8
Clerical work	11.6
Farming	9.9

Present occupations of older sisters who at least entered high school.

Further study	17
Professional	36
Teachers	35
Organist	1
Personal service	99
Married	75
Keeping house	21
Nurse	3
Clerical occupations	53
Stenographers	52
Librarian	1
Telephone operators	5
Miscellaneous	5

Summary of preceding table.

Girls engaged in—	Per cent.
Further study	7.9
Professional work	16.6
Personal service (married 34.9 per cent)	44.7
Stenography and office work	24.2

The occupations of all pupils who entered with present senior class.

BOYS.	
Still in school	47
In Elyria H. S.	41
In business college	2
Studying in Paris	1
In school elsewhere	3
Trade	12
Drug store	5
Grocery	2
Furniture dealer	1
Bakery	1
Bicycle shop	1
Lake Terminal Co.	1
Office steel plant	1

BOYS—continued.	
Industry	18
In Willis plant	9
Carpenter	3
Lace factory	2
Steel plant	1
Garford	1
Goodyear	1
Garage	1
Transportation	5
Personal service	1
Bell boy	1
Agriculture	5
Unknown	
Loafing	

The occupations of all pupils who entered with present senior class—Continued.

GIRLS.	
Still in school	59
In Elyria H. S.	53
Business college	2
In school elsewhere	3
Graduated	1
Industry	3
In factory	3

GIRLS—continued.	
Personal service	9
At home	6
Married	2
Nurse	1
Telephone operator	8
Clerical work	9
Unknown	1

Summary of preceding table.

	Per cent of boys.	Per cent of girls.
Still in school	50.6	66.1
Trade	12.9	----
Industry	19.4	3.3
Transportation	5.4	----
Telephone	----	9.0
Personal service	1.1	10.1
Clerical work	----	10.1
Agriculture	5.4	----
Unknown	4.3	1.1
Loafing	1.1	----

These five series of data afford about as good bases on which to predict the probable occupations of the pupils in Elyria High School as it is possible for us to find, for the records of the past are incomplete.

What the boys and girls of Elyria are likely to do.

Types of occupation.	Parents' occupation.	What the pupils say they will do.	What the graduates of 1915 and 1916 are doing.	What those who left the 1917 class are doing.	What older brothers and sisters are now doing.
BOYS.					
Professional and college	8.9	48.6	34.6	.....	17.3
Trade	17.1	13.1	7.7	25.8	9.0
Industry	31.2	18.9	36.4	38.9	44.1
Transportation	6.0	1.2	.....	10.8	1.4
Telegraph, etc.	2.2	.....	1.9	.....	.....
Public service	1.0	.....	1.9	2.2	5.8
Personal service	4.1	.....	.....	.....	.....
Clerical occupations	1.7	5.4	9.6	.....	11.6
Agriculture	19.8	12.8	1.9	10.8	9.9
GIRLS.					
Teaching and college	.....	22.2	66.7	.....	24.6
Trade	.....	2.2	2.0	.....	.....
Industry	.....	.8	2.0	10.0	3.3
Telephone, etc.	.....	.....	1.0	27.0	9.0
Home makers, nurses, etc.	.....	31.9	18.0	30.3	10.1
Clerical occupations	.....	23.9	19.5	20.2	10.1

On the basis of these data it is probable that most of the boys and girls in Elyria High School will fall into the following well-defined groups and that each group will have a sufficient number of members to warrant consideration:

(1) Boys who will go to college—
  (*a*) In the classical course, as in Oberlin or Kenyon.
  (*b*) In the general course, as at Ohio State, Western Reserve, Ohio Wesleyan, etc.
  (*c*) In the engineering or scientific work, as at Case or Ohio State.
(2) Girls who will engage in further study—
  (*a*) In the classical course, as (1*a*).
  (*b*) In the general course, as (1*b*).
  (*c*) In the Ohio Normal School, at Kent.
  (*d*) In the Elyria training course.
  (*e*) In the Oberlin Conservatory of Music.
(3) Boys who will engage in industry.
(4) Boys who will engage in business, mostly clerk work.
(5) Boys who will farm.
(6) Girls who will teach without further preparation.
(7) Girls who will be married or help at home.
(8) Girls who will engage in business, mostly as clerks or stenographers.

Having these well-defined groups in the student body, let us now consider the manner in which they are served in the present curriculum of the school. In investigating this question each pupil was asked why he had chosen to enter the curriculum which he was following. The results are given in the following tables:

Reasons given by boys for electing the various curricula.

Classical	95
Planning to go to college	63
"May go to college; and if I do, I wish to prepare"	12
Gives the best general education	12
To be a musician	3
To help in specific work, such as pharmacist, doctor, lawyer, writer, etc.	11
Vague and indefinite reasons	11
Commercial	28
To engage in office work	21
Vague and indefinite	7
Industrial	146
"Fits me for the work I am planning to do"	63
"Because I like it"	34
To prepare for college	17
To prepare for farming	14
To gain an idea of various lines of work	10
Vague and indefinite	16

Reasons given by girls for electing the several curricula.

Classical	156
Planning to go to college	66
May go to college, and would like to be prepared	33
Prepares for teaching	22
Prepares for the normal school	4
Have to have four years of language for the Oberlin Conservatory of Music	12
Best general training. (One girl said: "Best training for an undecided person")	13
Best training for a prospective nurse	6
Vague and indefinite	18
Commercial	76
To prepare for stenography or bookkeeping	56
To go to business college	3
Vague and indefinite. ("By taking this course, I'll get it rather than let it get me, because I am poor in mathematics")	14
Couldn't stay more than two years in high school	3
Industrial	69
"Because I like it"	27
To be a milliner, housewife, etc	29
Best for a nurse	3
Best general training	3
Vague and indefinite	7

Under the present conditions, choices of curriculum are made for widely varying reasons. All who plan to go to college or normal school (except the engineers) select the classical course. Those who are undecided select the classical course. A smaller number that have other fairly definite ambitions, go into the other lines. There are more significant groups of pupils than there are curricula provided. This brings us to our third question:

3. Are the curricula as offered as efficient as they might be in meeting the future needs of the pupils therein registered?

The classical curriculum enrolls those who are planning to go to college (except the engineering students) and those who think that there is some slight probability of their going on to further academic work. It enrolls boys and girls who are planning to go to the conservatory of music, girls planning to teach, with or without additional training. It also enrolls a group of doubtful students. How well does it meet their needs?

The entrance requirements of the colleges in northern Ohio most often attended by Elyria High School graduates are as follows:

College entrance requirements (arts college) in northern Ohio.

Units required.	Oberlin.	Ohio State.	Ohio Wesleyan.	Kenyon.			Western Reserve.
				(1)	(2)	(3)	
English	3	3	3	3	3	3	3
Mathematics	3	2	3	3	3	3	2
Foreign languages (Latin and Greek, 2)	4						
Latin and Greek				4			
Foreign language		4	4	2	4	4	4
History and civics	1	1	1	1	2	1	
Science	1	1			1	2	
Elective	3	4	4	2	2	2	5

Oberlin (8 miles from Elyria) and the classical course at Kenyon require two years of work in either Latin or Greek. The others allow the candidate to present any four units of foreign-language work, provided, of course, that it is presented in blocks of not less than two units. Elyria High School, through its present offering in the classical curriculum, is compelling every child who plans to go to an arts college to offer the Oberlin program of entrance. This is an injustice, in our opinion, for the following reasons: (1) Three representative northern Ohio colleges specify only four units of language work without specifying ancient languages; (2) only the group bound for Oberlin or Kenyon are thus served; (3) those planning to go to the normal school are compelled to study ancient languages, which will be of relatively little help to a teacher. All that is required for entrance is graduation from a standard four-year high school. (4) Those planning to enter the conservatory of music need four units of foreign language. The requirements run as follows: English (3); mathematics (2); foreign languages (4); history and civics (1); science (1); foreign languages, science, history, solid geometry, advanced algebra, or fourth-year English (4). These music students who obviously need much study of modern foreign languages are thus forced to study ancient languages for at least two years. (5) The curriculum as at present arranged is unjust to those who are undecided and to that great group of ambitious high-school students who start a curriculum which they are destined never to finish. Of every 100 boys who entered Elyria High School in the past five classes but 19 to 26 have graduated; of 100 girls, only 35 to 56 graduated. (See table, page 90.) The significant results of the study of ancient languages come only in later years of study, particularly in the upper high-school classes and in further work in college. The boy or girl who drops out during the high-school course has pitifully little result for his effort.

It seems wise, therefore, for the Elyria High School to divide its classical curriculum into at least two parts. One, preparing for the classical course at Oberlin and Kenyon, should remain substantially as the curriculum is at present, with the possible addition of another year of work in English. The other should substitute two years of some modern foreign language for the two years of work in beginning Latin and Cæsar. This would do no harm to the college-preparatory group and would be of more benefit to the music students and to those who are compelled to leave. There is every reason to suppose that another curriculum is needed. Many of the girls elect the classical curriculum with the idea of using it as preparation either for teaching directly after leaving high school or as preparation for the normal school work. Those who made this survey have grave doubts as to whether either a foreign language or abstract mathematics, such as algebra and geometry, furnishes the best preparation for prospective teachers within the brief time involved. We suggest, therefore, that the schools' officials discuss the type of preparation needed for that line of work with the authorities at the Kent Normal School and with the teacher of the "training class" in Elyria. Surely such preparation would not be had in its highest form in the present classical curriculum.

The commercial curriculum enrolls but one significant group of students, those who plan to enter business as clerks, bookkeepers, or stenographers. It appears that a few students are taking the commercial and other curricula with the idea of going to a business college. Why is this?

The industrial curriculum enrolls a variety of groups. They include boys planning: To enter the engineering or scientific courses in college, to enter industry, to become farmers, market gardeners, and dairymen; and girls planning to specialize in various phases of home economics or art work, or to conduct homes of their own or to help at home. The curriculum as at present arranged is not sufficiently diversified to meet all these needs. Those preparing for the engineering schools need a certain distinct distribution of courses. For example, the Case School of Applied Science requires the following for entrance:

	Units.
Algebra to quadratics	1.0
Quadratics, binomial theorem, and progressions	.5
Plane geometry	1.0
Solid geometry	.5
English	3.0
German, French, or Spanish	2.0
Physics	1.0
Chemistry	1.0
Optional (including mechanical drawing and shopwork)	5.0

The curriculum as at present arranged does not quite meet this need, requiring a choice between solid geometry and algebra and chemistry in the senior year, both of which are needed for entrance to Case. With this exception, the curriculum is satisfactory for this group. In all probability this curriculum, with its five optional units, four of which may be in drawing and shopwork, will also prove to be a good course for those who plan to enter industry. The nearer the two groups can be kept together the better, for undoubtedly there are many boys who plan to go to Case or Ohio State who will be compelled to enter industry before graduation from the high school. The English, mathematics, science, and industrial work all have great value for this group.

More than 80 boys in the Elyria High School live in rural communities. Nearly one-fourth of the older brothers of these children, who at least entered high school, are farming. A separate curriculum is needed for this group.

On the basis of the experience of previous classes, it seems that a large percentage of girls should have more work in home economics, and that a complete curriculum designed to prepare for home making should be devised. The value of mathematics, such as algebra and geometry, for girls preparing to be home makers is doubtful; chemistry and physics, more adapted to the needs of girls, should be introduced. Where there are four sections of physics and two of chemistry, one section in each weight will be specially adapted to the needs of girls.

In particular the course is weak in failing to provide as much as possible for the boys and girls who are forced to drop out of school. The teachers and administrators of high schools must keenly realize that less than one-half of the children who enter as freshmen will ever graduate. Elyria High School is no exception to this rule, as the following shows:

Elimination in Elyria High School in classes of 1912–1916 considering only those who entered with the class.

Students.	1912	1913	1914	1915	1916
Number of students who—					
Entered with the class	190	183	200	180	131
Left at end of first year	460	152	174	151	93
Left at end of second year	104	116	127	116	83
Left at end of third year	85	88	106	93	63
Graduated on time	57	59	68	69	40
Graduated one year later	11	12	16	11	
Graduated two years late		2			
Graduated one year early					
Total number of graduates	68	73	92	80	

Elimination in Elyria High School during the past five years, based upon every 100 that entered.

Students.	Total.					Boys.					Girls.				
	1912	1913	1914	1915	1916	1912	1913	1914	1915	1916	1912	1913	1914	1915	1916
Number remaining at end of—															
First year	82	83	87	84	74	81	74	70	74	74	82	88	93	93	[illegible]
Second year	53	61	64	64	62	50	61	55	51	62	55	65	69	78	[illegible]
Third year	43	48	53	52	49	37	39	49	33	49	49	54	56	60	[illegible]
Fourth year	29	32	34	38	30	19	25	26	20	19	39	40	40	56	[illegible]

The group that seems to be treated with the least consideration is the group which leaves school before graduation; those pupils receive the smallest return for their efforts, in proportion to time spent. This group must of necessity be more or less neglected. Any plan, however, which will strengthen and make more vital the work of the earlier years will improve the arrangement of the program of studies. The commercial curriculum and the agricultural phase of the industrial curriculum especially sin in this particular. No vital commercial work is given in the first year, nor is there any in agriculture; yet of the older brothers who are farmers, 11 graduated and 11 did not; and of the older brothers who are in business, 10 graduated and 10 did not. Of 52 older sisters engaged in office work, only 32 graduated. Further treatment of this problem will be found under the section which discusses the establishment of a junior high school.

4. Do the pupils receive adequate guidance in their choice of a curriculum?

The organization of studies is into a series of curricula, each devised to meet some definite need in an effort to steer between the elective system and the system of hard and fast requirements. It seeks to avoid random and aimless selection of courses of the one and at the same time to eliminate the hard and fast nature of the other, which has its only justification in poverty or in a belief in formal discipline. Under the curriculum plan each pupil has free choice of the general line which he wishes to pursue, but having made this choice, he is compelled to follow that specific line of work for the rest of his years in high school that he may achieve the results which follow thoroughness and continuity of attack. It is exceedingly important for the success of this system, however, that the pupils receive just, impartial, and adequate guidance in their selection of a curriculum.

It is necessary that Elyria High School take more vigorous steps in this direction in the future. At present a little booklet giving the curricula offered, the words of description quoted, and certain other rules and regulations are distributed to the children of the eighth grade shortly before they are ready to enter high school. The city

superintendent visits each eighth-grade class and makes a little talk. The teachers try to help. This guidance is insufficient. There are several reasons for this. The teachers in the grades are not in possession of sufficient information to guide their children wisely. One teacher told the investigator, with some pride, that nearly all of her children had elected the classical course, so that they might enter college. Upon being asked if she knew which colleges in northern Ohio demanded such preparation she admitted that she did not know, but "supposed that they all did." Too many of the children, in answering the questionnaire previously mentioned, were indefinite and vague in their statement of the reasons which prompted them to enter a particular course. This is natural, since they had never been put in possession of sufficient facts to warrant a satisfactory judgment. Further, the parents need enlightenment in this matter. Too often the children are advised by parents who have not sufficient facts at hand to know which curriculum a child ought to elect. Still further, children need to be protected from the propaganda advanced by alert, intelligent, but too often misguided and partial teachers. Too many children have been enticed into classical or industrial curricula by organized campaigns carried on by teachers of these subjects. The only remedy is to acquaint teachers, parents, and pupils alike with such facts as have been determined. It would be highly desirable for the board of education to have a booklet prepared giving each curriculum in detail, just what it leads to, just what preparation is needed, what the rewards are likely to be, what modifications, if any, can be made. Some of the history of previous classes could well be introduced, and the probable experience of present classes in this light could be predicted. Distributing this material well in advance of entrance to high school, encouraging discussion of it in class, at home, and at parent-teacher meetings, and eliminating scattered and casual recommendation, would help to prevent misfits, to put square pegs in square holes, and round pegs in round holes. At least serious discussion of this problem should occupy several faculty meetings. It can not be hoped that every child will be served with equal adequacy, but only that more children will be served efficiently than at present.

The following are therefore recommended:

1. That the present three curricula be expanded and molded more directly with certain results in mind. The following is suggested as a minimum:
   a. The classical course entrance curriculum, preparing for Oberlin and Kenyon.
   b. The general curriculum, preparing for other colleges of arts.

c. The scientific college preparatory curriculum, preparing for Case School of Applied Science, Ohio State, and the like. This course should also provide for most of the boys preparing for industry.

d. The commercial curriculum, arranged substantially as at present.

e. The agricultural curriculum, giving more thorough work in agriculture.

f. The home economics curriculum, giving a definite line of work for home makers, eliminating abstract mathematics, and including science work better designed for the needs of girls.

2. That the authorities consider the need of a curriculum better adapted than these to the needs of prospective teachers.

3. That the authorities consider whether there is sufficient facility and demand to warrant a special course in arts and crafts.

4. That every effort be made to put more vital work in the earlier years of the high school.

5. That the board of education, in cooperation with the high-school faculty, publish a booklet giving much more detailed information about the courses offered and probable demands and results, in order that more adequate guidance may result; and that the high-school faculty consider this problem with care.

It is recommended that the various curricula be made up somewhat as follows:

YEARS.	CLASSICAL.	GENERAL.	SCIENTIFIC.	COMMERCIAL.	AGRICULTURAL.	HOME ECONOMICS.
First year.	English. Science. Latin. History.	English. Science. Modern language. History.	English. Science. History. Industrial work.	English. History. Science. Commercial work.	English. History. Science. Agriculture.	English. History. Science. Home economics.
Second year.	English. Algebra. Latin. History.	English. Algebra. Modern language. History.	English. Algebra. Economics and industrial history. Industrial work.	English. Business arithmetic. Industrial history and commercial work. (2)	English. Arithmetic and accounts Industrial work. Agriculture.	English. Arithmetic and accounts Horticulture. Home economics.
Third year.	English. Plane geometry. Latin. German or physics.	English. Plane geometry. Modern language. Elective.	English. Plane geometry. Physics. German or industrial arts.	English. Commercial geography. Bookkeeping. Stenography.	English. Physics. Agriculture. Elective.	English. Household physics. Home economics. Elective.
Fourth year.	English. Latin. Solid geometry and algebra. Elective.	English. Modern language. Elective (2).	English. Solid geometry and algebra. Chemistry. German or industrials arts	English. Commercial work (2). Elective (1).	English. Chemistry. Agriculture. Elective (1).	English. Household chemistry. Home economics. Elective (1).

SCIENCE.

There are three courses offered in science, not including the agriculture—which is discussed separately—general science in the first year, physics in the third, and chemistry in the fourth. The work was elected by 190 students. 57 electing general science, 96 physics, and 37 chemistry. The textbooks are: Snyder—General Science; McPherson and Henderson—First Course in Chemistry; and Hoadly—Physics.

There are two outstanding needs in the science work—better equipment and a wider application of the work covered in class.

The general science is taught in a room not well adapted to the teaching of science. It is merely an ordinary classroom with one row of seats left out to provide a little space for experimentation. A few additional closets are available for extra material. The physics work is carried on in a very poorly lighted laboratory in the oldest of three buildings. The chemistry laboratory, while none too light, is better than the physics. In the near future, however, it will either have to be moved or extensive repairs must be made, for the plumbing is giving way to the attacks of acids that have been passing down the sinks for years. The result of these conditions has been to limit the usefulness of the other laboratory equipment. In the general science, the very nature of the room compels the experiments to be demonstrations by the teacher and not experiments by the class. In physics, while there is considerable excellent material provided in sufficient quantity for 24 to work at once, the bad light limits its usefulness. The chemistry classes are not as bad off now as they will be in a year or two.

The way in which the science work in Elyria High School can be most improved, however, is in a wider application to the life which the pupils are to lead. The work in general science gives only about 15 out of 450 pages to problems of health, probably the most-needed study in the entire program. Physics is taught largely in a theoretical way. A topic is taken up; the class is given a series of directions for experiment; a double period or more is spent in the laboratory; then its significance is treated. There is relatively little excursion work and only a meager amount of direct application to any of the growing industries of Elyria. The work in chemistry is open to the same criticism.

There are two ways of remedying this difficulty. The science teachers can, through conference, discussion, and study, enliven their work far more than they are now doing. It is perfectly feasible for them to give more time to applications and to allow the class to spend a considerable portion of the time on the use of the work in question in the local industries.

It would be far more easy, however, to make application of the science work if the classes were composed of more homogeneous groups. Three great groups need the science work particularly; boys who will need it in industry, boys who will use it on the farm, and girls who will need it in the home. Under the present arrangement it would be practicable to divide the sections in such a way that persons with similar interests would take the work at the same time. For instance, in two of the four sections of physics there is a majority of girls; in one, 18 girls and 6 boys; in another, 14 girls and 9 boys. Ten girls are taking chemistry with 27 boys. It is suggested that the six sections of chemistry and physics be divided as follows: That one section of physics and chemistry, each, be taught with special reference to the home, one section with special reference to the farm, and one section with special reference to industry.

The separation of the pupils into groups of this sort ought to improve the work. It will continually remind the teacher that there are applications to be made. There need be no vital change in the content of the course. The needed change will be made by more and better applications of the material studied.

We also suggest that a greater importance be granted to the study of health. The high school has no higher duty.

GERMAN.

Two years of German are offered in the Elyria High School, 113 taking first-year German in the third year and 53 taking second-year German in the fourth year. Students who wish to take four years of language are compelled to elect two years of ancient language, whether they wish to take it or not. Elyria is particularly fortunate in having teachers who speak the German language, whose pronunciation is excellent, and whose knowledge of German does not stop with the language. We believe that Elyria should make more of modern languages. We suggest that four years of one modern language be given. It may be that with additional time, the teachers, who are amply prepared for it, may be able to make more use of the "direct method" and still rest assured of proper college preparation.

LATIN.

Four years are offered in Latin, the usual sequence of Cæsar, Cicero, and Vergil being followed. In the fall semester there were 101 beginning Latin, 64 reading Cæsar, 31 reading Cicero, and only 19 reading Vergil. Four out of every five who begin this course never begin the fourth year's work. If the rewards of the study of Latin were to come early in the work, this would not cause comment. It is believed that the results from the study of Latin come in the increased appreciation for the culture and literature of the

Romans and in the added knowledge of our own tongue which comes from a familiarity with the language which makes up so large a part of it. The first value comes only to a small number, roughly 20 per cent. The second comes only after methods of teaching are employed definitely to attain that end. We suggest that the Latin teachers strive eagerly for two goals: (1) To keep out of Latin the children who ought never to take it and (2) by early and constant effort to show children how the Latin helps the English. This ought to be a part of every classroom exercise.

ENGLISH.

Three years' work in English is offered, the usual program being to omit it in the third year. It is taken by 231 in the first year, 158 in the second year, and 106 in the fourth year. Twenty pupils in the third year are taking a course called commercial English and salesmanship. Literature is commonly studied three days a week; composition, oral and written, two days. Herrick and Damon's New Composition and Rhetoric is used in the composition work throughout the school, although some of the beginning classes are using Lewis and Hosic's new book.

The literature work is arranged as follows:

First year:
- First half—
  - Ashmun, Prose Literature for Secondary Schools.
  - Ashmun, Modern Prose and Poetry for Secondary Schools.
- Second half—
  - Ivanhoe.
  - Merchant of Venice.

Second year:
- Silas Marner.
- Julius Cæsar.
- Speeches of Washington, Webster, and Lincoln.
- Idyls of the King.
- Vision of Sir Launfal.
- Rime of the Ancient Mariner.

Fourth year:
- Macaulay, Essay on Samuel Johnson.
- Shakespeare, Macbeth.
- Hawthorne, House of Seven Gables.
- Selected American Poems.
- Holmes, Autocrat of the Breakfast Table.

Several things stand out in striking manner in this course:

1. *The work is not as efficiently related within itself as it might be.* This is shown in several ways. There is not sufficient correlation between the work in oral composition and the work of the remainder of the week. As shown below in the study of methods of teaching, one of the most striking things is the brief and fragmentary char-

acter of the answers given by the classes; the English classes on days when oral expression was not definitely provided for were no exceptions to this rule. The children talk when they are having "oral expression." The rest of the time they do not.

The same thing is true of the relationship of the classics studied. If the teachers were to take advantage of every opportunity, there would be more reference to other works that had gone before. In the classes in which comparisons were made, and the various works of literature were connected, better work was done.

There is not sufficient emphasis upon the use to which the English classics are to be put. Obviously, the study of English literature should have as its main object the instillation of a love of reading, particularly the reading of books of the best sort. The Elyria High School properly starts with two collections of rather short selections; and then settles down to intensive work for the rest of the course. When children spend 19 weeks on Ivanhoe and The Merchant of Venice progress must of necessity be so slow that the children do not "see the forest for the trees." Much time is spent on the author's life, unessential details of construction, and unimportant niceties which might just as well be spent on much more extensive reading of a pleasurable sort. We suggest that many more works be read, just for the fun of reading them.

By starting with the short selections at the beginning, it is clear that the teachers realize that the children have interests of their own, and that the old-time way of beginning with the long novel was not successful. The particular selections which are used as a beginning are too abstract and too much without adventure to appeal to the average high-school beginner. We suggest that these dry and prosy selections be reserved until later in the course, when the student will have developed more taste for them. Begin with modern short stories and read "Treasure Island" before very long.

There is probably not sufficient connection between writing or speaking and the study of technicalities of writing. Grammar as such is the study of the elementary school. Rhetoric comes in the high school. It is hardly likely that the errors warned against early in the course will be recognized in their new setting late in the course. We usually learn when the need for learning arises. If grammar were reserved until need for it arises in connection with compositions, the problem of teaching it efficiently would be greatly simplified.

2. *There is a healthy tendency to make literature more readable.* Burke has given way to Washington, Webster, and Lincoln; the Idyls of the King to American poems. Milton's Shorter Poems have been postponed until college, and pieces of literature have been deemed worthy of reading which are less than 100 pages in length.

3. *There is excellent use of objective aids.* Bulletin boards are found in every room. Illustrative material gathered from current literature, pictures from all sources, maps, charts, etc., are found in the English classrooms in profusion.

4. *There is great need for experimentation.* There is little of the growth apparent in the English department which comes from the constant contact of alert and progressive teachers with one another. Improvements there undoubtedly have been. Good devices are unquestionably in use. But the teachers are isolated from one another. One has all the senior English; another all the sophomore; several others divide the freshman Latin and English and history. There should be more division of the work and more departmental meetings, in order that good ideas may be disseminated and grow.

5. *Every class should be a class in English.* Good habits in written and oral English can not be gained from school work by occasional lessons in one subject only. Every teacher throughout the school should require and demand accuracy in expression. Yet this is not done at the Elyria High School, and it has rarely been accomplished in an incidental way. We recommend that the English department accept this as a problem for study. It seems to us that the problem for proper cooperation in English has never been adequately solved.

MATHEMATICS.

There were 352 pupils studying algebra, 92 studying plane geometry and 27 studying solid geometry. More were studying beginning algebra than any other single subject. This was due to the fact that in previous years algebra had been given only in the second year of the high school, and in 1916–17 it was advanced to the first. Next year there will be a small group electing algebra and a proportionately larger group in geometry.

The mathematics work seems to be well done so far as it goes. There is little application of the work done, but that is not usually found in high-school mathematics. Much of it is abstract, but that is what teachers usually want.

The Monroe algebra test and the Peabody algebra test were both given. The Peabody test was given by the writer personally. The Monroe test was left to be given March 1, when it was designed to be given. Through a mistake in the time element, the test was not given as directed, and of course the results are meaningless.

The Peabody test is better adapted to those who have had algebra a year. There were no pupils of this grade in Elyria. It was given to those who were just beginning their second half-year's work.

The results, compared with pupils of similar advancement, are as follows:

Elyria pupils in algebra compared with others.

	A1	A2	A3	A4	B4	C4	D4
Eight schools with 522 pupils of other cities	*Per cent.* 37.0	*Per cent.* 51.1	*Per cent.* 33.9	*Per cent.* 44.2	*Per cent.* 41.8	*Per cent.* 32.3	*Per cent.* 4[illegible]
Elyria (Ohio) pupils	22.3	24.7	5.3	22.1	26.4	3.0	10.0

Elyria is not doing the work that the schools in Nashville, Paducah, Owensboro, Whitesville, and Little Rock are doing. Considerable difference was found in the work of the individual teachers, but that is a matter to be handled by the principal and is not of special interest to the general public.

II. METHODS OF TEACHING.

Despite the emphasis that is placed upon matters pertaining to administration, the program of studies, physical equipment, school buildings, and the like, there is no more important phase of high-school work than the methods of teaching. It is here that the success or failure of a particular line of work rests. The major efforts of the principal should be directed to increasing efficiency here. Neither school law, social pressure, nor finances stand in the way of improvement in this particular.

Realizing this, the observer made every effort to obtain as comprehensive and as accurate knowledge as possible of the methods of teaching used by teachers in the Elyria High School. This is difficult to obtain. Classroom observation at best is bound to be unsatisfactory. Teachers unaccustomed to visitors are apt to be nervous, especially in the face of a *survey*. A stranger in the room often disturbs the pupils. Chance observations of scattered recitations or portions of recitations often fail to reveal facts in their true light because of the necessary lack of familiarity on the part of the observer with what has gone before. These difficulties, while not eliminated, were minimized in the following ways:

1. Before starting the survey the teachers were called together and acquainted in a general way with the plans of the observer. They were told that their difficulties were appreciated; that while of necessity they were being viewed in a critical light, they were before no "court of star chamber"; that every effort would be made to judge their work by standards that all would accept; and that before any definite recommendations were made, sufficient concrete data would be advanced to substantiate the point. The teachers were asked to pay no attention to the observer, who promised to try to make himself as inconspicuous as possible.

2. During the earlier days of the investigation and as much as possible during the later days, the observer entered each classroom with or before the class, took an inconspicuous place in the rear of the room, and remained there until the close of the period. Fifty-three complete recitations were observed in this fashion. In some of the work, particularly in language and mathematics classes and in laboratory periods, two and sometimes three classes were visited in the same hour. Twenty-one classes were visited in this way. Toward the close of the investigation several tours of the school were made, the observer remaining but a few minutes in each room, verifying certain conclusions from previous investigation and watching the progress and connectedness of the work.

3. To obtain a more complete knowledge of the work, the observer made a practice of seeing the teacher teach the same section for three or four days in the same subject. In this way the continuity of the work was seen, and abnormalities of a single recitation were seen more nearly in their true light.

Five variations of classroom procedure were clearly distinguishable in the Elyria High School, namely, variations in—

(1) The responses given by the pupils,
(2) The relative emphasis on memory and on thought work,
(3) The responsibility for the work shared by teacher and pupil,
(4) The application of material studied in class, and
(5) The interest of the pupils in the class work.

These are to be considered by the faculty of the high school in a thoughtful way to determine if such variation is efficient, to magnify the strong points, and to eliminate the weak ones. There are a few considerations in connection with each, however, that deserve mention.

(1) *The responses given by pupils.*—Other things being equal, we should assume that longer answers by the pupils would be desirable. It should make for continuity of thought and better oral expression. It seems hardly right, in English for example, to devote a day a week to oral composition and then for the remainder of the time to discourage it. Short answers, however, are not necessarily a bad thing. There is no necessary objection to a rapid-fire review or to a hurried survey of a field. Some of the short answers were the direct result of bad questioning habits on the part of the teachers, and where this is the case the short answer should be considered a signal of danger. These are discussed in order:

(*a*) In the classes where short answers are found many of the teachers have a habit of asking questions that end in "isn't it," "doesn't it," and "isn't that the way it was," etc. Questions of this type are indications of careless preparation, careless thinking, or they may mean that the teacher is really lecturing while he thinks

he is conducting a recitation. Almost no effort is required of the pupil, either in remembering material or organizing it. Illustrations of this are the following:

"A form of government, isn't that what it was?"
"You found it worth while, didn't you?"
"Then, it was a matter of heredity rather than environment, wasn't it?"
"Common working place, wasn't it?"
"He has thus far succeeded, hasn't he?"
"The war was not over here, was it?"
"He sums it all up, doesn't he?"
"It tells how the trees are arranged, doesn't it?"
"There was a dislodged stone, wasn't there?"
"They usually were privileged characters, weren't they?"
"Then, we practically agree, don't we?"
"Your figure proves it a trapezoid, doesn't it?"

A small number of questions of this type in a recitation can do but little harm, and most teachers ask a rhetorical question occasionally. But when they are numerous they certainly do no good and frequently develop bad habits. In general, a question of this kind might just as well not be asked. Nine times out of ten but one answer is possible. The teacher, in fact, makes an assertion to which the class lends passive assent.

In some of the classes in the Elyria High School questioning of this sort is too frequent to be consistent with efficiency. Four teachers in particular sin in this direction. One teacher, for instance, asked 26 questions of this sort in a 45-minute period, another 18, another 21, and another 16.

(*b*) Possibly more important still in the encouragement of short and incomplete answers is the inverted question that ends in "what." The teacher who asks this question has in mind not a query to be answered, but a particular answer to be achieved. The teacher thinks first of the answer wanted, repeats a portion of it, and then calls upon the class to fill out the thought. The following series of questions and answers from an English class illustrates the point:

Q. Then from there he went to what place?
A. Salem.
Q. What for?
A. To prepare for college.
Q. Under whom?
A. Worcester.
Q. He went where?
A. To Bowdoin.
Q. Longfellow was not such an intimate friend, was he?
A. No.
Q. On his finishing, he went where?
A. To Salem.

Here is another series of questions that gave the same results, so far as brevity of answers is concerned:

"He held most of his positions through friendship with whom?"
"And the great product of his writing was what?"
"His whole aim was to move back to what place?"
"If you had noticed, you would have found what about his relations?"
"Obliged to move to what little place?"
"Nearer still to what place?"
"The name of his home was what?"

Other questions to show the same type, which was found in almost every class in the school, are the following:

"One thing we learned about fungus yesterday? Another? What about them? They are what?"
"The purpose of this experiment is what?"
"You put on here what? That will be where? That will be put where?"
"It all goes back to what?"
"That will be the volume at what temperature?"
"Give me the formula for an acid salt. That is the name for what?"
"That is needed to get what? Talk about what agents?"
"Swegen was followed by what ruler?"
"Forte modifies what?"

It seems that sufficient evidence has been given to show the seriousness of this habit. When the "what" or "whom" is placed at the end of the question, the teacher has already done a good share of the work; the sentence and setting are all prepared; the pupil has but to put one little word into the place that is waiting for it. This does not require great ability, nor does it tend to develop it.

Nearly every teacher in the school, to a greater or less degree, has the habit of asking questions like this. One teacher asked 42 questions of this sort in a single period, several others between 30 and 40. In a few cases the observer would wait as long as five minutes for a single question of another type.

In one of the teachers the habit had become so ingrained that it even appeared in a written assignment, which was to be copied by the children from the board. The question was, "Even without knowledge of the historical setting, the reader of this address must feel what effects?"

(c) Another factor in encouraging brief and incomplete answers is the habit that several teachers have of asking questions that are sentences with a word or two left out, requiring through manner or gesture the pupils to fill in the gaps. It is about the same as the inverted "what question" with the what left out. Such teaching reminds one of the puzzle page or of the "completion tests" of the psychologist. The teacher frames the puzzle or the test; the pupil supplies the missing word. It is needless to remark that in this

case the teacher does too much of the work. Illustrations of this habit follow (the portions spoken by the pupils being put in parentheses):

What did they mean? The right to (secede) from the (union).
That means (secession). The States tried to make it (null and void).
Would there have been any dispute if the constitution had definitely provided certain things that the States might (do) or might not (do)?
Was the constitution for or against the (Virginia and Kentucky resolutions)?
The things that are (constitutional) and the things that are un-(constitutional).
After Boston he went to (Brookfarm).

This habit is not found as frequently as some of the others, but, nevertheless, it is found all too often.

(*d*) Another factor that contributes to the brief answers is the habit which many of the teachers have of repeating the answer given by the pupil. If the teacher were to repeat the answer exactly as it is given, the habit would not be so harmful, as it would make the teacher realize the essential incompleteness of that answer. But the teacher, in his eagerness, usually picks on the fragment extracted from the pupil, resets it, and gives it forth in a more complete sentence or in a new application. All this is work that the pupil should do. Another danger arising from the repeated answer is that the teacher, in his eagerness to hear the correct answer, often fails to note mistakes. The pupil is encouraged to "bluff" an answer or give a portion of it—just enough to set the teacher going again.

In every class where the answers are fragmentary or brief the observer found that the teacher was repeating the answer. Nearly all the teachers did this more or less. So far as the observer could estimate, one teacher repeated practically every answer given by the class. He counted over 60 successive repetitions before turning his attention to something else. He observed five recitations with more than 60 answers repeated by the teacher, four with from 40 to 60 repetitions, and 9 with more than 20 repetitions, not counting the ones just mentioned.

In a few cases he noted places where the pupils' answers and the teacher's repetitions did not agree. Such occurrences are particularly bad. The following are a few illustrations of this:

"Agrees in person and number." "Yes, in person and gender."
"A circle." "Yes, a circle is a plane figure, isn't it?"
"In the plane." "When they lie in the plane, yes."
"Line." "A straight line, yes, or the side of a parallelogram."
"France." "Yes, Spain."
"After the Revolutionary War." "Yes, during the Revolutionary War."
"Sie durfte sprechen." "Yes, Sie durften sprechen."

"Er durf sprechen." "Ja, er darf sprechen."
"Was soll das." "Ja, was soll denn das."
"Du sollte lernen." "Ja, du solltest lernen."

(e) Another bad habit, closely allied to this, is the "Yes" habit. The teacher in this case continually approves or disapproves of what the pupil says. The teacher calls upon the pupil to answer the question. The pupil singled out starts upon his answer leisurely. The others in the class sit back, knowing that they are not to be held responsible for the correctness of the answer. Meanwhile the pupil who is reciting is eagerly awaiting some sign as to whether or not a "yes" or a "no" is coming. He leaves his forked road open as long as possible. The teacher who continually judges the correctness of the pupil's answers is like a black cloth absorbing the rays of sunlight. The teacher might as well be a mirror reflecting to the class the answers that are proposed, holding the class responsible as to whether they are right or wrong.

A few of the teachers in Elyria have a bad attack of this habit. One teacher says "yes" or "no" every time a child answers. Another does it every time that he does not repeat an answer. The habit is much too frequent.

(f) Another tendency which makes for brevity in response is the habit which some of the teachers display when, after explaining a point or making a short discussion, they inquire of the class, "Is that clear?" or "Do you see the point?" Of course the only answer usually given is "Yes." Only once in all the classes visited was there a dissenting response given; only once did the pupils indicate any lack of comprehension.

Most of us who have been high-school pupils at some time or other in our lives remember with considerable wonder how often we were called upon in class for the exact portion of the lesson which we did not know well. We were accustomed to give our teachers credit for almost supernatural insight into our foibles. But this was probably not the case. We supposed that we understood the whole of the lesson, and only realized that we did not when we were called upon for the results. This only goes to show that we may think we understand something when we really do not, and the way accurately to determine our understanding is not to ask us whether we do or not, but to call for an application of the knowledge in question or to drill upon it.

This is a common educational principle which several of the Elyria High School teachers have failed to apply. One teacher in particular conducts his recitations by interspersing a series of talks with a few questions, many of which are of the "Is that clear" type. Where such a question is asked the teacher should at once know that to make the information accurate further questions are needed.

(2) *Thought versus memory work.*—A recitation depending mainly upon memory work is not in itself a bad thing. Surely one of the great aims of school attendance is obtaining and holding fast much knowledge of a great variety of things. Thought work itself must be dependent upon a deal of memory work, because one can not think with accuracy or to good purpose without a solid basis of fact. To that extent the two types of work combine. Some of the teachers in Elyria High School, however, confine the greater part of the work to the mere recitation of facts from textbooks or from topical outlines. There can be but two reasons for such procedure. One is that the teacher believes firmly in the doctrine of formal discipline, resting the methods of teaching upon the assumption that all work, so long as it is well done, will strengthen the mind and yield discipline. The other reason is that those teachers have no clear idea of why they are teaching or of what they wish to accomplish.

The mere fact that some of the teachers are doing more than mere memory work suggests that others could do more in that direction. The ultimate solution of this problem lies in a change of ideas on the part of the teachers themselves. A teacher can teach successfully by no method but his own. A teacher can aim in no direction but that which he himself deems worthy. The basic cause of this difference in method lies, therefore, in the theory of teachings held by the individual teacher. Improvement must be the result of changed ideas.

(3) *The relative responsibility of teacher and pupil.*—This divergence of method is also a result of diverging ideas on the part of the teachers. The one group apparently believes that the way to educate a pupil is to repress him. Education is a matter of holding down the individual, of repressing the wrong responses, of encouraging passive assimilation. To the other group, education is a matter of encouraging an individual to act, to think for himself, to assume responsibility. It is much like the old theological doctrine of original good and original sin. The one meant encouragement; the other, repression. Possibly the truth lies between the extremes.

(4) *The application of material studied.*—The varying ideas back of varying practice in this respect lie in the opposing theories in regard to the use of subject matter. One group believes that any subject matter carefully learned will be applied in time of need. The other believes that the only way to be sure of the proper application of material is to make this application while the material is being learned. No individual can decide this question for all teachers, and it requires consideration. The growth of the case method in the law schools, and the development of the interne system in the study of medicine, point to the growing strength of the latter idea.

(5) *Interest versus effort.*—Two opposing ideas of successful teaching have caused the differing practice in this particular which is found in this school. The hard, distasteful work that men are compelled to do in the world, the impossibility of sugar-coating all tasks, the feeling of triumph that comes from compelling people to do work that they do not want to do have led teachers to advocate work that takes effort. The sluggishness of classes driven by force, the stimulation of work done for the work itself or for its legitimate applications, have led other teachers to a belief in the doctrine of interest. Here again the solution lies in a change of ideas.

The remedy.—Many of these divergences are legitimate. It is entirely within the bounds of possibility that these teachers are doing right in using one method for one group and another method for another. It would be better, however, if methods were consciously adopted by the teachers in the light of the experiences and ideas of other teachers. Each teacher should know what the practices of the others are, and how his standards compare with theirs.

The biggest obstacle to progress in the Elyria High School is the isolation of the teachers. While a visiting day is technically provided by the school board, very few have availed themselves of the privilege. Many frankly say that they have not seen a class taught by another in years. Day by day they go through the routine of their tasks, hoping that they are doing the right thing, but having no standard of comparison other than their own experience. Experiments in adjoining rooms, different methods of approaching, results of other methods are unknown to them. A physician or a lawyer similarly isolated would be out of touch with his profession in a very short time.

Coupled with this is the practice of giving each teacher as many sections of the same class as possible. One teacher teaches four sections of senior English, another four sections of sophomore English, another all the history taught to juniors and seniors. One teacher teaches only beginning Latin, another only Cæsar. This practice applies throughout the school.

This isolation has prevented growth. A teacher with almost no mechanical faults teaches within 30 feet of a teacher who is as faulty on mechanical details as any in the school. Another teacher who teaches with the sole purpose of storing the memory of her pupils is separated only by a partition from a teacher who is stimulating thought in his pupils as much as any teacher the observer has seen. Within the walls of the school are all the examples needed for improvement. The remedy lies in breaking down the isolation.

Frequent visits of the principal and frequent conferences would help. The principal could direct attention to mechanical imperfec-

tions which the teacher could not see. He could relate the procedure of other classes. He could act as a medium for the exchange of ideas.

Faculty meetings for the study and discussion of opposing educational theories would produce a more alert attack on educational problems. Departmental meetings and assigning different classes to teachers would help. Three teachers were teaching Ivanhoe to second-term freshmen. One had a truly excellent idea for teaching it. It would have been desirable for these teachers to discuss methods of presentation before taking up the book; but each taught in his own way and without knowledge of what the others were doing. Had four teachers each taught a section on Washington's Farewell Address instead of one, and had there been discussion before taking it up, surely a better attack could have been made.

We therefore make the following recommendations:

1. That the principal observe as many of the teachers as he can, and that he spend as much of his time in supervision as possible in order that he may note and remove mechanical errors in teaching and serve as a means of communicating successful practice from teacher to teacher.

2. That a series of faculty meetings be devoted to the findings of this section of the survey. Improvement can only come from a frank and full discussion of the points mentioned. A teacher can teach by no method but his own.

3. That the problem of memory versus thought be considered, and that works like Dewey's *How We Think*, McMurry's *How to Study*, and Strayer and Northsworthy's *How to Teach* be read.

4. That the problem of the relative responsibility of teacher and pupil be considered, possibly with the above books.

5. That the problem of applications be given consideration.

6. That the problem of interest versus effort be considered in connection with Dewey's *Interest and Effort*.

7. That teachers be given every opportunity to visit the classes of their colleagues.

8. That teachers be encouraged to pair off for mutual criticism for the improvement of their teaching.

9. That teachers be given a greater number of different sections to teach, and that where this is done departmental meetings be encouraged.

III. THE ADMINISTRATION OF THE HIGH SCHOOL.

LIBRARY.

There is a fairly good school library of some 1,200 volumes arranged along one side of the senior study hall. It contains a number of the usual reference works and collections. It is stronger in

history and science than in English. It has no regular librarian, the room teacher taking charge. It needs cataloguing. Some binding should be done.

This library has two sources of revenue. About $60 a year comes from an endowment left to the library years ago. A varying sum is received annually from the sale of tickets to the commencement exercises.

No regular system appears to have been devised for the expenditure of the money. If the Elyria High School is to keep abreast of the times, a good, up-to-date library must be maintained. We recommend that instead of buying books by the haphazard method of the past, a budget system be introduced, with definite amounts appropriated to members of the various departments who need reference material.

The present arrangement with the city library, whereby pupils who hold cards may read there during the first period, is unsatisfactory. It limits the privilege to a few pupils, and for the number who can take advantage of it, only a short time is left for reading.

SUPERVISED STUDY.

One of the latest ideas in high-school work is "supervised study." There is manifest need of doing something to correct the aimless kind of activity which is found in the din and tumult of the study hall and in the family gathering in the home, where few pupils have opportunity to study uninterruptedly. One remedy that has been suggested for this is to lengthen the class period, and to devote a portion of it to recitation and a portion to study under the direct supervision of the teacher. This has been said to produce good results, and there are many advocates of this measure as there are real opponents. Most high-school teachers are neutral.

The Elyria High School has an excellent opportunity to do some constructive work in this regard. We frankly do not know whether or not the proper sort of study will result from lengthening the periods and devoting class time to it. Probably more will come from better teaching. But the arrangement of classes affords opportunity for an excellent experiment. At present, of the eight periods in the day, the first and the last are used only for assembly, laboratory periods, and the like. We recommend that in certain classes of the second and seventh periods, a teacher be allowed to start earlier or continue later than usual, so that the periods may contain 60 to 70 minutes. This would allow supervised study to be tried out in those classes, and the principal could watch the results and compare with other classes not on the same plan. In two years Elyria would know whether supervised study was wanted or not.

THE MARKING SYSTEM.

In the Elyria High School a percentage system of marking is used. By that is meant that the pupils are ranked upon the basis of their work, absolute perfection being signified by 100 per cent, absolute failure by 0 per cent. Grades are supposed to be entered nearly every day. The average of these is turned in to the section teachers once a month, to be transferred to cards. These cards are given to the pupils to take to their parents. At the close of each semester the monthly grades are averaged. If the pupil receives a grade of 75 per cent or above, he is considered to have completed the course successfully. If he receives 74 per cent or less, he fails in the course, receives no credit, and if he desires credit in that course he must repeat it.

It is a recognized fact that through the country as a whole there is little uniformity in grading. Dr. F. J. Kelly in his study of "Teacher's Marks" substantiated the conclusions of many that had gone before him, that there is the widest variation. Where courses of study are determined for the pupils, and little choice is left to the individual, wide variation is merely unfair to the pupil. He knows that for certain results one teacher will assign a certain "grade"; with another, a totally different grade. He can merely resign himself to his fate, and hope to get an "easy" teacher during the next semester. In a school like the Elyria High School, however, where there are large numbers of pupils and only three set curricula, and considerable election within each curriculum, wide variation in marking is not only unjust to the pupil, but it tends to handicap the system of election. A pupil is often prevented from going on with work that he knows he ought to take because of the abnormally high standards of those who teach it.

It was because of this phase of the problem, that the investigator addressed himself to a study of the marking system and the variations in marking among the various teachers.

Lists of the grades given for the semester's work (fall of 1916) were procured, arranged so that it was relatively easy to determine the teacher's name, the grade and sex of pupils, and subject in which the mark was given. These grades were the final grades in the courses taken, determining the promotion or failure of the student. The grades were then tabulated according to several classifications. It was obviously a statistical task of too great extent to transcribe and tabulate in several different ways each numerical grade. The investigator arbitrarily divided the grades into five groups, namely, 100–95, 94–89, 88–83, 82–75, and 74–0. All the failures were placed in the last group. These grades were then transferred on cards, of which the following is an illustration.

Teacher (Miss Terry). History III. 2.30.						
	100–95	94–89	88–83	82–75	74–0	Total.
Boys	I	II	IIII	IIII	II	13
Girls	I	IIII	III	II	II	12
Total	2	6	7	6	4	25

The data, after being transferred to the cards, were assembled in various ways, in each case the total number of grades of a particular group being totaled before the percentages were figured. Certain conclusions from this study follow:

1. The general distribution of grades for the school as a whole is as follows:

100–95	94–89	88–83	82–75	74–0
6 per cent.	17 per cent.	28 per cent.	36 per cent.	13 per cent.

2. The teachers in Elyria High School do not vary widely in their marking either of boys and girls, or of freshmen, sophomores, juniors, or seniors; nor is there any special difference in the way men and women teachers mark. In other words, the general distribution of marks for these groups is about like that for the school as a whole.

3. It is much easier to receive a high mark in some departments than in others.

Marks in the Elyria High School.

Pupils.	100–95	94–89	88–83	82–75	74–0
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
School as a whole	6	17	28	36	13
Boys	4	16	27	37	16
Girls	7	17	29	35	12
Seniors	10	16	25	39	10
Juniors	9	16	28	33	14
Sophomores	4	19	27	33	15
Freshmen	5	18	29	35	13
Men teachers	6	20	29	31	14
Women teachers	7	16	28	36	13

Students receiving marks of 95 to 100 per cent.

In the department of—	Per cent.
German	20
Agriculture	10
History	9
Mathematics	9
Latin	7
Home economics	7
Commerce	5
English	4
Science	4
Industrial arts	1

4. It is much more difficult to pass in some departments than in others.

Students failing in the different departments.

In the department of—	Per cent.	In the department of—	Per cent.
Mathematics	21	English	13
Latin	18	Mechanic arts	9
History	18	German	8
Science	17	Agriculture	5
Commerce	13	Home economics	3

5. One mark does not mean the same thing in one department that it means in another. The following data show that:

Per cent of students receiving certain marks.

Departments.	100-95	94-89	88-83	82-75	74-0
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Home economics	7	18	36	36	3
Commerce	5	20	12	50	13
German	20	15	23	34	8
Mechanic arts	1	24	33	33	9
Latin	7	13	35	29	18
English	4	16	28	37	13
History	9	20	19	33	18
Agriculture	10	22	47	16	5
Science	1	12	27	40	17
Mathematics	9	19	23	27	21

6. A mark does not mean the same thing with one teacher that it means with another. The following table shows that. Here each teacher in the Elyria High School is designated by a letter. Coupled with this is the percentage of his classes which he has marked within the group noted:

Markings of the different teachers.

100-95	94-89	88-83	82-75	74-0
Per ct.	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*
P....20	D....28	R....47	J....53	Q....36
H....15	E....23	I....47	B....51	L....29
K....13	A....22	F....39	W....50	V....24
T....13	R....22	U....37	Q....43	X....23
D....11	C....21	X....37	H....41	N....18
O....12	F....20	A....37	G....40	M....17
M....10	I....20	C....35	O....37	J....17
R....10	N....20	G....35	V....37	T....15
X....8	W....20	E....34	U....36	S....14
B....7	K....19	M....31	F....36	W....13
I....7	O....19	K....30	P....34	B....12
G....6	T....19	D....28	E....34	O....12
W....5	H....17	H....24	X....33	U....11
A....4	M....17	B....23	C....32	K....10
C....4	S....17	I....23	A....31	G....8
S....4	V....16	T....23	L....31	P....8
F....3	P....15	X....23	N....30	E....6
J....2	G....14	V....22	T....28	A....6
U....2	U....14	L....21	D....28	G....5
V....1	X....13	O....20	K....26	R....5
Q....1	L....12	J....19	M....25	F....5
L....1	Q....11	S....18	N....25	H....3
N....0	J....9	W....12	S....23	I....2
F....0	B....7	Q....11	R....16	D....2

Teachers P, H, K, T, D, and O are clearly giving more marks from 95 per cent to 100 per cent than the best judgment of all the teachers would warrant. In the same way teachers Q, L, V, X, N, and M are clearly "failing" many more of their pupils, in a similar way, than the judgment of the entire group would indicate. When one teacher "fails" 36 per cent of all the pupils with whom he comes in contact, while another fails but 2 per cent, something is wrong. One teacher is either exceedingly good and the other exceedingly bad, or one has standards much higher than others, and one has standards much lower than others. Pupils will gravitate from the classes of those high up in the last column to those low down, while the movement will be in the opposite direction in the first column. Surely it would be much better for the teachers to have standards more nearly alike.

7. Some teachers in Elyria High School do not mark boys and girls in the same way. Some favor boys; some, girls; some fail more boys; some, more girls. The point is not as important as the other, but its investigation brings out several cases in which mention of it to the teacher may do some good. Teachers B, K, L, M, N, V, and X fail a larger percentage of boys than girls, while teachers J, O, Q, S, and T fail a larger percentage of girls than boys. It seems hardly probable that such wide variations should exist. The other teachers are not making wide differences in their judgments of boys and girls.

8. The school at present has a well-defined standard of marking. There are not wide variations from this in large groups. Individuals and departments, however, do vary widely. It would be a good thing for the principal to talk with the teachers who vary most widely from the standards set down by the combined judgment of the rest of the school, and try to ascertain the causes for either the poor teaching and high standards or good teaching and low standards. There should not be such wide variation from teacher to teacher.

9. Experience in many studies of marking, and in variations in all other phases of human abilities, shows that people vary about as the "normal curve of distribution." Where a five-step scale is used—that is, A, B, C, D, and E—it has been found that under normal circumstances about 3 per cent fall into the A group, about 22 per cent in the B group, about 50 per cent in the C group, about 22 per cent in the D group, and about 3 per cent in the E group. It seems that the children in Elyria High School are marked both too high and too low. It hardly seems probable that as many as 20 per cent of a class would be able to do perfect work; and we fail to see how a teacher could rest content with from 20 per cent to 40 per cent of the children failing in the work, particularly when a conference hour is provided at the close of the day.

COST OF INSTRUCTION.

The cost of instruction in the Elyria High School is well balanced in the various departments. Basing the cost of instruction on the enrollment in the classes on September 20 (the end of the third week) as the number of pupils for whom places are provided, and estimating the costs on the basis of 1,000 sixty-minute student hours, we have the following costs for the several departments. (For example, if a teacher has 40 children in a class for 45 minutes, she has taught 30 student hours.)

Cost per 1,000 student hours of the various departments in Elyria High School.

Commerce	$76.28	Modern languages	$66.30	History	$57.88
Latin	77.36	Home economics	61.84	Natural science	54.04
Agriculture	67.80	Industrial arts	62.60	English	53.65
Mathematics	66.84			Drawing	48.75
				Music	38.34

It is rather unusual to find in a high school such an even balance between the various types of work. The management is highly to be commended on its efficiency.

At the same time the costs in the Elyria High School are also well balanced so far as being within the "zone of safety," as Prof. Bobbitt calls it. The costs of various subjects compared with the data tabulated by Prof. Bobbitt are shown in the following tables:

Costs per 1,000 student hours of various subjects in Elyria High School compared with other cities.

AGRICULTURE.

De Kalb, Ill	$118
Bonner Springs, Kans	106
Elyria, Ohio	[illegible]
Maple Lake, Minn	[illegible]
Brazil, Ind	58
Russell, Kans	52
Mount Carroll, Ill	44
Noblesville, Ind	40
Boonville, Mo	34
Greensburg, Ind	35
Washington, Mo	20

HISTORY.

Elgin, Ill	127
Maple Lake, Minn	109
De Kalb, Ill	103
Mishawaka, Ind	91
San Antonio, Tex	83
Greensburg, Ind	82
Waukegan, Ill	79
Harvey, Ill	76

HISTORY—continued.

Mount Carroll, Ill	$73
East Chicago, Ind	71
East Aurora, Ill	63
South Bend, Ind	62
Granite City, Ill	59
Leavenworth, Kans	58
Elyria, Ohio	58
Noblesville, Ind	54
Boonville, Mo	53
Bonner Springs, Kans	52
Russell, Kans	48
Brazil, Ind	46
Morgan Park, Ill	45
Washington, Mo	41
Norfolk, Nebr	33
Junction City, Kans	26

COMMERCE.

Elgin, Ill	113
De Kalb, Ill	112
San Antonio, Tex	103

Costs per 1,000 student hours of various subjects in Elyria High School compared with other cities—Continued.

COMMERCE—continued.

Washington, Mo	$100
Mishawaka, Ind	83
Boonville, Ind	81
Elyria, Ohio	76
Waukegan, Ill	73
Noblesville, Ind	72
East Chicago, Ind	72
Harvey, Kans	69
Leavenworth, Kans	60
Junction City, Kans	54
Granite City, Ill	54
Bonner Springs, Kans	52
Aurora, Ill	49
Rockford, Ill	49
Brazil, Ind	47
Nashville, Tenn	46
South Bend, Ind	43
Greensburg, Ind	23

HOME ECONOMICS.

De Kalb, Ill	174
San Antonio, Tex	83
Waukegan, Ill	83
Greensburg, Ind	81
Nashville, Tenn	79
Harvey, Ill	77
South Bend, Ind	72
Noblesville, Ind	62
Elyria, Ohio	62
Mishawaka, Ind	61
Elgin, Ill	60
Rockford, Ill	48
Junction City, Kans	46
Bonner Springs, Kans	45
Maple Lake, Minn	41
East Aurora, Ill	39
East Chicago, Ind	36
Russell, Kans	36
Leavenworth, Kans	35

LATIN.

Maple Lake, Ill	244
University High, Chicago, Ill	174
Russell, Kans	170
Elgin, Ill	138
Mishawaka, Ind	126
San Antonio, Tex	103
Harvey, Ill	92
South Bend, Ind	86

LATIN—continued.

Junction City, Kans	$79
Elyria, Ohio	77
Leavenworth, Kans	75
De Kalb, Ill	74
Washington, Mo	69
East Aurora, Ill	64
Mount Carroll, Ill	62
Waukegan, Ill	61
Noblesville, Ind	61
Brazil, Ind	54
Morgan Park, Ill	53
Granite City, Ill	52
Rockford, Ill	49
Norfolk, Nebr	48
Boonville, Mo	48
Greensburg, Ind	46

MATHEMATICS.

University High, Chicago, Ill	169
Mishawaka, Ind	112
Elgin, Ill	100
Maple Lake, Minn	100
Granite City, Ill	88
East Chicago, Ind	82
De Kalb, Ill	74
San Antonio, Tex	69
Harvey, Ill	69
Elyria, Ohio	67
Waukegan, Ill	63
South Bend, Ind	62
East Aurora, Ill	61
Rockford, Ill	59
Boonville, Ind	58
Brazil, Ind	56
Leavenworth, Kans	56
Greensburg, Ind	54
Morgan Park, Ill	53
Noblesville, Ind	52
Norfolk, Nebr	42
Washington, Mo	41
Bonner Springs, Kans	38
Russell, Kans	34
Junction City, Kans	33
Mount Carroll, Ill	30

ENGLISH.

De Kalb, Ill	105
Mishawaka, Ind	95
East Chicago, Ind	85

Costs per 1,000 student hours of various subjects in Elyria High School compared with other cities—Continued.

ENGLISH—continued.

Elgin, Ill	$82
Harvey, Ill	71
Waukegan, Ill	69
San Antonio, Tex	68
South Bend, Ind	66
East Aurora, Ill	58
Boonville, Mo	54
Elyria, Ohio	54
Leavenworth, Kans	52
Rockford, Ill	51
Greensburg, Ind	51
Noblesville, Ind	50
Brazil, Ind	49
Maple Lake, Minn	47
Morgan Park, Ill	44
Junction City, Kans	43
Mount Carroll, Ill	40
Granite City, Ill	39
Bonner Springs, Kans	38

MODERN LANGUAGES.

San Antonio, Tex	114
Elgin, Ill	109
Mishawaka, Ind	98
De Kalb, Ill	95
East Chicago, Ind	82
Waukegan, Ill	81
Harvey, Ill	80
East Aurora, Ill	78
Noblesville, Ind	68
Elyria, Ohio	66
Greensburg, Ind	65
South Bend, Ind	63
Rockford, Ill	62
Leavenworth, Kans	61
Washington, Mo	61
Brazil, Ind	54
Junction City, Kans	53
Boonville, Mo	45
Bonner Springs, Kans	43
Norfolk, Nebr	43
Russell, Kans	42
Maple Lake, Minn	37
Granite City, Ill	33

NATURAL SCIENCE.

De Kalb, Ill	140
University High, Chicago, Ill	130

NATUREL SCIENCE—continued.

Waukegan, Ill	$125
East Chicago, Ind	125
Harvey, Ill	101
East Aurora, Ill	88
Elgin, Ill	87
Morgan Park, Ill	74
San Antonio, Tex	68
Bonner Springs, Kans	65
Maple Lake, Minn	64
South Bend, Ind	62
Mishawaka, Ind	60
Mount Carroll, Ill	60
Boonville, Mo	58
Granite City, Ind	56
Russell, Kans	56
Elyria, Ohio	54
Norfolk, Nebr	54
Leavenworth, Kans	54
Brazil, Ind	52
Rockford, Ill	50
Noblesville, Ind	50
Greensburg, Ind	49
Junction City, Kans	34
Washington, Mo	30
Russell, Kans	30
Washington, Mo	34
Norfolk, Nebr	28

INDUSTRIAL ARTS.

Junction City, Kans	148
Elgin, Ill	139
Aurora, Ill	133
De Kalb, Ill	128
Waukegan, Ill	122
South Bend, Ind	114
Boonville, Mo	108
San Antonio, Tex	103
Mishawaka, Ind	82
Russell, Kans	68
Noblesville, Ind	67
Rockford, Ill	64
Elyria, Ohio	63
Harvey, Ill	56
Leavenworth, Kans	54
Norfolk, Nebr	48
Greensburg, Ind	35
East Chicago, Ind	21

A number of factors might combine to determine the costs, the salaries of the teachers, the number of periods taught per day, and the size of the sections. Are these well balanced?

The teachers do not teach too many hours a week. Prof. Bobbitt gives a table showing the median length of the teaching week in the various subjects in the schools he studied, together with the quartile range. Giving this and comparing the average length of teaching week (the median is inaccurate with so few cases) in Elyria High School, it is clear that the teachers do not teach too many periods as compared with other schools.[1]

Length of teaching week per teacher and subject, Elyria and others.

Subjects.	Zone of safety.	Med. 60 minute hours per teacher per week in other cities.	In Elyria
Agriculture	28–23	25.4	18.58
Household occupations	28–23	24.1	22.50
Commerce	27–23	24.1	30.00
English	26–20	21.3	18.58
Mathematics	26–22	23.3	18.58
Latin	26–21	23.2	18.58
Modern languages	24–20	23.2	18.58
Shopwork (industrial arts)	26–21	23.1	30.00
History	26–20	23.0	18.58
Science	25–22	22.5	25.50

In all but commerce, shopwork, and science the teachers in Elyria High School are well below the median and below the zone of safety. This would increase costs, not lower them.

Nor are the sections especially large. The median section for the school is 21 pupils. The entire distribution of sections is given in the following table:

Size of sections in Elyria High School.

Subjects.	Median numbers.	Students. 1–4	5–9	10–14	15–19	20–24	25–29	30–34	40
Agriculture	21								
Commercial work	14					4	1		
Drawing	17			4	1		1	1	
English	24			1	2				
History	26				1	8	9	2	
Home economics	15	2	1	5	12	6	6	3	
Latin	20			1	3				
Mathematics	24			1	2	7	1		
Modern languages	26			1		9	4	3	
Music	41.5					2	3	2	
Science	21								4
Industrial arts	16			2	4	6			
						3			
Total	21	2	1	15	27	45	25	11	4

[1] The School Review, Oct., 1915.

Size of sections in Elyria High School compared with upper and lower quartiles of a number of other cities (Babbitt).

Subjects.	Elyria.	Other cities.		
	Median.	Upper quartile.	Median.	Lower quartile.
Music	41.5	88	58	42
English	24	24	22	20
Mathematics	24	24	21	18
History	26	23	21	17
Science	21	22	20	16
Agriculture	24	25	19	13
Commerce	14	23	20	15
Drawing	17	24	18	14
Modern languages	26	20	17	15
Latin	20	19	17	14
Household occupations	15	23	17	13
Shopwork	16	18	14	12

Elyria is clearly at about the central tendency of the cities studied by Babbitt. The expenses of instruction are well distributed from department to department. It is at about the median.

The salary of the principal.—The latest available compilation of statistics of salaries of high-school principals is for the year 1913–14. At that time the principal of the Elyria High School received $1,600, which was $100 less than the median and $73 less than the average paid to high-school principals in the cities of the country whose population was between 10,000 and 25,000.

The Elyria principal now receives $1,700, exactly the median salary in 1913–14. Since that time, however, salaries have increased throughout the country, and undoubtedly the median salary is still greater than that of the Elyria school. A reasonable increase should be granted to him. The following table shows the salaries of 223 high-school principals:

Salaries of high-school principals in cities of 10,000 to 25,000 population in 1913–14.

	Principals receiving.		Principals receiving.		Principals receiving.
$3,500	1	$2,300	4	$1,500	31
3,000	1	2,200	13	1,400	19
2,900	1	2,100	6	1,300	16
2,800	2	2,000	20	1,200	10
2,700	3	1,900	9	1,100	6
2,660	2	1,800	30	900	2
2,500	7	1,700	16		
2,400	6	1,600	20		

Median, $1,700; average, $1,673. At that time Elyria paid $1,600.

TEACHERS.

The salaries of the teachers in the high school at Elyria are surprisingly low. The median salary is $1,000, or $100 more than it was in 1912–13. The distribution of salaries of 23 teachers employed in the fall of 1916–17 was as follows:

Salaries of teachers, 1916–17.

	Teachers.		Teachers.
$1,350	4	$1,000	5
1,250	2	950	1
1,200	1	900	1
1,150	2	850	2
1,100	1	800	2
1,050	1	750	1

Comparing the median salary in Elyria with the median salary of certain other cities of about the same size (reducing the median to conform to similarity of dates) we have the following;

Median salaries of high-school teachers in certain cities.

Alameda, Cal	$1,440	Kearney, N. J	$1,000
Plainfield, N. J	1,300	Kenosha, Wis	1,000
Norwood, Ohio	1,300	Morristown, N. J	1,000
Fresno, Cal	1,300	Ann Arbor, Mich	1,000
Boise, Idaho	1,300	Moline, Ill	1,000
West Chester, Pa	1,200	Adrian, Mich	950
Wilkinsburg, Pa	1,200	Muncie, Ind	950
Hackensack, N. J	1,150	Leavenworth, Kans	935
Gary, Ind	1,100	East Chicago, Ind	900
Trinidad, Colo	1,100	Elyria, Ohio	900
Port Chester, N. Y	1,100	Fargo, N. Dak	900
Sioux Falls, N. Dak	1,100	Sandusky, Ohio	900
Everett, Wash	1,100	Burlington, Iowa	875
Belleville, Ill	1,080	Owensboro, Ky	855
Dunkirk, N. J	1,000		855

Under ordinary circumstances, with such a low price paid for teaching, one would naturally expect to find marked deficiencies in other lines, such as very young teachers, teachers without experience, poorly trained teachers, etc. But this is not the case.

1. The teachers of Elyria High School are exceptionally well trained. The median teacher has had a four-year college course; three have done graduate work; while only seven have had less than a complete college course.

Years of training beyond elementary school. Elyria high-school teachers.

	Teachers.		Teachers.
9 years	1	7 years	2
8½ years	1	6½ years	1
8¼ years	1	5½ years	1
8 years	13	5 years	3

2. The teachers of Elyria High School have had successful experience in high-school work. The teaching done and the amount of each kind is given in the following table, in months:

Experience of Elyria High School teachers.

No.	Total teaching experience.	In present place.	In high school.		In elementary school.	
			City.	Rural.	City.	Rural.
	Months.	*Months.*	*Months.*	*Months.*	*Months.*	*Months.*
1	360	126	153		207	
2	306	198	198	99		9
3	232	212	212			20
4	171	36	36	108		27
5	140	140	140			
6	132	45	45	27		60
7	114	105	105		9	
8	111	70	70	32		9
9	100	36	100			
10	88	77	77	9		2
11	87	36	36			51
12	80	27	80			
13	78	0	0		20	58
14	72	54	54			18
15	63	45	63			
16	54	54	54			
17	54	18	36	18		
18	43	43	43			
19	18	18	18			
20	18	18	18			
21	18	9	9			
22	18	0	0		0	9

The median teacher of the Elyria High School has had a total experience of 80 months, 43 months of which have been spent in the present place. All but 3 have had experience in high-school work previous to the present year, and only 1 has had less than two years' experience previous to the present year.

3. The teachers of Elyria High School are a mature group of teachers. Their ages are as follows:

Ages of teachers in Elyria High School.

	Teachers.		Teachers.
Under 25	2	45–49	1
25–29	6	50–54	1
30–34	7	55–59	1
35–39	3	60–64	1
40–44	1		

4. The teachers of Elyria High School have had considerable work in education. The amount of work which each had done in education and psychology, computed to a common standard, the semester-hour basis, is shown in the following:

Professional study by teachers.

Semester hours in education:	Teachers.
0	7
5–10	3
10–15	2
15–20	4
20–25	3
25 and over	3

Considering that the teachers of the Elyria High School are well educated, have had successful experience, are mature, and have had training in psychology and education, it is surprising that they are not better paid. The explanation lies in the fact that the great majority of them previously lived in Elyria or the vicinity, and that the opportunity to teach at home among familiar surroundings and friends outweighs the higher salaries that would be paid elsewhere. Only a few of the teachers have any appreciable income outside of school work, but the fact that a good many live at home with their parents in effect increases their salaries a little. Eleven of the teachers are graduates of the Elyria High School itself, seven from high schools in northern Ohio, and only five from other places. Nearly every teacher in the school secured his place through the personal knowledge of the former superintendent, showing that the school was not bidding for teachers in the open market.

The teachers take an active part in the work of the community, only six not working either in the clubs, Sunday schools, Young

Men's Christian Association, or Young Women's Christian Association.

One noticeable feature of the attitude of the teachers is their lack of attendance upon summer schools. This is not so necessary as it might be if they were not so well trained, but the fact remains that 15 of the teachers have not been to a summer school since graduation from college. The salaries paid, of course, do not warrant much expense for study during vacations.

1. We recommend that the salaries of the teachers of Elyria High School be increased to meet the demands on the outside. Ten teachers have been drawn away from Elyria by Cleveland and other cities during the past 10 years.

2. We also recommend that efforts of teachers to increase their worth to the schools of Elyria by study at summer schools and in other ways be given proper recognition.

POSSIBLE ECONOMIES.

In addition to the plans previously mentioned, there are at least three ways in which the Elyria High School may economize the time of the pupils who enter its doors. It is not peculiar to Elyria that boys and girls are entering professional life at a later age than boys and girls in other countries. Twenty-five per cent of the present senior class were 19 or older last June. The following "age-grade" table shows the maturity of the student body.

Ages and grades of pupils in Elyria High School.

Grades.	Ages.								
	13	14	15	16	17	18	19	20	21
First year	7	49	59	37	9	2			
Second year		10	48	79	34	7	2	1	
Third year			11	39	43	30	8		
Fourth year				7	29	24	17	2	2

Anything which will enable the boys and girls to finish school at an earlier age, or to complete more of the course before they are forced to stop school, would be a good thing. Three measures may be more or less completely adopted to further this purpose: (1) The school might continue for a longer time each year; (2) the pupils in certain cases might be allowed to carry more work; and (3) a closer relationship might be made with the elementary school whereby the break between the two institutions would be lessened, so that the boys and girls might get an earlier start in the high school.

(*1*) *Increasing the time given to school work.*—The Elyria High School has a term of 38 weeks, an unusually long term. Many other schools in the North Central Association run but 35 or 36 weeks, and

still receive the same credit for a year's work. If Elyria High School were to institute a summer term of nine weeks, and add to that two or three weeks of the winter term, a summer course completing from one-fourth to one-half of a year's work might be offered. If a student were to take one-third of a year's work every summer, the course could be completed in three years, a saving of an entire year. If compulsory military training is adopted by this country some such plan as this will be needed to make up the time to be lost in that way. This, of course, will increase the total expense for salaries, but it will be making a better use of the school plant. In time some such plan as this should be adopted.

(2) *Allowing certain pupils to carry more work.*—Individuals differ widely. On the race track we expect certain boys to run much faster than others, in the declamation contest we are not surprised at inequalities in ability, but in high school we usually insist that every boy and every girl carry four subjects, no matter whether he or she is bright or dull. It is well known to anyone who has made any psychological study of variations in ability that it is quite as easy for certain children to carry five subjects as it is for certain others to carry three. There is no good reason why the bright, healthy children should not be permitted to carry five subjects and graduate in three years.

At present in the Elyria High School relatively few are carrying more or less than the normal amount. The following table gives the conditions on February 15, 1917:

Number of pupils in Elyria High School carrying 2, 3, 4, and 5 courses.

	Two courses.	Three courses.	Four courses.	Five courses.
Freshmen		[1] 4	161	2
Sophomores		13	170	13
Juniors		[2] 15	106	11
Seniors	[3] 2	[4] 8	72	6

[1] From delinquent school.
[2] Six taking music outside.
[3] Doing office work outside; need but two units to graduate.
[4] Taking music outside.

Most of the pupils carrying less than four courses are carrying music in addition. Those from the delinquent school are carrying but three. In the same fashion, why should not the exceptionally able, coming from the elementary school, be allowed to elect an extra subject, or rather be encouraged to elect it. It would make for earlier graduation. It would save a year for many.

(3) *A better organization of the program of studies.*—At present the elementary schools and the high school at Elyria are almost completely separate. In the grade schools the children sit in one room;

in the high school they move about; in the grade schools they have but one teacher except in manual training and mathematics; in the high school they have many. In the elementary school the same subjects are studied throughout most of the course; in the high school new ones are taken up with relative frequency. One of the large elementary schools is on the same plat of ground as the high school, yet the two are in no way connected. Few high-school teachers have seen an elementary-school class taught since they left the eighth grade. Few elementary-school teachers have seen a high-school class taught since they themselves were in the high school. Not a single reference was made in any first-year high-school class that was visited to any elementary school work that might have gone before. The high-school teachers were quite as unfamiliar with any of the details of the eighth grade work as the eighth grade teachers were of the high-school work. One teacher appointed in February had a little work in both schools; a few of the manual training classes are held in the high school. These are the only connections.

No argument is needed to prove the inefficiency of this organization, the result of accidental combinations of differing types of schools in our educational system. There is no psychological, sociological, or practical reason why "elementary-school work" should continue for eight years and then suddenly give way to "high-school work." There is no valid reason for a break between the two. Various attempts are being made all over the United States to remedy this evil, which, of course, is not peculiar to Elyria. Many elementary schools have introduced departmental work in the upper grades, allowing for greater specialization of the teaching force, with the consequent increase in efficiency, striving to make the elementary school more like the high school. Other cities have tried to make the first year of the high school more like the elementary school, giving one or two teachers entire charge of a section. Some cities promote the eighth-grade teacher with the class, making her a section teacher of the new first-year high-school class, and having her continue the Latin and algebra which she started the year before. In this way all the eighth and ninth grade teachers teach one grade or the other every two years.

Without doubt the most successful solution of the difficulty has been in the introduction of the junior high school. This movement has been viewed as an unwarranted extension of the high school downward. In reality it is fully as much an extension of the elementary school upward. The elementary school and the high school were all right so long as one was for the training of followers and the other for the training of leaders. But the spirit of democracy has grown, and the high school has changed from a preparatory school to a real college of the people, beyond which not more than 4

per cent of the people go. More than 50 per cent of those who enter it leave before the close of the second year. A change, therefore, is urgently needed which will wipe out the line of demarcation between the elementary and the high school. For the commercial curriculum does not really start any commercial work until the second high-school year. Yet, as Van Denburg in his study of the New York high schools has showed, pupils leave in great numbers to enter business before the close of the first high-school year. For the college preparatory group, the four years of training are not sufficient; nor do we see the like of it in any other great country. German boys start Latin in the class corresponding to our fourth grade, and a similar condition prevails in France.

In view of the foregoing facts it is recommended that Elyria adopt the six-three-three plan of organization for its schools. In this plan the first six grades become the elementary school; the seventh, eighth, and ninth grades become the junior high school; and the tenth, eleventh, and twelfth grades the senior high school.

It has been said that it is the function of the first five or six years of school to impart the tools and basal concepts of education by means of interesting subject matter, and that it is the function of the upper grades and the high school to impart interesting subject matter by means of the tools and basal concepts learned in the earlier grades. This shift in emphasis forms the logical transition from the elementary school to the junior high school.

Impress upon the teacher the fact that pupils are leaving school. One great advantage of the junior high-school idea is that there is a "graduation" at the close of the ninth grade, and the teachers do not count on three years' additional work for every child. Yet in the usual high school, the program of studies and the ideas of the teachers are often based upon the thought that all children are going to graduate.

One additional consideration. A survey need not confine itself to suggestions which are immediately practical. The one which follows is one which the administrators of the high school should weigh with exceeding care, considering its possible advantages and disadvantages. The suggestion is that at least a part of the Elyria High School be organized on a part-time plan like that of Fitchburg, Mass., and the University of Cincinnati. A number of considerations lead to this suggestion. A great number of the pupils are leaving school before graduation. Much of the so-called vocational work, particularly agriculture, is without point unless it is connected with the actual operation of such work out in the world. The great majority of the boys and many of the girls are engaged in gainful occupations during the summer and on Saturdays and before

and after school. If the "alternation plan" were adopted of operating the school in groups, one group to be at work in the industry or on the farm or in the home, and another group to be in school, the groups exchanging places every week or every two weeks, practical experience in the work would be had, the school work would have more point, and many pupils otherwise unable to remain in school would be enabled to do so.

The children at Elyria are already engaged in gainful occupations. The pupils were asked the following questions: How much did you make at work last summer? What was the work? How much do you make out of school hours and on Saturdays? What is the work? The results are given in the following tables:

Money earned by high-school boys.

Nonresident pupils who earned the amounts stated in column 3.	Resident pupils who earned the amounts stated in column 3.	Amounts earned during summer vacation, 1916.	Nonresident pupils who earned the amounts stated in column 6.	Resident pupils who earned the amounts stated in column 6.	Earnings per week during school term.
1	2	3	4	5	6
5	14	0	40	84	0
5	9	$0–$10	1	3	$0.01–$0.50
9	24	11– 20	7	10	.51– 1.00
12	16	21– 30	5	16	1.01– 1.50
6	6	31– 40	10	25	1.51– 2.00
8	5	41– 50	1	10	2.01– 2.50
6	11	51– 60	6	15	2.51– 3.00
5	6	61– 70	1	4	3.01– 3.50
6	15	71– 80	1	9	3.51– 4.00
2	8	81– 90	1	3	4.01– 4.50
8	25	91–100	1	11	4.51– 5.00
.....	2	101–110	1	1	5.01– 5.50
.....	7	111–120	1	4	5.51– 6.00
.....	7	121–130	.....	1	6.01– 6.50
.....	7	131–140	.....	.....	.....
.....	9	141–150	.....	1	7.01– 7.50
.....	2	151–160	.....	2	10.00
.....	2	161–170	.....	1	13.00
.....	2	171–180	.....	.....	.....
.....	2	181–190	2	.....	Award.
.....	7	191–200	2	.....	Indefinite.

Profitable occupations of high-school boys.

Occupation in which money was earned.	Nonresident pupils who earned money—		Resident pupils who earned money—	
	During summer vacation, 1916.	During school term.	During summer vacation, 1916.	During school term.
Clerking in store	3	7	49	49
Office work	0	0	6	3
Farm and garden	58	29	15	1
Factory	5	1	63	9
Odd jobs	0	3	20	7
Chauffeur and garage	1	0	8	3
Driving truck	3	0	5	0
Plumbing	0	0	0	2
Shopwork	1	1	4	0
Carpentry	1	0	0	0
Music	1	1	0	1
Theatrical work	0	0	1	0
Caddying	1	0	2	1
Setting ten pins	6	1	0	2
Delivering	1	0	0	2
Minor sales	2	2	13	26
Waiting and barbering	0	0	1	3
Printing	0	0	3	2
Electric work	0	0	1	1
Library	0	0	0	1
Drafting	0	0	0	1

Money earned by high-school girls.

Nonresident pupils who earned the amounts stated in column 3.	Resident pupils who earned the amounts stated in column 3.	Amounts earned during summer vacation, 1916.	Nonresident pupils who earned the amounts stated in column 6.	Resident pupils who earned the amounts stated in column 6.	Earnings per week during school term.
1	2	3	4	5	6
37	127	0	76	161	0
29	44	$1-$10	7	13	$0.01-$0.50
12	17	11- 20	2	18	.51- 1.00
11	11	21- 30	1	1	1.01- 1.50
1	2	31- 40	2	2	1.51- 2.00
1	2	41- 50	0	5	2.01- 2.50
0	2	51- 60	2	1	2.51- 3.00
1	0	61- 70	1	1	3.01- 3.50
1	2	71- 80	0	1	3.51- 4.00
5	0	Indefinite.	0	0	4.01- 4.50
0	1	Premiums.	1	1	4.51- 5.00
1	0	Board.	0	12	Indefinite.
			1	0	Board.

Profitable occupations of high-school girls.

Occupations in which money was earned.	Nonresident pupils who earned money—		Resident pupils who earned money—	
	During summer vacation, 1916.	During school term.	During summer vacation, 1916.	During school term.
Housework	25	13	38	25
Clerking	3	2	15	16
Office work	1	2	10	2
Nursing	0	0	9	1
Farm and garden	30	0	5	0
Factory work	1	0	3	0
Baking and candy making	0	0	1	2
Selling small articles	1	0	4	3
Theatrical work	0	0	2	2
Errands	0	0	1	0
Giving lessons (music or dancing)	0	0	1	3
Garage	1	0	0	1
Literary work	0	0	1	0

It is clear that a large number of lines of work are already represented in this high school. The boys particularly are already at work, and many of them are engaged in work which renders considerable return for the effort. It is certainly true that the rapidly growing industries of Elyria and the vicinity are drawing boys away from school. A combination plan whereby boys could be allowed to alternate between work and school would tend to keep boys in school, would help them to earn their way, and at the same time would tend to make the school work of a practical nature that no other plan would secure.

This plan has been successful in other cities. It is doubtful if the work in industrial arts or agriculture will ever amount to what it should until some plan something like this is adopted.

SUGGESTIONS.

(1) That a curriculum better adapted to the needs of prospective teachers be devised upon consultation with the normal school authorities.

(2) That a curriculum in arts and crafts be devised.

(3) That every effort be made to put more vital work in the earlier years, particularly in the commercial and agricultural departments.

(4) That the three science laboratories be repaired and made more suitable for their work.

(5) That more work in hygiene and health be given.

(6) That science work, especially physics and chemistry be better adapted to the needs of farmers, industrial workers, and housewives.

(7) That four years of one modern language be offered.

(8) That every Latin class be also a class in English.

(9) That the pupils who are not doing well be encouraged to drop Latin and algebra early in the course.

(10) That instruction in "oral English composition" be extended in a measure to all the exercises of the school; that frequent comparisons be made between the classics, and greater emphasis be laid upon the reasons for reading particular books; that more interesting stories be selected for beginners; that better application be made of grammar and rhetoric.

(11) That algebra be postponed to the second year.

(12) That the hard and fast system of assigning lessons be abolished.

(13) That experiments in supervised study be tried.

(14) That some part-time classes be introduced.

Chapter VI

INSTRUCTION IN PRIMARY GRADES.

READING.

Failures in reading.—Twenty-one per cent of the children in the first grade in the Elyria schools failed in reading at the mid-year promotions in 1917. Ten per cent failed in the second grade, 5 per cent in the third grade, and only 1 per cent in the fourth grade. Comparison of this record with that of Cleveland for June, 1914, shows that the first-grade failure in Cleveland was 15 per cent as against 21 per cent in Elyria; the second grade 10 per cent in both cities; and the third grade 6 per cent as compared with 5 for Elyria; and in the fourth grade 4½ per cent for Cleveland, and 1 per cent for Elyria. Cleveland has a lower rate of failure in first grade by 6 per cent than Elyria, but in the next three grades—second, third, and fourth—the Cleveland failures are 6 per cent greater than in Elyria. Cleveland's curve of failure in reading is lower than Elyria's in the first grade, but still maintains a high per cent, while it follows the same general direction through all the grades. Elyria has a decided gain on Cleveland in the middle grades, and it was demonstrated repeatedly in the reading classes observed in Elyria that the children in the middle grades read with fluency and accuracy.

A full discussion of the probable causes which lead to the high percentage of failures in the first grade and the reasons for the wide variation in proficiency in reading between the first and the middle grades will be given in the following pages.

First grade.—Many influences work together to deter the progress of first-grade children. For the first months they must adjust themselves to new conditions and adapt themselves to a new environment. The language of the schoolroom is very different, even for American-born children, from that of the home. The arbitrary symbol in reading, as the sign of the spoken word, requires in itself a remarkable adjustment. The child has known language through the ear and voice, and now it becomes a thing of sight. He *sees* language and is expected to translate the symbols quickly and accurately into the spoken word with which he is already familiar. This fundamental principle of learning to read is too often made more difficult for him than it need be. He comes equipped with a

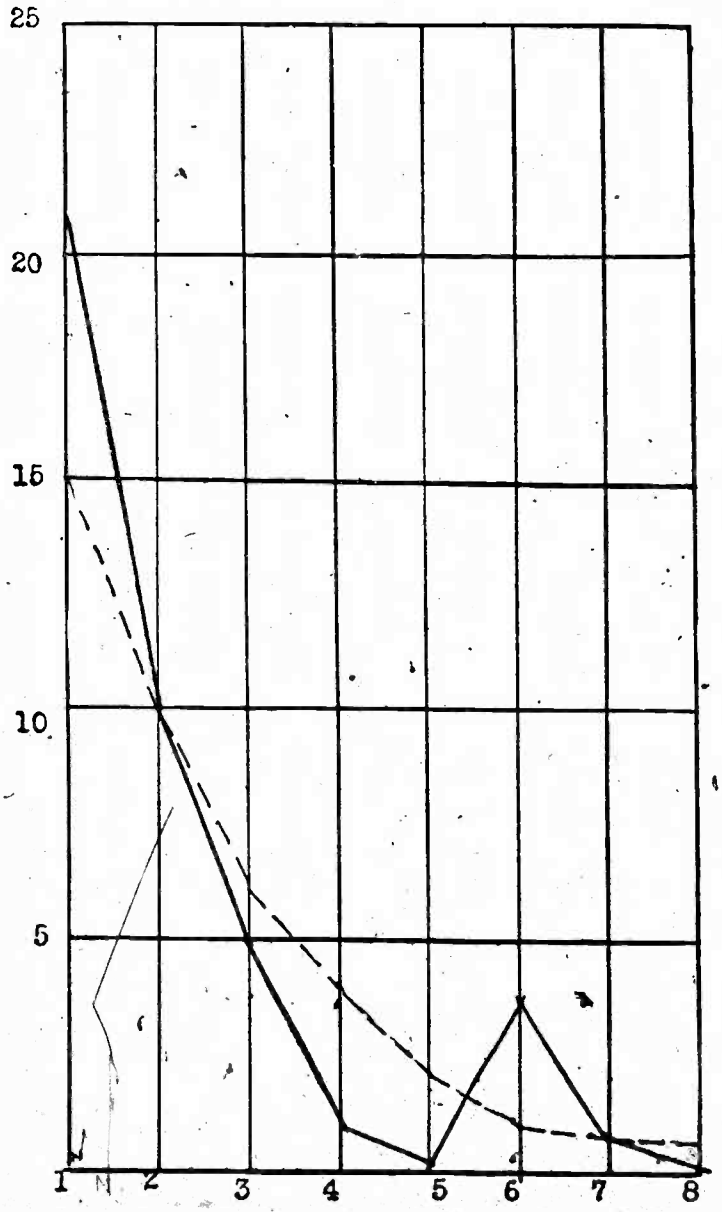

DIAGRAM 1.—Per cent of failures in reading in Elyria at mid-year promotions, January, 1917, compared with Cleveland for June, 1914. Elyria, solid line; Cleveland, dotted line.

large vocabulary of spoken words. He knows their meaning. He can use them at will to express his thoughts on many subjects. These thoughts and words are too often ignored in the early lessons in reading, especially with children who speak a foreign language at home. New matter and the strange symbols confuse him, and frequently after five months of struggle to meet this requirement he fails.

Requirement in first grade.—That the requirement for first-grade reading is much too large is fully demonstrated by the number of failures in all the first grades throughout the city. There needs to be a quickened conscience among the teaching force in regard to failures in their classes, and greater use should be made of the half-hour period at noon designed for the special help of backward children.

Method in first grade.—The method used in the beginning classes lacks the element of adaptability and elasticity. Children are held too long on one unit of work before they proceed to new matter. No provision is made within the method used for either the advanced or the backward child.

Observation in first grade.—The first grades throughout the city were beginning a new term and the method was the same in all reading classes observed. A rhyme was written on the blackboard and the pupils went over the words with the teacher until they were familiar with them. Then individual words were emphasized until the children were able to recognize them out of their setting in the rhyme. Sometimes this analysis of the sentences into word units became monotonous and tiresome, for the children were held on one rhyme until all the words in it were mastered. In one first-grade room there were 18 children, 10 of whom were repeaters, and as they had already spent five months on the same rhymes the repetition of the process must have been most discouraging. Some individual teachers made an attempt to vary the exercises by singing the rhyme, or by playing a game with bean bags and keeping time with the tossing of the bags back and forth as the children chanted the rhyme. This diversion added a fictitious interest to the exercise but did not seem to promote the real object of the lesson, that of functioning words.

PHONICS.

Mechanical difficulties in reading.—It is evident, both from observation and from statistics, that the work in phonics in most schools is desultory and does not carry over into the reading and spelling lessons as it should. The time allotment in phonics in Elyria and in 15 other cities shows that Elyria is no exception to the rule.

Fifty minutes per week in the first three grades are devoted to phonics in the Elyria schools according to the daily program in those grades. Ten minutes a day, extending over three years of school time, mean a long-drawn-out study of a subject that needs to be emphasized only during the first year of school.[1] It could be virtually mastered in two or three months. In all his vocabulary the child uses but 45 sounds, and he needs to learn but 36 letters and letter combinations to represent them. It would seem an easy matter to analyze his spoken words into the 45 fundamentals and then teach him to recognize the symbols which represent them. If this could be done during the first few months of school, it would give the child a mastery of the technique of reading and greatly reduce the percentage of failures in reading in the first grade.

Time allotment for phonics in Elyria and in 15 other cities.

Grades.	Minutes per week.		Per cent of grade time.	
	Elyria.	Fifteen cities.	Elyria.	Fifteen cities.
1	50	105.50	3.9	6.8
2	50	81.72	3.9	5.4
3	50	50.45	3.9	3.3

The time allotment from 15 other cities compared with that of Elyria indicates that this plan has been carried out in some schools. The 15 cities tabulated in the table above show an average of 105.5 minutes a week devoted to phonics in the first grade, as against 50 minutes in Elyria; 81 minutes in the second grade for 50 in Elyria, and the same allotment in both cases for the third grade.

The apportionment which these cities make through the three grades seems an equitable distribution of time for phonics. It shows a high appreciation of the importance of phonics as a subject for study in primary education.

Phonics, or word drills.—Unfortunately, not even the 10 minutes' allotment for phonics per day in Elyria is absolute, for the daily programs give a double assignment to this period which is listed as "phonics, or word drills," in all programs examined except one. The choice lies with the teacher; she can teach either subject during this period, and as the "word drill" is more closely related to the reading lesson than the "phonic drill" she often emphasizes the former at the expense of the latter.

Observation of a phonic lesson in first grade.—Drill cards were used in a first-grade phonic lesson observed. They were presented

[1] The data in this section are not calculated on the same basis as the data given in the section on instruction in the intermediate and grammar grades.

at random as far as the sounds of the letters were concerned. The drills consisted of initial consonant sounds in blend with the letters *r*, *h*, *l*, etc.—*pr*, *tr*, *fr*, *sh*, *th*, and *bl*, combined with the endings *ad*, *ee*, *y*, *ay*, *over*, and *ound*, to form the words *pray*, *tree*, *fry*, *shad*, *rover*, *round*, etc.

This exercise, like many of the phonic drills observed, was a drill on the quick recognition of the symbol by sight and the pronunciation of its corresponding sound. There was no training of the ear to the quick recognition of sound apart from its association with the visible symbol, a type of training which is much needed by these children and is greatly neglected in all grades. No observation was made of a development lesson in which the sound of any letter was first presented to the class.

In general all lessons in phonics that were observed were used as sight drills rather than sound drills. It is suggested that the symbol be used only occasionally until the children become expert in discovering sound units in the words they use ordinarily in conversation in the schoolroom. The work from charts and cards is apt to become perfunctory and to lose all spontaneity. It is suggested that the teacher originate and prepare new matter and new methods for these lessons.

Tests for reading vocabulary.—The Haggarty Scale for Reading Vocabulary was used in the first three grades in selected schools to determine the child's proficiency in pronouncing words. The test consists of lists of words, 25 phonetic and 25 sight words selected from the Jones list, and printed on small cards in columns arranged in groups of 5 according to a scale of increasing difficulty. The first group of words is numbered 50, and the list consists of the words *would*, *out*, *bit*, *that*, and *fox;* line 60, following line 50, is 10 points more difficult than the preceding line and consists of the words *ring*, *cut*, *time*, *seed*, *more;* this is followed by lines 80, 100, and 120, of five words each, the points of difficulty being indicated by the number of the line.

Each child was tested alone and by the same person. A card was handed to him and he was told to read the list of words it contained; if he hesitated, he was told to pass on to the next word. The child was not marked in percentages on this test, but a careful record was kept of his reaction on each word; a space left if he pronounced the word correctly, a zero if he made no attempt, and the word he substituted for the correct word was written in the space reserved for the record of his score in the test.

THE HAGGARTY TEST FOR READING VOCABULARY IN PRIMARY GRADES.

CHART I. Class 1-A, in school five months. *PHONETIC WORDS.*

Pupils	1	2	3	4	5	6	7	8	9	10
Sex	B	G	G	B	G	B	G	B	G	G
Age	6	6	6	6	6	7	6	6	6	6
Line 50.										
would			0	wald	so			ode	wind	blow.
out		0	0		toe			0	but	not.
bit		0	bic		ball			0	bit	bite.
that		0	what		cat		this	0		0
fox	goat									ox.
Line 60.										
ring		0	0		ray	riden		rocks	rine	rain.
cut		0	0	cout	kay		eat	cat	0	cat.
time			0		tay			0	0	0
seed		feed	see		say		feed	0		0
more	0	0	0		mow	0	0	0	0	0
Line 80.										
duck	0	0		0	old	0	0		0	0
song		sing	sing		some			some	0	sing.
dance	0	0			pay	0	0	0	0	0
feel		0	feed		fale		feed	feed	fall	feed.
hot	0	0	0	hote	toe	0	0	hote	hote	hote.
Line 100.										
dig	big	big	big		pig	dite	dog	dice	dog	pig.
sled		0	slight	slid	slee	0	0	sleed	0	sling.
sent	0	0	0		tie	0	0	0	0	0
match	0	0	0		they	0	0	meadow	0	mage.
drive	0	0	0		they	0	0	0	0	0
Line 150.										
snug	0	0	0	snake	some	0	0	0	snug	0
slope	0	0	0		slow	0	slopy	0	slopy	slopy.
rang	0	0	0		run	ramen	0	ring	0	sung.
lace	0	0	0		lay	0	lake		0	0
care	0	0	0		cull	0	0	0	0	carry.

Influence of phonetic training shown in this test.—Chart I is the record of the children of a 1-A class in beginning reading who have been in school five months, as tested by the Haggarty Scale for Reading Vocabulary. It throws an interesting light on the influence which phonetic training has on the ability of children to pronounce words. The pupils are numbered on the upper line and on the next two lines below a record of their sex and age is given. The list of test words is given at the left of the chart in a vertical line and each child's reaction is recorded in the spaces at the right of the word lists.

An individual pupil's record is read down the column and each child's attempt on a certain word is found by reading across the chart from left to right. Of the 250 trials on this list of phonetic words in this class of pupils 190 were missed, and of these 144 were attempted. Nearly all these attempts show a decided phonetic influence. They show, also, for this class, at least, a state of mind that is "confusion worse confounded." The word "dig," for instance, has 1 correct pronunciation out of 10 trials and 9 attempts, in this order—*big, big, big, pig, dite, dog, dige, dog, pig.* The consonant difficulty here is strikingly apparent. Five substitutions for the letter *d* occur, the letter *b* three times, and the letter *p* twice. The vowel difficulty occurs four times, long *i* confused with short *i* twice, and

with short *o* twice. One little girl, 6 years old, whose record is recorded as No. 5, attempted every word in the list of 25 with 1 correct pronunciation and 24 incorrect. Her difficulty is evidently with vowels, for she gives the initial consonant sound correctly 13 times out of 24 and the vowel sound only 4 times accurately. Her other attempts are far afield and they show no phonetic influence.

THE HAGGARTY TEST FOR READING VOCABULARY IN PRIMARY GRADES.

CHART II. Class 3-A, in school two years. *PHONETIC WORDS.*

Pupils	1	2	3	4	5	6	7	8	9	10
Sex	G	B	B	G	B	B	B	G	B	B
Age	9	8	9	9	9	8	8	7	9	10
Line 50.										
would	world.				world.		world.			world.
out										
bit										
that										pit.
fox										
Line 60.										
ring										
cut										rain.
time										
seed		said.								
more										
Line 70.										
duck		dusk.								dick.
song										
dance										dance.
feel					feed.					
hot		hit.		hoot.			hote.			hut.
Line 100.										
dig										dog.
sled				slid.						sleed.
sent		see.								
match		march.			0					
drive		driven.								druve.
Line 120.										
snag	nag.	snail.			sang.		sang.			sang.
slope					0					
rang		ring.			ring.					rain.
lane		lake.			0		last.			
care			0							sore.

Chart II shows the results of tests in a 3-B class who had been in school two years. The same words were given to the same number of children and under the same conditions as before. Of the 36 words missed in 250 trials, 32 were attempted. Many of the attempts indicate that phonetic analysis had not been utilized, but that the flash-card method had been adopted. Many show the influence of phonetic drills, however; the word "sang" occurs three times as a substitute for *snag*, *ring* twice for *rang*, *slid* for *sled*, and *hit*, *hoot*, *hote*, and *hut* for *hot*. Nearly all these substitutions show a vowel difficulty which should not trouble children entering the third grade. A suggestion for a more suggestive and incisive treatment of phonetics has already been made, and may well be repeated here.

Value of reading vocabulary tests.—These charts in the hands of the teachers of these children should prove to be most illuminating

and suggestive. Here is an opportunity for the teacher to put her hand on the weak spot in reading vocabulary for every member of her class. One child needs drills on the vowel sounds, another on the consonants. When a child has formed the habit of guessing at words, like number 5, in Chart I, and is unconscious of making 24 errors in 25 attempts, a special analysis of words into sounds and symbols is needed to create a consciousness of sound values in the child's mind.

Rates of progress and the evidence of new difficulties will be revealed if tests of this kind are given frequently. Comparisons of proficiency of pupils in other school buildings of the same grade will prove of value to the teacher when measured by this scale.

The weekly time allotment for reading for the first grade in Elyria is 207.5 minutes, while the average for 20 other cities is 388 minutes. Elyria devotes one-third less time to reading than is usually given, which may in part account for the per cent of failure in this subject. In the second grade the time allotment is practically the same and still much lower than for corresponding grades in other cities. In the third grade, where the Elyria curve of failure in reading drops to 5 per cent, the time allotment is about normal. It is suggested that the time allotment for reading in the first grade be lengthened and that an effort be made by other means as well to lessen the number of failures. In the section of this survey devoted to arithmetic it is shown that number work is receiving a disproportionate amount of time in the first grade. Some of the time given to arithmetic might well be applied to reading.

Time allotment in reading in Elyria and in 20 other cities.

Grades.	Minutes per week.		Per cent of grade time.	
	Elyria.	20 cities.	Elyria.	20 cities.
1	207.5	388	16.2	20
2	215.0	355	16.8	23
3	195.5	275	15.4	18

Development lessons in the study recitation in reading.—The reading material in Elyria is drawn largely from the best sources, namely, folklore, myth, and fable. The reading lessons in all classes are reproductions of the finest literature that the world has produced. These lessons should be treated as more than mere oral reading exercises, perfunctory and formal, in which one child reads one paragraph, another following with the next, and so on. Some of the time should be taken for the development of appreciation. The socialized recitation is the type of exercise for these lessons. The following outline is submitted as a suggestion:

OUTLINE FOR THE STUDY RECITATION IN READING.

I. Assignment of the lesson; Arouse interest by—
   1. Questions.
   2. Informal conversations.
   3. Reading the text by pupils and teacher together.
II. Reading the lesson, orally and silently.
   1. Section the story.
   2. Make an outline.
   3. Retell important parts.
   4. Visualize.
   5. Dramatize.
   6. Read silently for appreciation.
   7. Read orally for expression, fluency, etc.
   8. Memorize choice phrases and sentences.

Divided periods in reading.—In some cities the need for training for appreciation is realized, and the time schedule has been changed so that 30 minutes are devoted to each lesson in reading. Fifteen minutes of this time is taken for a talk about the story, and the other 15 for training in proficiency.

Observation in second grade in reading for appreciation.—One of the second-grade reading lessons observed dealt with the story of "The Three Billy Goats Gruff." from the Free and Treadwell Primer. The aim of this lesson was to read for appreciation. The children stood grouped about the teacher in an informal way, and the social spirit strongly dominated the entire exercise. The children had already read part of the story, and a review of this was being given by the pupils in reply to the skillful questions of the teacher.

TEACHER. What story did you have yesterday?
PUPIL. The Billy goats.
TEACHER. How many goats were there?
PUPIL. There were three.
TEACHER. What were their names?
PUPIL. Little Billy Goat Gruff, etc.
TEACHER. Who lived under the bridge?
PUPIL. A troll.
TEACHER. What was on the other side?
PUPIL. A hill.
TEACHER. What was on the hill?
PUPIL. Pretty grass.
TEACHER. What did the goats want to do?
PUPIL. Get fat.
TEACHER. What did the troll want?
PUPIL. He wanted to eat the goats up. That's what trolls like to do.
TEACHER. Did he eat Little Billy Goat Gruff? Let's read and find out.

(Children read from page 83.)

TEACHER. Did the troll say that? Did the Billy goat say it? Which Billy goat said it? What is the second word? (little). I suppose you would not say it that way, would you? Just suppose some one was going to eat you.

The teacher's questions brought out the vital points of this fine old tale and helped the children to appreciate much of its charm. The oral reading was excellent. Reading for appreciation was emphasized throughout the entire recitation, only one reference being made to the mechanical side of the reading.

Recitations of this kind should be more common than they are in the Elyria schools. The study recitation outline is recommended as a guide to teachers who desire to improve their method of teaching reading after the manner of this recitation.

I. *Failures:* There should be a quickened conscience among the teaching force in regard to failures, and greater use should be made of the half-hour period at noon designed for special help to backward children.

II. *Phonics:*

1. Longer periods should be allotted to the teaching of phonics.
2. A few weeks of oral training in sounds should be given before the symbols are presented.
3. The work should be thoroughly systematized and become a a regular part of the daily program.
4. There should be a closer application of phonics to all language subjects.

III. *Reading for appreciation:*

1. The time allotment for reading in the first grade should be increased.
2. A period should be set apart each day for training in reading for appreciation.

LANGUAGE.

Oral language.—The lack of opportunity for oral expression was the most noticeable defect in the school program. The individual pupils observed in the first three grades spoke less than 100 words during a session of 260 minutes. This opportunity came only in the recitation period and consisted of counting numbers and reading words from the blackboard. No time was given to free and spontaneous expression; no questions were asked by the pupil; and no opinion was offered by him on any subject.

This table shows that little provision has been made in Elyria for language training in primary grades. The daily program gives 10 minutes a day to oral language in the first grade, and this is usually listed as "sense training or games," "dramatizing," "games and folk dances." In the second grade a little over 8 minutes is devoted to oral language. In the third grade 20 minutes three times a week is set apart for "nature study," "oral language," "poem," as wished, which indicates that the children are not receiving any definite systematic training in this important subject. One of the third-grade

daily programs lists one period of 15 minutes on Tuesday for "language games," "talk of grammatical errors," "describe a picture," or "reproduce a story." The fourth grade lists a 25-minute period on Monday and Wednesday for "language," but this consists of written work only.

Time allotment in language in Elyria and in 20 other cities.

Grades.	Minutes per week.		Proportion of grade time.	
	Elyria.	Twenty cities.	Elyria.	Twenty cities.
			Per cent.	*Per cent.*
1	51.0	133	3.9	8.8
2	43.0	144	3.3	9.6
3	62.5	170	4.9	11.3

In comparing Elyria with 20 other cities, we find that nearly three times as much attention is paid to oral language in other cities as in Elyria. We find, also, from observation and reference to daily programs that the work in Elyria is not language work, but that the time allotted to this period is distributed over a large number of subjects already enumerated in this report.

Importance of oral language training.—Too much can not be said in favor of oral language training in primary grades. All authorities agree that the ear is the important organ to be considered in teaching little children to speak, to read, and to write. "Address the ear principally," Gouin exhorts the teacher of language, "afterwards take as auxiliaries the eye and hand in reading and writing." Huey agrees, "The ear, and not the eye, is the arbiter of speech; the mouth, not the pen, its greatest instrument."

It is hardly possible that the children in the Elyria schools are receiving more than a minimum amount of language training with such limited time allotment and such indefinite assignment of subject matter.

Suggestive material for oral language lessons.—So far as observed in these grades there was no correlation of the work of the school with the interests and experiences of the children out of school. The number work, the language lessons, the games, and plays were all too far removed from the immediate interests of the child.

Table of out-of-school activities.—A table of out-of-school activities is included in this report as suggestive material for oral language lessons, for number lessons, and for the other activities of the schoolroom to be correlated with the regular subjects of study. These data were gathered from children in the first four grades in the Elyria schools and are recorded under the subjects of home work, home games, vacation activities, church entertainments, and books read during the year.

OUT-OF-SCHOOL ACTIVITIES OF PRIMARY SCHOOL CHILDREN.

Grades.	Home work.	Per cent.	Home games.	Per cent.	Vacation activities.	Per cent.	Church activities.	Per cent.	Books read.	Per cent.
First grade, 20 pupils	Set the table	50	Hide and go seek	100	Gardening:		Home entertainment	20	Tick Tock	10
	Sweep for mother	75	Hide the thimble	100	Pull carrots				Peter Rabbit	15
	Wash the dishes	80	Play house	60	Hoe garden				Old Mother Hubbard	10
	Wipe the dishes	100	Play with wagon	50	Pick tomatoes				Jack be Nimble	5
	Mop the floor	50	Automatic toys	10	Plant onions					
	Clean snow	80	Sled	100	Pull weeds					
			Washing set	30	Plant potatoes while daddy digs hole					
			Dollies that shut their eyes (girls)	100	Break earth in pieces with a hoe when father digs					
Second grade, 17 pupils	Carry dinner to father	6	Bowling alley at home	6	Play around house	48	Socials	18	Old Mother Hubbard	18
	Wash dishes	60	Hide the thimble	30	Went to grandparents	30	Sunday school	12	Ding dong	6
	Wipe dishes	50	Hide and seek	100	Lake	24	Easter	12	Cinderella	18
	Go to store	78	Coasting	30	Swimming	12	Christmas	18	Rub-a-dub-dub	6
	Make bed	12	Fox and geese	48	Cowboy	6	Bazaar	6	Little Jack Horner	6
	Clear table	6	Play house	24	Indian	6			Barber, Barber, Shave a Pig	6
	Answer phone	6	Old maid	6	Visiting	30			Uncle Tom's Cabin	6
	Iron	12	Tap the ice box	12	Country	12			Grimm's Fairy Tales	6
	Care for baby	6	Indian	24	Parties	12				
	Set table	6	Old Mother Goose	6	Automobile riding	6				
	Dust	50	Cowboy	18	Play war	6				
	Tend fire	6	Spin top	6	Help in garden	6				
	Clean walks	6	Ring around Rosie	6						
	Sweep floor	42								
	Take out ashes	18								
	Rock baby	6								
	Mop floor	6								
Third grade, 44 pupils	Wipe dishes	25	Tap the ice box	2	Go to seaside	2	Easter	6	Beautiful Joe	2
	Set the table	20	Tag	2	Play in sand	6	Children's day	2	Uncle Tom's Cabin	2
	Wash dishes	50	Bean bag	2	Swimming	18	Lecture course	2	Camp Fire Girls	2
	Go to store	12	Postman	2	Boat trip	4	Christmas	20	Black Beauty	2
	Work in barn	2	Indian	2	Fishing	6	Socials	8	What Tommy Did	4
	Watch the baby	4	Ball	2	Dolls	6			Jack and the Beanstalk	2
	Dust	18	Old maid	2	Dishes	2			Peter and Polly	2
	Make the beds	12	Checkers	12	Sleds	2			Animal Stories	2
	Sweep	25	Chess	2	Party	2			Play Days	2
	Tend to fire	2	Embroider	2	Hide and go seek	4			Punch and Judy	2
	Carry washing	2	Lotto	6	Ball	12			Fluffy Tail's Adventures	2
	Bring in coal	2	Doll	8	Pool	4			Beauty and the Beast	2
	Hoe in garden	2	Cars	2	Games	6			Little People of the Garden	2
	Run errands	2	Coasting	8	Visiting	16			Red Time Stories	2
	Chop wood	2	Hide and go seek	28	Lake	4			Little Prudy's Series	4
	Carry ashes	2	Toys	4	Automobile	2				
	Clean walks	2	School	8	Play war	4				
	Make a garden	2	Fish pan	2	Play farmer	2				

			Dominoes	1	Jump rope	4			Night Before Christmas	2
			Gun	2	Play house	8			Busy Little Folks	2
			Show	2	Tag	2			Alice in Wonderland	4
			Snowball	2	Roller skate	2			Through the Looking Glass	4
			Pool	2					Andersen's Fairy Tales	4
			Skate	2					Grimm's Fairy Tales	2
			Parchesi	2					Readers	75
			Little shoppers	2					Cinderella	4
			Hide the thimble	12					Nature Story Book	6
			Play house	8					Grit the Young Boat Man	2
			Leap frog	2					Brownie's Adventures	4
			Blindman's buff	6					Mother Goose	4
			Fox and geese	8					Ten Little Indians	2
			Red riding hood	2					Story of Liberty Bell	2
			Mulberry	2					Robinson Crusoe	6
									Bunny Brown Bobby	2
									Lame Prince	2
									Water Babies	2
									Tommy Tip Top	2
									Fox Story	2
									Pony Rider	2
									Boys in New Mexico	2
									Folk Lore	10
									That's Why	16
									Horace Mann	8
									Rose Bud Fireside Series	2
Fourth grade, 14 pupils	Clean stove	7	Duck on a rock	21	Fishing	7	Christmas	56	The Wise Old Rabbit	2
	Wash dishes	84	Hide and go seek	100	Ball	21	Easter	14	Readers	14
	Make beds	42	Tag	21	Cheese it	7	Socials	21	Bird Book	35
	Mop floor	14	Tap the ice box	28	Cowboy	7	Thanksgiving	7	Animal Book	7
	Dust	14	Ball	35	Visiting	42	New Year	7	Pony Riders in Pennsylvania	14
	Carry fuel	28	Hide the thimble	35	Jacks	7			Pony Riders in the Ozarks	7
	Sweep floor	56	Jump the rope	14	Jump rope	7			Alger books	14
	Care of baby	7	Parchesi	21	Play house	7			Now or Never	7
	Care of garden	35	Fox and geese	7	Marbles	7			Boat Club	7
	Carry out ashes	7	Checkers	7	Swimming	14			Robinson Crusoe	14
	Set table	21	Leap frog	21	Fishing	7			The Yankee Middy	7
	Build fires	7	Hat in row	7	Lasso	7			Folk Lore	42
	Go to store	7	Jacks	7	Riding	7			Bible	7
			Toys	7	Skating	7			Tin Box	7
									What Tommy Did	14
									World of Girls	7
									Adventures of a Brownie	7
									Brown's Fairy Tales	7
									Uncle Tom's Cabin	7
									Peter Rabbit	7

The table offers a wide range of subjects from which to select material for oral language lessons. Interesting topics of study for nature-study lessons are listed under vacation activities. One child reports a garden activity. "I break earth in pieces with the hoe when father digs"; which suggests to the resourceful teacher a series of interesting lessons in the preparation of soils for planting. "I plant potatoes while daddy digs the holes" introduces the subject of germination and offers an opportunity for valuable experiments in sprouting potatoes, planting bulbs, etc. Another suggestive report, "I pull carrots," leads the teacher directly to a series of lessons on the value of the roots of some plants as a food supply, and the best ways of cooking carrots, beets, parsnips, and similar roots.

The proportion of children in each grade who are engaged in different home activities is reported. These reveal in a concise way those occupations and interests most common to the children of Elyria. For instance, all the children in the first grade wipe the dishes as a part of their home work, 50 per cent in the second grade, and 25 per cent in the third grade. It is within the power of the teachers in these grades to make these homely activities interesting and to lift them above the plane of drudgery they so often occupy. A practical, usable course of study on home economics might be prepared for the elementary grades from reports of this kind.

The reading interests shown in this table should be utilized in various ways as a basis for oral language. The reports on books read would be valuable; an exchange of books between pupils and discussions of the story and characters should find some place in the course of study as a phase of the work in library reading. The games, the vacation sports like swimming and fishing, the church and Sunday-school interests, all make up the child's world and should find some place in his school life.

SUGGESTIONS CONCERNING THE TEACHING OF LANGUAGE IN ELYRIA.

1. The time allotment should be lengthened in the primary grades.
2. A systematic course of study should be mapped out with a definite assignment of subject matter for each semester in each grade.
3. Each teacher should have the opportunity to study for herself the best literature for children, and should receive training in this most necessary art, that of telling stories to little children.

ARITHMETIC.

The number of failures in arithmetic in Elyria is unusually large in the lower grades. In the first grade, 17.5 per cent of the children failed at the mid-year promotion in February, 1917; 6.5 per cent failed in the second grade, and about 12 per cent in the third and

fourth grades. Cleveland's rate of failure for June, 1914, was 2 per cent in the first grade, and 4 per cent in the second grade, but

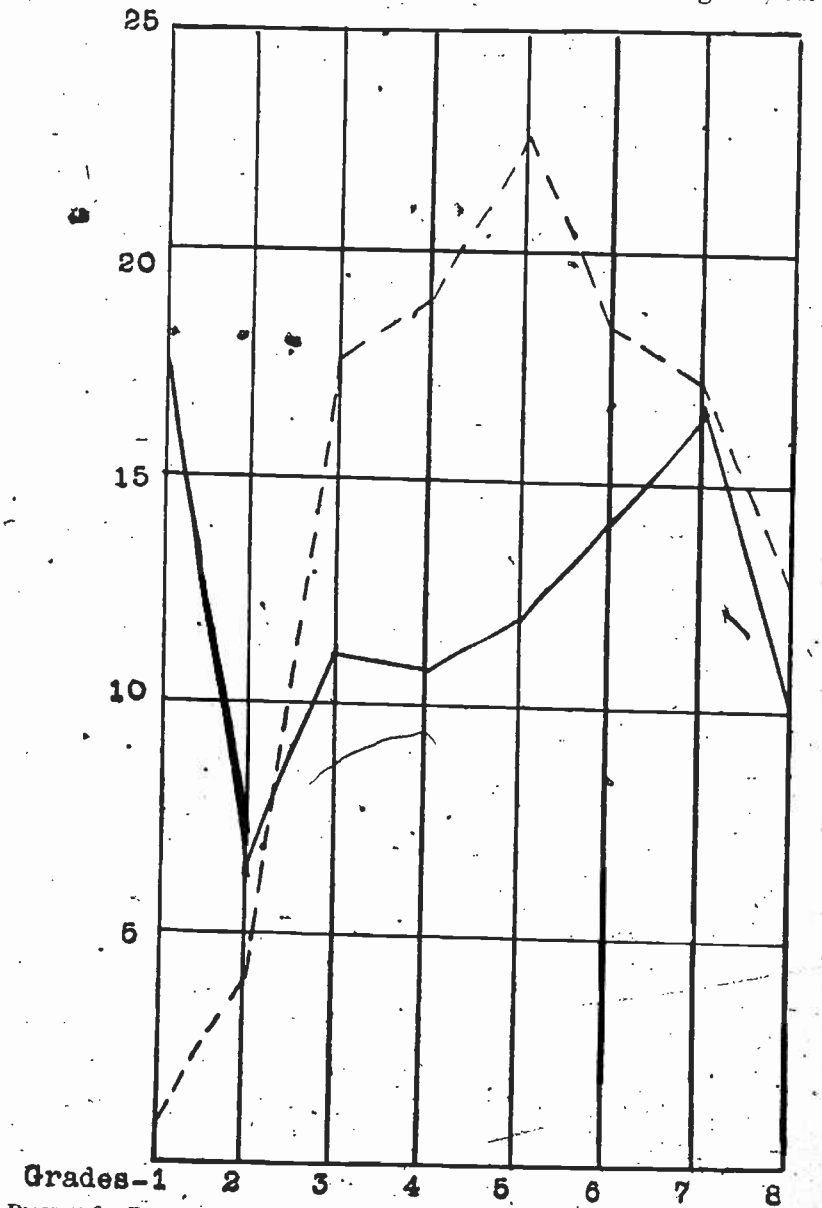

DIAGRAM 2.—Per cent of failures in arithmetic in Elyria at midyear promotions, January, 1917, compared with Cleveland for June, 1914. Elyria, solid line; Cleveland, broken line.

in the third grade the Cleveland curve rises to 17.5 per cent, and to 18 per cent in the fourth.

Both in Elyria and Cleveland the difficulty in the third and fourth grades is due, no doubt, to the introduction of the principle of carrying, which perplexes children more than it should. It is difficult to fix responsibility for failure in any subject, but probably the lack of a pedagogical development of subject matter is one of the chief factors.

Failures in the first grade.—The difficulty in first-grade arithmetic in Elyria, as shown by the curve in diagram 2, is undoubtedly due to the lack of adaptation of subject matter. Number work in the first grade should be largely a matter of counting and measuring. Demands for measuring are found in the manual arts, in nature study, in the home and school activities, and in the child's own personal interests. The pupils in Elyria are weighed each month under the direction of the school nurse, and this might well be used as illustrative material in number lessons. The pupil's height, his age and birthday dates, all afford excellent matter for applied number work. During the survey in Elyria schools a request came to the teachers for the children to report on the size of the back yards adjoining their homes. Here was a demand for the measuring and computing of areas, which would have been of vital importance in the making of home and school-gardens. No use was made, however, so far as could be determined of this opportunity.

Logical development of number emphasized.—Judging from the observation of many classes in arithmetic, from an examination of daily programs, and from conferences with teachers, the logical development of the subject of arithmetic is the only one considered in the primary grades. In the first semester the children count to 100 by ones and tens. They read and write these numbers and add and subtract in simple combinations. A marked rigidity characterizes this work in all the primary grades, both in the recitation periods and in the outlines prepared by the teachers from the formal course of study. The entire class in arithmetic moves through this required work with lock-step precision; the bright children are restrained, and those who are backward join the ranks of the "repeaters" at the end of the semester.

Time allotment in arithmetic.—With twice as much time spent on arithmetic in the first grade as in 20 other cities the ratio of failure in Elyria is abnormally high. In the second grade, where the time given is about equal to that of other cities, the failure score corresponds to that recorded in Cleveland and elsewhere. In the third grade the failures increase, and the time allotment is about 3 per cent below the average.

It would seem then that the quality and not the quantitiy of work done in Elyria needs attention; that much of the time now spent on arithmetic could well be given to reading and language and to school

room activities more in harmony with the child's development at this period of his school life.

Time allotment in arithmetic in Elyria and 20 other cities.

Grades.	Minutes per week.		Ratio of grade time.	
	Elyria.	Twenty cities.	Elyria.	Twenty cities
			Per cent.	*Per cent.*
1	145.00	72.50	11.3	4.8
2	135.50	148.75	10.6	9.9
3	148.50	218.00	11.5	14.5

Skilled supervision needed.—Applied number is difficult for an untrained teacher. She must know how to find a legitimate demand for number in the several subjects of study and how to connect the fundamentals in arithmetic with the problems which arise in those subjects.

It is evident that the social aspect of number is almost wholly ignored in Elyria, and that the abstract treatment is overemphasized. Illustration with objects was seldom used, and measurement with the ruler was never made a part of the number exercise. There is need of a supervisor in this work who is especially trained in primary methods to help the teachers formulate a pragmatic course of study in arithmetic.

SUGGESTIONS CONCERNING THE TEACHING OF ARITHMETIC IN ELYRIA.

1. A study of other courses of study in cities like Cleveland is recommended to note the difference in requirement as a possible cause for the wide variation in per cent of failure.

2. Adaptation of the subject matter to the different grades in the primary school is recommended, and greater emphasis should be placed upon the social bearing which number should have for the children. The child's need of number and his use of number should be the basis of his work and not the logical development of the subject wholly from the scientific standpoint.

3. Less time should be devoted to the study of arithmetic in the first and second grades, and greater stress should be placed upon the cultural subjects of reading and language.

4. A skilled supervisor is needed to assist the teachers in this work.

PENMANSHIP.

Method of teaching penmanship.—The exercises in penmanship consisted of drills on movement, sliding the hand back and forth over the slate as the arm rested on the large muscle in the forearm. Rhythm was emphasized by the use of a small phonograph, which

was a source of great interest to the children and put considerable enthusiasm into what would have been otherwise a dull lesson. Ovals and circles, upward and downward strokes were practiced and occasionally a single letter was given as a copy. The stress then was put on the form of the letter, and the movement was of the fingers only.

Material inadequate.—Slates were used because of the difficulty in obtaining paper and pencils. It should be pointed out that slates and slate pencils are a poor medium for writing lessons. The friction of the pencil and the obstruction of the frame are hindrances to ease, grace, and speed.

The tops of the desks in the primary grades are too small to allow the arm to rest on them; the children hold their arms in the air and used the finger and hand movement. When the copybooks were used the writing became a painstaking copy of a letter rather than a free exercise in movement.

SPELLING.

Subject matter in spelling.—The spelling lists used in the primary grades were taken largely from the reading lessons. The time allotment amounted to about 20 minutes per day in the second and third grades. The assignment for seat work in spelling was usually inadequate; sometimes only two words were given for a second-grade lesson to fill a period of 15 minutes.

Method of teaching spelling.—The words were written on the blackboard and were spelled orally by the class in concert. They were then copied on paper, and finally written in exercise books from dictation. The exercise was a training of the eye to recognize the different symbols in a word without considering the part which the ear plays in the functioning and the analysis of words.

No application of phonics to the spelling was observed. Sight words and phonetic words all received the same treatment, and were all taught in the same way.

Suggestions for the spelling lesson.—The oral exercise in the spelling recitations should be lengthened in order to train the children's power to form auditory images. There is no greater aid to correct spelling than the power to hear the different sound elements in a word and to represent those sounds with the appropriate symbols.

GAMES.

OBSERVATION OF SENSE GAMES.

First game.—The aim of this game was to give a drill on the recognition of the three primary and secondary colors.

The method consists of calling six children to the floor, each holding a colored ball in his hand. They stand in line, arranged according

to the order of color in the spectrum. First the class are asked to name the colors; then the balls are changed about and the class are asked to rearrange them in their proper order. Finally, the balls are hidden and the class are asked to locate the colors.

Second game.—The aim of this game was to test the child's memory of the location of different members of the class when they are in their respective seats.

One member of the class was blindfolded while four others left their seats and hid in various parts of the room. Then the blind was removed from the child's eyes and he was asked to name the absent pupils, to locate their seats, and to describe their appearance.

Third game.—This game was designed to test a child's sense of hearing. A blindfolded child was seated with his back to the class and two erasers were placed on the floor behind him. The child was a "watchdog" and the erasers were "bags of gold." The game consisted of individual pupils in the class "stealing" the bags of gold without the watchdog's knowledge. If he heard, he called out, "Who is it? Is it John?" and John answered, "Yes; it is John." When the watchdog failed to hear, the children all clapped their hands.

The value of games.—For an occasional exercise for sense training these games were excellent, but they lacked spontaneity and afforded no opportunity for the pupil's initiative. There should be greater freedom in any game than was allowed in these. A series of games that cultivate resourcefulness and give an opportunity for physical exercise are recommended as a part of the daily program in every room.

RECESSES AND DISMISSALS.

Waste of time.—The children have a 20-minute period for recess in the primary grades in Elyria, both in the morning and in the afternoon. They pass to the cloakroom and get their wraps, then back to their seats to put them on, and when all are ready they pass out, first to a basement toilet, where the janitor assists in "keeping order," then in line to the school yard.

During the snowy weather they stood about with their hands in their pockets, shuffling their feet in the snow or swinging on an iron bar which formed the fence in the school yard.

Putting on wraps.—The recess period was appreciably shortened by waste of time in getting wraps and putting them on, and in waiting for all the school to pass out together. It may not be possible to make this an individual matter, allowing each child to leave the room when he is ready, but it would greatly lengthen this period for most children if this could be done.

Some form of entertainment needed.—Some entertainment should be provided for this period, both within and without the schoolroom. Large yards and open spaces surround most of these schools and afford excellent opportunity for games and exercises. In some yards an embankment had been thrown up, and the inclosed space flooded so that the children might skate during the cold weather. Some school yards were fitted up with a few pieces of apparatus for physical exercises, and some yards were arranged for games and sports, but where no one was especially designated to lead in these exercises the children made little use of them.

An assignment for this work needed.—It is suggested that one teacher each week be appointed to provide some form of recreation for the recess period in each building. Valuable suggestions for the recess recreation period may be found in the table of out-of-school activities, included in this report, especially those designated by the children themselves under the head of home games, for the first four grades.

NEED OF KINDERGARTENS.

Value of kindergartens.—Another cause of failure in the first grade in Elyria is undoubtedly the lack of kindergarten training for the children before they enter school.

English.—The kindergarten prepares children for the work of the first grade, and this is especially true of children of foreign-born parents who speak a foreign language at home. In language training alone the kindergarten is indispensable. In Elyria, where so large a proportion of the population is foreign born, the school authorities can ill afford to weaken the school system at its most vulnerable point.

School adjustment.—As an introduction to the school régime, and as a training in school habits, it is most important, since his term in the kindergarten saves the child a similar amount of preparation for school work in the first grade.

Social adjustments, the ability to work in harmony with his fellows and his teacher, motor control, the ability to coordinate his motor activities with his will and understanding, obedience and discipline, these are only a part of the many lessons he learns under the kindly guidance of his school mother. Add to those his acquisition of knowledge and its constant application to his social needs and uses and we have a sum of indisputable arguments in favor of this training. In no other school department will he find this important correlation.

Data from investigations.—To those who still doubt the efficiency of kindergarten training we cite a number of investigations lately

conducted in various parts of the country. Berry's statistics[1] regarding the effect of kindergarten training on promotions in Michigan disclose the fact that the percentage of repeaters in first grade is 69.5 greater in towns having no kindergartens than in towns which have them. Mrs. Bradford found from a study of the Kenosha (Wis.) schools,[2] in comparing a group of 925 kindergarten-trained children with a group of 738 children without kindergarten training, that fewer retardations occurred in the first group. Supt. Hervey, of Pawtucket, R. I., discovered that 60 per cent of children entering first grade without kindergarten training failed as against 35 per cent of those having that training.

Conclusions.—It is especially recommended that the kindergarten school system be reestablished in Elyria. There seems to be an imperative need for such training in Elyria on account of its large foreign population. Undoubtedly a continuation of these schools will do much toward raising the standard of instruction above the plane of dry formality which it now occupies.

[1] Berry, C. S. A study of Retardation, Acceleration, Elimination, and Repetition in the Public Elementary Schools of 225 towns and cities of Michigan.

[2] Bradford, Mary D. The Kindergarten and its Relation to Retardation. N. E. A., 1912, pp. 624–629.

Chapter VII.

INSTRUCTION IN INTERMEDIATE AND GRAMMAR GRADES.

READING.

The time given to reading in the schools of Elyria ranks approximately midway between that given in Cleveland and that in 50 other American cities.

Time given to reading.[1]

Grades.	Fifty cities.	Elyria.	Cleveland.
	Per cent.	*Per cent.*	*Per cent.*
1	31	30.5	43
2	26	30.3	36
3	21	27.7	32
4	16	17.1	22
5	13	17.0	18
6	12	14.0	15
7	10	15.0	17
8	10	11.4	17
Average	17.4	20.4	25

READING IN THE UPPER GRADES.

An analysis of the reading material used in the upper grades indicates that only about one-third is of a literary nature or of a nature calculated to lay a foundation for literary selections, such as the story of the Iliad. The rest may be classified as history, civics, geography, hygiene, and nature study.

That some nonliterary material has a place in the reading class is not questioned, but that this material should make up two-thirds of what is read may well be questioned. It makes of the reading class a dumping ground for the overflow from other classes and for material that should have an independent place in the curriculum. This is unfair to the other subjects and robs the reading class of its proper spirit. It is therefore recommended that the major part of the mis-

[1] The figures in this and succeeding tables for Cleveland are taken from Bobbitt's volume in the Cleveland (Ohio) Educational Survey entitled "What the Schools Teach and Might Teach," and those for 50 American cities from Holmes's paper on "Time Distribution by Subjects and Grades in Representative Cities," published in Part 1 of the Fourteenth Yearbook of the Society for the Study of Education (University of Chicago Press, 1915).

In calculating the percentages for these tables the time spent in recess and opening exercises is not included. Reading, furthermore, includes phonics, literature, and memorizing poems, as well as reading in the narrow sense.

cellaneous material be transferred to those subjects in which it is germane.

Nature study is not now scheduled as a separate subject in the Elyria schools, but it should be. This subject should not lose contact with the concrete, it is true, but in giving an appreciate understanding of the plant and animal world, books like "Plant and Animal Children," "Ways of Woodfolk," and "The Bird World," which are now classed as supplementary reading, form an indispensable aid. These books are written by people who love their subject, and are therefore well adapted to inspire a similar love in the pupils. They fall into the class of natural history rather than science, and are indicative of the spirit that should pervade the science work in the elementary school and even the junior high school. Here the method of scientific dissection and analysis is not yet in place.

If the major part of the reading material that falls in the fields of history, civics, geography, hygiene, and nature study were assigned to these subjects, it is clear that the time for reading could be materially reduced and still more selections of a literary nature than now could be read. This reduction in time would also help to make room for such subjects as nature study and civics.

Some of the texts now read in the upper grades are clearly too difficult for the grades to which they are assigned. Examples are Hawthorne's "The Story of Achilles," assigned to 6B, and Mowry's "First Steps in the History of England," assigned to 7B. Such texts should either be assigned to higher grades or be displaced.

The basic reading material, or some of it, may very properly offer a fair amount of difficulty; but most, if not all, of the supplementary material should be chosen for rapid reading. It is this type of reading that brings the pupil into the spirit of the selection, that gives him the swing of it, and is therefore most likely to develop a love for the art.

The 17 classes in reading that were observed in the upper grades were taught with widely varying degrees of merit. Approximately one-fourth of the teachers get satisfactory classroom results. They direct attention to the heart of the selections, develop the setting, and then follow the story or theme in a vital manner. Their pupils are interested and read with good expression. Yet even these teachers restrict their work too much to the traditional study-and-recitation type. Little reading for the joy of it, reading that is relatively free and spontaneous, appears to be done in connection with the schools.

In the hands of approximately one-third of the teachers in the upper grades the classroom results in reading are not satisfactory. These teachers usually have their pupils stand at their seats and read mechanically to the teacher; they appear to feel little or no interest in the selections themselves and they fail to cause their pupils to feel any;

they spend little or no time in bringing out the thought or setting, and most of the criticisms they offer pertain to the pronunciation of words and the observation of punctuation marks. A few of these teachers let their pupils stumble along one after another with practically no suggestions whatever, and they assign the advance lessons by pages without even directing attention to the difficult words that will be met.

Perfunctory results such as these can be remedied only by the vitalization of the teacher's own attitude. The teacher must realize what the significance of the selection read is; he must develop the historical, geographical, or other setting that brings out this significance for the class; he must in the longer selections develop an introductory outline of the theme or story; he must direct the study and discussion along the one central theme, leaving all else to give support; and he must not hesitate, upon occasion, to read choice or difficult portions to the class himself.

In every class observed every member had studied the same selection. This must, of course, be the case when basic classics are studied, but with much of the reading material suited to elementary school pupils it is difficult to maintain interest under this condition. Motive on the part of the reader and variety and interest for the class may be brought in by letting each pupil occasionally prepare a different selection for oral reading. Such selections may be taken from newspapers, magazines, library books, and supplementary readers. If a selection is too long for the time allotment of one pupil, let two or more parcel it out among themselves.

Little, if any, attention is given to the development of facility in silent reading. This is the type of reading most used in life, and it should therefore receive attention in school. The slow but necessary motor habits of pronunciation involved in oral reading are not needed in silent reading, yet, if all the emphasis is placed on oral reading, these habits are likely to become so indelibly associated with the reading process that they will in a measure impede silent reading. What is needed is a parallel set of habits for silent reading. The development of these habits should receive attention all through the elementary school.

In the upper grades about two-fifths of the reading time may well be given over to relatively free silent reading. Let the children bring or choose the books they are interested in and let them read primarily for their own satisfaction. It is through such free silent reading, interspersed with periods for discussion and with more formal work, that reading becomes easy and that a taste for it is developed.

Something like this has already been attempted in the Garfield School, where only the first four grade are represented. A vacant room is provided with chairs and a long table plenteously supplied

with books and children's papers. To this room the children repair with evident enjoyment at recess and at noon whenever the weather does not permit outdoor play. This is essentially a school library or reading room, and it would be even more in place for the grades above the fourth. A suggestive list of books for such a library, as well as for supplementary reading, may be found in "The Sixteenth Yearbook of the National Society for the Study of Education," pages 33–59.[1]

RECOMMENDATIONS.

1. More of the spirit of delight should be introduced into the reading classes.

2. Practice in rapid silent reading should be given and more opportunity for relatively free silent reading should be provided.

3. Much of the material now assigned to reading should be transferred to other subjects.

4. Selections too difficult for their grades should be reassigned or displaced.

Time given to language.

Grades.	Elyria.	Fifty cities.	Cleveland.
	Per cent.	*Per cent.*	*Per cent.*
1	7.5	8.6	10.9
2	6.0	8.7	10.8
3	8.3	10.3	9.0
4	10.0	10.9	11.8
5	12.1	12.0	13.6
6	17.0	12.2	13.6
7	15.8	13.7	14.3
8	20.8	14.1	14.3
Average	12.2	11.4	12.3

The provisions of the course of study in language for the four upper grades are as follows:

Grade 5 B.—Parts of speech, forms of nouns, qualifying words, degrees of comparison. Written and oral exercises suggested in the reader.

Grades 5 A and 6 B.—"Speaking and Writing No. III" is used as a text, and emphasis is given to argumentation, description, relation of stories, topics about Lincoln, and debates.

Grades 6 A–8 A, inclusive.—"The Mother Tongue, No. II," is parceled out by pages and topics to the five divisions, and formal grammar is systematically studied. Oral and written exercises are called for. Although not mentioned in the course of study, at least one written composition a month is desired.

Sixteen lessons in language and grammar were observed in the four upper grades. Seven of these were grades 5 B to 6 B, and nine

[1] Public School Publishing Co., Bloomington, Ill., 1917.

in grades 6 A to 8 A. All of the latter were on formal grammar, and the others were based on "Speaking and Writing," the prescribed text. In no case was language or composition directly correlated with the other work of the school. In fact, language study in the upper grades of Elyria is made a thing apart.

Viewed as a formal study, grammar is on the whole well taught. The pupils participate in the recitations, they ferret out the minute subdivisions of the various parts of speech, and they analyze and diagram highly complicated sentences. But the wisdom of devoting two and one-half years, the language time in divisions 6 A to 8 A, to formal grammar, and some of the time in the fifth grade to grammar more informally studied, may be seriously questioned.

The best thought of the present inclines to the idea that language study, as such, need be given but little separate time—not more than one or two periods a week—and that language and composition receive emphasis as part and parcel of all the other work of the school. Oral expression is of necessity involved in all the situations of the school, and many of the topics studied in geography, history, civics, current topics, nature study, and literature should be written up in the interest of mere pedagogical completeness. The more spontaneous forms of composition, such as stories and letters, should grow out of reading, literature, and preparation for Thanksgiving, Christmas, and other special days. This provides an abundance of language topics, places the attention on the content, where it belongs, and gives language the interconnections and continual emphasis that it inherently requires.

Easy and correct language control is acquired through frequent and correct language use, and then only on the condition of having something to say. Habit and not knowledge is the immediate guide rail of right construction, especially with children. Grammatical and rhetorical knowledge function in expression only indirectly and reflectively, and then with children almost solely through adult assistance. It is seldom that even an eighth-grade child will correct what he has written on the basis of his grammatical knowledge. This is the achievement of the extensively trained adult and is still exceptional with high-school and college students.

This relation of language and grammar indicates the place that grammatical and rhetorical study should have in the elementary school. This study should be treated as the reflective support of correct expression and should be brought in only when it is clearly needed and when the pupils themselves may be led to feel this need. It is needed in developing control over such topics as capitalization, punctuation, number, agreement, inflection, sentence structure, paragraphing, and the correction of habitual errors. The rationalization of these topics is for most pupils helpful and satisfying, but the facts

and principles needed must be brought in again and again, for not until the correct forms become habitual has the desired end been achieved.

Giving grammar a separate place on the daily program before the eighth grade can do little, if any, good, consumes valuable time, and is likely to develop a dislike for the subject. By the time the eighth grade is reached a sufficient number of language facts and principles may have been gained to make a systematization through the specific study of grammar significant. But even here the study should face in the direction of use rather than theoretic knowledge, and should serve as an interpretation of expression. It should be correlated not only with the written work done by the pupils, but also with reading, history, and the like.

The conclusion that formal grammar has little or no effect upon the clearness and correctness of writing is borne out by the composition work of the children in Elyria. Compositions were collected from 17 classes, 9 of which were in the seventh and eighth grades. Composition scales are as yet not sufficiently specific to make possible a comparable ranking of these compositions; neither are standards available for the seventh and eighth grades with which these rankings might be compared. A study of the compositions, however, reveals all the faults, both in variety and frequency, that are usually found in children's writing. Sentence structure is often poor; clauses are strung together without proper connections; verbs are sometimes omitted; quotation marks and the sign of the possessive are frequently omitted; the rules of capitalization are occasionally ignored; and the principles of punctuation are not applied. Occasionally a whole composition is written as one paragraph, and even as one sentence. *Done* is used for *did*, *seen* for *saw*, a plural subject is followed by a singular verb, and the tense of verbs is varied within the same sentence or the same paragraph. *Different* is followed by *than* about as often as by *from*, and such words as *person*, *pupil*, *teacher*, *one*, and *everybody* are almost invariably followed by a plural, instead of the masculine pronoun. Pupils and many of the teachers alike seem to be ignorant of the fact that in English the masculine serves as the common gender pronoun. Such expressions as "A person should do *their* best"; "If you see some one doing something unkind, what is the best way to persuade *them* to be kind?" and "Let some one read it who thinks *they* can do it well," are the rule rather than the exception.

Whether or not the percentage of grammatical and rhetorical errors made by the Elyria children is greater or less than that made by children elsewhere it is impossible to say, but that many errors persist in spite of the extensive and intensive study of formal grammar is clear. It also seems clear that the way to correct these

errors is not by the study of formal grammar, as such, but by never ceasing to correct the mistakes that are made. In making these corrections the overt study and application of language facts and principles may often be of assistance, but it is habit rather than knowledge that serves as the main guide of expression.

In the 5A and 6B divisions lessons were observed on such topics as Daniel Webster and the woodchuck, Mercury and the woodsman, The cruelty of a knight to his faithful horse, The schoolmaster persuading the farmers not to kill the birds, A frog pleading with boys not to throw stones into the pond, and a fable from Aesop. The pupils discussed these topics, read them from the text, acted them out with and without the aid of the text, and wrote compositions upon them. The reading was good as reading, but the acting was usually so simple and artificial that it was embarrassing to the pupils, who, it should be remembered, were in the fifth and sixth grades. The compositions observed were of an argumentative nature. They aimed to persuade a person not to be cruel to a faithful horse, farmers not to shoot the birds, and boys not to kill the frogs. Most of the pupils were interested in writing these compositions and for fifth and sixth grade children they did well with them. But why not dispense with the text, at least in the hands of the pupils, and let the composition grow out of topics of real concern, such as indiscriminate snowballing, keeping the snow and ice off the sidewalks, and keeping backyards in order? In the spring such topics as killing frogs, robbing birds' nests, walking across lawns, and picking other people's flowers might well be taken up for discussion and composition.

When the language work is correlated with the other work of the school and with the interests of the community, State, and Nation, no special language text is needed in the hands of the pupils. Such texts always tend to make the work unreal and formal, to make language a thing apart, and to consume a disproportionate amount of time. They also tend to take the zest out of the work for the eighth grade, where a text is needed if formal grammar is taken up. The teacher, of course, should have a variety of texts for suggestive purposes.

SPELLING.

The following table gives the percentage of spelling time in Elyria, Cleveland, and 50 other cities. While Elyria sets no specific time apart for spelling in the first grade, the average for the eight grades is still above that of Cleveland and the 50 cities.

Time given to spelling.

Grades.	Elyria.	Cleveland.	Fifty cities.
	Per cent.	*Per cent.*	*Per cent.*
1	0.0	6.5	6.3
2	11.5	7.2	7.3
3	10.6	9.0	8.0
4	10.6	7.1	6.9
5	7.0	5.7	6.3
6	7.4	6.4	5.9
7	8.8	5.4	5.3
8	5.5	5.4	5.1
Average	7.7	6.5	6.4

Spelling was tested in all the grades above the first with the lists of words used in the Cleveland survey.[1] These lists contain 20 words each and have been selected from the Ayres spelling scale. This scale is made up of the 1,000 words most frequently used in correspondence, newspapers, and books. The words are arranged by groups in their order of difficulty as determined by extensive tests in 84 different cities.

On the words used in Elyria the children in these 84 cities made average scores of 73 per cent correct. These scores were the same for each grade and applied to those children that had completed one-half of the work of the grades. As the tests in Elyria were given within 10 days of the beginning of the second semester's work, these scores are directly comparable with those made by the A classes in Elyria. These classes began the work of their grades in September, and had therefore completed one-half of it. The average scores for the A classes are given in the following table:

Spelling scores.

Arranged for the A classes.

Schools.	Grades.						
	2	3	4	5	6	7	8
Franklin		47	69	63	74	82	73
Garford	94	92	92				
Gates	30	62	57	71	68	57	63
Hamilton		63	67	68	70	80	
Jefferson		66		68	71	73	63
McKinley	35	59	65	74	84	70	68
Ridge	31	62	50	68	73		
Average	48	64	67	69	75	72	67
Ayres	73	73	73	73	73	73	73

[1] Judd, Charles Hubbard. "Measuring the Work of the Schools," p. 239, Cleveland Education Survey, 1916.

Only 12 of the 38 A classes tested made scores of 73 per cent or over, while 26 made scores below 73 per cent. An exceptionally wide variation is manifest. While 4 classes made scores above 85 per cent, 8 classes fell below 60 per cent. On the average only one group of classes, the 6 A classes, exceeded the 73 per cent standard, and these exceeded it by only two points. Why this relatively poor showing?

It can not be assumed that the children in Elyria are inherently poorer spellers than those in other cities; neither can the poor showing be laid to an insufficient amount of time devoted to spelling. On the average 7.7 per cent of the recitation time in Elyria is devoted to spelling, as against 6.5 per cent in Cleveland and 6.4 per cent in 50 other cities. Neither does it seem clear that the poor showing can be laid to poor teaching. The members of the survey commission observed the teaching of 40 spelling lessons, and these appeared on the whole to be well taught. The words studied were within the range of comprehension of the pupils, their meanings were brought out, they were used in sentences, they were divided into syllables, they were often pronounced and spelled in concert, the results in the final spelling were usually excellent, and the teachers follow the practice of reviewing the more troublesome words at the end of the week.

The main cause for the poor showing in spelling appears to be in the method of selecting the words for study. No spelling books or spelling lists are used, the words studied being selected from the other school subjects or from newspapers, as the teacher may see fit. This is excellent as a supplementary means of word selection, but as the primary means it is too haphazard; it is likely to let too many common words slip through without adequate study.

That poor word selection is the primary cause of the poor showing in spelling was corroborated by the testimony of the teachers and by the spelling in the composition papers. When the spelling lists were handed out a number of the teachers predicted that their results would be poor, for, said they, "Our children haven't studied these words." Most of the misspelling in the composition papers were of such words as *where*, *there*, *goal*, *always*, and *receive*.

To insure a more systematic word selection it is recommended that Elyria adopt either a good series of spelling books or a word list, such as that published by Pryor in the Sixteenth Yearbook of the National Society for the Study of Education. (Bloomington, Ill., 1917.)

PENMANSHIP.

The following table shows the time given to penmanship in Elyria as compared with other cities:

Time given to penmanship.

Grades.	Elyria.	Cleveland.	Fifty cities.
	Per cent.	*Per cent.*	*Per cent.*
1	5.8	6.5	6.7
2	5.0	7.2	6.7
3	5.8	7.2	5.7
4	4.9	7.2	5.5
5	4.4	6.4	5.1
6	4.0	5.4	4.8
7	4.6	5.4	3.9
8	3.5	3.6	3.7
Average	4.7	6.1	5.1

UPPER GRADES.

Specimens of penmanship were obtained from all the pupils above the fourth grade. The pupils were asked to write with pen and ink a well-known sentence, such as "Mary had a little lamb." The sentence was placed upon the board and the pupils were allowed precisely two minutes in which to write it over and over. The results obtained are summarized in the two following tables:

Speed of penmanship. (Median number of letters per minute.)

Schools.	Grade.							
	5		6		7		8	
	B	A	B	A	B	A	B	A
Franklin	59	74	90	59	72	62	62	72
Gates		59	70	72	77	81	78	70
Jefferson	43	42	67	73	99	102	65	70
McKinley		56	63	85	85	76		79
Ridge	54	49	80	56				
Elyria	55		69		68		73	
Cleveland	58		71		77		81	
Fifty-six cities[1]	59		63		68		73	

[1] Frank N. Freeman, "Handwriting." In the Sixteenth Yearbook of the National Society for the Study of Education, p. 61. Bloomington, Ill., 1917.

Quality of penmanship.

(Thorndike scale, median scores.)

Schools.	Grade.							
	5		6		7		8	
	B	A	B	A	B	A	B	A
Franklin	9	9	10	9	11	11	11	11
Gates	.....	10	9	10	10	11	11	11
Jefferson	9	10	10	10	9	10	11	10
McKinley	.....	9	9	10	11	11	.....	12
Ridge	10	10	11	10	.....	.....	.....	.....
Elyria	9.5		10.0		11.0		11.0	
Butte	8.9		11.6		11.2		12.1	

The table on page 157 gives the median number of letters written per minute for each half grade of the different schools, and the table on page 158 in a corresponding manner gives the median scores for quality in terms of the Thorndike scale.

The Thorndike scale is made up of samples of handwriting differing in quality by equal steps from zero to 18. Samples 9 to 11 may be considered fair, 12 to 14 good, and 15 to 18 excellent.

A comparison of the Elyria scores in speed with those of Cleveland and 56 other cities (p. 157) and in quality with those of Butte (p. 158) indicates that in penmanship the children in Elyria are doing about what the children in other cities are doing. There is no question in respect to the comparability of the scores in speed, but the same assurance can not be expressed in respect to the scores in quality. In Butte "about 80 teachers scored the papers under the direction of a member of the survey commission,"[1] while in Elyria one member of the survey commission did the scoring. He was assisted by the teachers in two of the buildings, but found so much inconsistency that he felt compelled to go over most of the papers again.

The fact that Elyria has, and for many years has had, an efficient teacher of penmanship would have led one to expect that the city would take rank above the median in this subject. In passing judgment, however, it should be remembered that this teacher has time to give only one lesson in two weeks in each room. This manifestly leaves the teaching of penmanship to the room teachers after all, who are nevertheless relieved of much of the responsibility for results. These teachers were not observed to insist upon the arm movement and good form outside of the writing lesson, and as a consequence only a small proportion of the pupils are mastering the arm movement.

With so many other urgent needs in the schools unsatisfied, it is recommended that the teacher of penmanship be dropped; that a

[1] Report of a survey of the school system of Butte, Mont., p. 70.

standard system of penmanship be adopted; that manuals setting forth this system be placed into the hands of the teachers; and that the classroom teachers be held responsible for results through the general supervision.

GEOGRAPHY.

Geography as a distinct study is begun in the fourth grade. It is given a daily period in the fourth, fifth, and sixth grades, and shares the time with history in the seventh grade. Home geography in the form of supplementary reading is taken up in the third grade.

Time given to geography.

Grades.	Elyria.	Cleveland.	Fifty cities.
	Per cent.	*Per cent.*	*Per cent.*
1	0.0	0.0	1.8
2	.0	.0	.8
3	.0	3.2	5.4
4	15.3	11.4	8.5
5	15.5	14.3	11.2
6	17.6	14.3	11.0
7	8.1	6.4	9.9
8	.0	6.4	7.6
Averages	7.1	7.2	7.1

From the preceding table it appears that the amount of time given to geography corresponds precisely to the average time given to the subject in 50 other cities. If, however, the time given to home geography in the third grade and to geographical readers in the fifth and seventh grades were counted here instead of in reading the average would be raised from 7.1 per cent to about 8.5.

Geography is usually discontinued in the middle of the seventh grade, where it gives way to history, and, save as commercial geography in the third year of the commercial course, it is not included in the curriculum of the high school. The wisdom of this may be questioned. This subject is so fundamental in importance that it might well be allowed to share the time with history throughout the eighth, ninth, and tenth grades.

But if a wider range of geographical study is to be justified, the teaching of the subject must be vitalized. The texts used are satisfactory, but the work is based too exclusively upon them. The few geographical readers that are used are connected with reading and not with geography. This leaves only the relatively meager texts as a basis for the work. Maps and globes are usually before the class, but they are seldom referred to; pictures are used sparingly, and specimens very rarely. Sets of Tiffany's "Nature cabinet" were seen in two of the buildings, but only one teacher was seen to make use of one. The fact that these cabinets were not even mentioned

in the teaching material listed by the principal appears to indicate the place that they hold in the minds of the teachers.

All the seventh grade teachers were teaching the mathematical or astronomical phases of geography, but none was heard to direct the attention of the children to the visible planets, the brighter stars, or the conspicuous constellations. Children delight in locating these objects in the heavens, and the observation of their motions forms the only direct basis for appreciating the motions of the earth. The knowledge gained, moreover, comprises that minimum astronomical heritage that should be considered the right of every child. If the teachers themselves do not now have this knowledge, they could easily gain it while teaching it by means of a manual like Bowen's "Astronomy by Observation."[1]

Should it seem inadvisable to give the primary presentation of these astronomical topics in connection with geography, this could be done as nature study during the winter months in the fifth or sixth grades, and the knowledge could then be used in the geography classes. Two periods a week for four or five months would be ample. Interesting and valuable language material would be found in the associated myths and legends.

While it is true in general that the work in geography lacks realness and vitality, it should not be inferred that no good work was observed on the subject. A few of the teachers supplement their work well with pictures, specimens, and the making of maps in relief, and a majority of them enlist the thought responses of the pupils in tracing geographical relationships without, however, making the work sufficiently realistic. Those whose work is poor in nearly all respects are again in the minority.

Recommendations.

1. The work on home geography in the third grade should be classed with geography and be taught in relation to the pupils' environment through exercises and constant first-hand observation.

2. A series of geographical readers should supplement the formal texts.

3. Geographical magazines and articles of geographical topics from other sources should be placed in the hands of the older pupils.

4. Pictures and specimens of geographical interest should be given a position coequal with globes and maps, and all should be used more abundantly.

5. The visible planets, about a dozen of the brighter stars, and the chief constellations should be located and their movements observed in correlation with general or mathematical geography.[2]

[1] American Book Co., 1886.

[2] For a detailed discussion of methods in geography, compare the San Francisco Survey (Bulletin of the Bureau of Education, 1917, No. 46).

ARITHMETIC.

The following table shows the percentage of time given to arithmetic in Elyria as compared with other cities:

Time given to arithmetic.

Grades.	Elyria.	Cleveland.	Fifty cities.
	Per cent.	*Per cent.*	*Per cent.*
1	21.1	5.2	6.9
2	19.2	15.5	10.7
3	21.0	16.3	14.4
4	20.0	17.2	15.4
5	20.5	17.1	14.9
6	20.7	17.5	15.0
7	20.5	16.1	14.4
8	21.1	17.9	14.1
Average	20.5	15.4	13.2

UPPER GRADES.

The ability of the pupils in addition, subtraction, multiplication, and division was tested by the Woody tests, series B,[1] and the ability in reasoning by the Stone tests in reasoning.[2]

The Woody tests are composed of problems arranged in an ascending order of difficulty for each of the four fundamental operations, as exemplified by the following test for subtraction:

Subtraction scale.

(1)	(2)	(3)	(4)	(5)	(6)
8	2	11	13	78	16
5	1	7	8	37	9

(7)	(8)	(9)	(10)	(11)
50	393	567482	$2\frac{3}{4}-1=$	$8\frac{1}{4}$
25	178	100493		$5\frac{3}{4}$

(12)	(13)	(14)	(15)
27	5 yds. 1 ft. 4 in.		
$12\frac{3}{8}$	2 yds. 2 ft. 8 in.	7.3−3.00081=	$3\frac{1}{2}-1\frac{1}{8}=$

Ten minutes is allowed for the solution of each set of problems, and the scores are determined by counting the number of problems solved correctly. The number of problems, which represent the possible scores, in each set are: Addition, 19; subtraction, 15; multiplication, 20; division, 15.

[1] Clifford Woody, "Measurements of Some Achievements in Arithmetic." Teachers' College, Columbia University, New York City, 1916.

[2] Cliff W. Stone, "Arithmetical Abilities." Teachers' College, Columbia University, New York City, 1908.

As 10 minutes is more time than most of the pupils need for solving all the problems in each set for which they are prepared, the tests do not test speed, but accuracy only.

The results from the Woody tests are summarized in the tables on p. 163. The scores are given in medians instead of averages for the different grades or half grades of the various schools. The median is the middle score, and is found by arranging the scores under consideration in an ascending series and then counting in from either end to the middle. It usually corresponds very closely to the average; is found more quickly, and in studies like this is now very frequently used.

Woody tests.

Median scores by buildings and grades.

ADDITION.

Schools.	Grade 2.		Grade 3.		Grade 4.		Grade 5.		Grade 6.		Grade 7.		Grade 8.	
	B	A	B	A	B	A	B	A	B	A	B	A	B	A
Franklin			6.50	9.00	11.00	12.00	13.70	14.00	14.50	16.00	15.75	15.80	15.70	17.00
Garford		7.00	9.00	11.00	10.50	14.00								
Gates		6.00	9.00	10.00	11.00	13.00	11.00	14.00	13.00	16.00	16.00	16.00	15.00	16.00
Hamilton	6.00	6.00		10.00	11.00		13.50	16.10	15.00	17.00	16.00	16.50		
Jefferson		7.00			13.00	13.00	13.00	12.50						
McKinley	6.00	5.50	7.00	10.30	11.00	13.50	13.00	14.00	14.00	14.00	15.00	16.00		17.00
Ridge		6.00	10.00	10.00	11.00	13.00	13.00	15.00	14.00	14.50				

SUBTRACTION.

Franklin			6.00	7.00	8.00	9.00	10.70	12.00	12.00	13.25	12.83	13.63	14.10	14.35
Garford		7.00	7.00	6.50	8.00	10.00								
Gates		5.00	5.00	5.00	7.00	9.00	10.00	9.50	11.50	12.50	11.50	13.10	14.00	14.00
Hamilton	4.50	5.00		8.00	8.00		11.50	12.00	12.00	13.00	13.00	13.50		
Jefferson		6.00			10.00	10.00	11.00	9.50						
McKinley	3.00	5.00	6.00	8.00	7.50	9.00	10.00	12.00	13.00	13.00	13.00	13.00		14.00
Ridge		5.00	6.50	8.00	7.00	9.00	9.00	10.50	12.00	13.00				

MULTIPLICATION.

Franklin			5.00	6.00	9.00	9.00	9.80	10.00	12.00	16.00	16.67	16.75	17.00	18.00
Garford				6.00	9.00	10.00								
Gates		4.00	5.00	6.00	7.00	10.00	9.00	10.00	12.50	16.00	15.00	15.00	15.00	17.50
Hamilton				8.00	10.00		11.50	14.00	12.00	16.00	16.00	16.50		
Jefferson		4.00			11.00	11.00	11.00	10.00						
McKinley			5.00	7.00	9.00	10.00	10.00	11.00	14.00	15.00	15.00	16.00		18.00
Ridge			6.00	7.00	9.00	9.00	10.00	11.00	15.00	14.50				

DIVISION.

Franklin			3.00	5.00	6.00	7.70	7.50	9.00	10.00	11.00	11.25	11.50	11.75	13.00
Garford				5.70	7.00	10.00								
Gates		2.00	4.00	5.00	6.00	8.00	8.00	8.00	9.00	10.00	11.00	11.50	12.00	12.00
Hamilton				6.00	8.00		10.00	10.00	10.00	11.00	12.00	12.50		
Jefferson		4.00			9.00	8.00	7.80	7.00						
McKinley			4.00	5.00	6.50	8.00	8.00	9.00	11.00	10.00	10.50	11.00		13.00
Ridge			3.50	6.50	4.00	6.00	6.00	6.00	11.00	10.00				

Elyria scores compared with standard scores given by Woody.

Grades.	Addition.		Subtraction.		Multiplication.		Division.	
	Elyria.	Woody.	Elyria.	Woody.	Elyria.	Woody.	Elyria.	Woody.
2	6.0	4.5	5.0	3.0	4.0	.....	3.0	.....
3	10.0	9.0	6.5	6.0	6.0	3.5	5.0	4.0
4	12.8	11.0	9.0	8.0	9.0	7.0	7.7	5.0
5	13.6	14.0	10.6	10.0	10.0	11.0	8.0	7.0
6	14.5	16.0	12.7	12.0	14.7	15.0	10.0	10.0
7	16.0	18.0	13.0	13.0	16.0	17.0	11.2	13.0
8	16.0	18.5	14.0	14.5	17.5	18.0	12.0	14.0

An inspection of the table on page 163 reveals the fact that there are occasionally wide variations between the scores for the different buildings. For example, the scores for the 5A classes vary from 12.5 to 16 in addition, from 9 to 12 in subtraction, from 10 to 14 in multiplication, and from 6 to 10 in division. As these variations do not occur with any uniformity between schools, they may be of little significance; yet they set a problem that the supervisors and teachers may find well worth considering.

Another fact revealed by this table is a frequent lack of steady progress from grade to grade. Beginning with 4B and ending with 6A, the scores for the Gates School in addition are: 11, 13, 11, 14, 13, and 16. Similar irregularities are found in the other schools. This would indicate that the development of skill in the fundamentals does not receive sufficient specific attention.

Data pointing in the same direction are exhibited in the table on page 164. In this table the Elyria scores are set alongside of the standard scores given by Woody. In grades two, three, and four the Elyria scores are better than the standard scores; in grades five and six they are approximately equal to them; and in grades seven and eight they are poorer.

The main reasons why the good scores in the primary grades do not continue through the grades appear to be: The basic combinations are not sufficiently automatic; complicated thought problems are introduced prematurely; and not sufficient time is given to accurate and rapid work in the fundamental processes in the intermediate and upper grades. It was noted, for example, that many pupils in the eighth grade still added by tapping or by counting in a whisper.

Ability in reasoning problems was tested by the Stone test in reasoning, which follow:

ARITHMETIC; REASONING.

Solve as many of the following problems as you have time for; work them in order as numbered:

	Credit.
1. If you buy 2 tablets at 7 cents each and a book for 65 cents, how much change should you receive from a $2 bill?	1
2. John sold 4 Saturday Evening Posts at 5 cents each. He kept half the money and with the other half he bought Sunday papers at 2 cents each. How many did he buy?	1
3. If James had four times as much money as George, he would have $16. How much money has George?	1
4. How many pencils can you buy for 50 cents at the rate of 2 for 5 cents?	1
5. The uniforms of a baseball nine cost $2.50 each. The shoes cost $2 a pair. What was the total cost of uniforms and shoes for the nine?	1
6. In the school of a certain city there are 2,200 pupils; one-half are in the primary grades, one-fourth in the grammar grades, one-eighth in the high school, and the rest in the night school. How many pupils are in the night school?	1.4
7. If 3½ tons of coal cost $21, what will 5½ tons cost?	1.2
8. A newsdealer bought some magazines for $1. He sold them for $1.20, gaining 5 cents on each magazine. How many magazines were there?	
9. A girl spent one-eighth of her money for car fare, and three times as much for clothes. Half of what she had left was 80 cents. How much money did she have at first?	2.0
10. Two girls receive $2.10 for making buttonholes. One makes 42, the other 28. How shall they divide the money?	2.0
11. Mr. Brown paid one-third of the cost of a building; Mr. Johnson paid half the cost. Mr. Johnson received $500 more annual rent than Mr. Brown. How much did each receive?	2.0
12. A freight train left Albany for New York at 6 o'clock. An express left on the same track at 8 o'clock. It went at the rate of 40 miles an hour. At what time of day will it overtake the freight train if the freight train stops after it has gone 56 miles?	2.0

These tests were given in the grades above the fourth in the Franklin, Gates, McKinley, and Ridge schools. The results are summarized in the two following tables:

Stone test in reasoning—Average scores by buildings.

Schools.	Grades.							
	5B	5A	6B	6A	7B	7A	8B	8A
Franklin	3.16	4.06	3.44	5.44	6.53	6.41	7.84	7.77
Gates	.....	3.19	3.83	5.13	4.11	5.40	6.70	8.90
McKinley	.....	3.92	5.56	6.60	5.50	6.08	.....	9.00
Ridge	1.70	2.47	3.83	4.63	.....	.....	.....	.....
Averages	2.34	3.48	4.16	5.43	5.55	6.26	7.62	8.36

Stone test in reasoning—Comparative scores.

Cities.	Grades.			
	5	6	7	8
Butte, Mont.	2.20	3.90	5.80	7.50
Springfield, Ill.		5.08		
Elyria, A and B divisions.	2.91	4.97	5.98	8.05
Elyria, A division.	3.18	5.43	6.26	8.25
Stone (median city).		5.51		

In scoring the papers credits were given as indicated after each problem on page 165, except that when a problem was reasoned correctly but through a mechanical error a wrong answer was obtained, a uniform credit of 1 was given.

The data for the Stone tests were collected from sixth-grade classes, some of which were in the first half of the school year and some in the second half. The average scores from 26 systems tested by Stone varied from 3.56 to 9.14. The Elyria score that may be most fairly compared with these scores, is that from the 6A classes, which had just finished the first half of the school year. This score (5.43) ranks just below the median in Stone's table, there being 12 lower and 14 higher scores. This would indicate that the result achieved in reasoning problems in Elyria is about average. Elyria ranks considerably above both Butte, Mont., and Springfield, Ill. The Butte score (3.90) is the average for the 6B and 6A divisions, while that from Springfield (5.08) is for 6A, taken, however, near the end of the school year.

In view of the time given to arithmetic in Elyria one might expect that the scores would be better. Why are they not better?

(1) The fact that complicated reasoning problems are introduced too early is no doubt one cause. This tends to deaden the sense for thought relations. (2) Sufficient attention is not given to developing clear conceptions, thoughtfully understood, of how to solve problems, the lion's share of attention being given to getting the answer. Only one assignment was seen over which the teacher had written "Study how to solve." (3) The basic principles of handling common and decimal fractions and of percentage appear not to be brought out in sufficient relief and appear not to be continually reviewed and recognized in application. The pupils appear not to be led to become clearly aware of the fact that arithmetic, outside of the fundamental operations, common and decimal fractions, and percentage, contains nothing new of a mathematical nature, and that even these mathematical phases are closely interrelated. (4) Finally, the work in the applied phases of arithmetic lacks in vital relationship to reality; it is bookish, and so falls short in thought-provoking motive. All the sixth-grade teachers, for example, were teaching tables

of measures, but only one was seen to let the pupils measure something. In the main the pupils are not getting concrete notions of yard, rod, acre, and the like. In two of the schools the observer asked about how many acres the school yard contained, but none of the pupils could even give an estimate. The 8B classes were studying stocks and bonds, and while one teacher had present a stock certificate which was pinned to the bulletin board, none made use of the stock quotations in the daily papers or related the subject to the commercial interests of the city or Nation in any way.

RECOMMENDATIONS.

1. The time given to arithmetic, especially in the lower grades, is excessive and should be reduced.

2. The work should be made more concrete and should be more intimately related to the children's own experiences, both in and out of school. The children should learn to weigh and measure, and topics like interest and stocks and bonds should be used to interpret business practices.

3. The aim should be to make automatic the basic combinations in addition, subtraction, multiplication, and division, and develop confidence and accuracy in the use of common and decimal fractions.

4. Bring into relief the common principles running through the applied phases of arithmetic and place comprehension above the use of formulas.

5. Have study lessons on "how to solve," and avoid introducing complicated thought problems prematurely.

SUGGESTIONS FOR THE IMPROVEMENT OF INSTRUCTION.

The foregoing examination of the content and method of instruction in the elementary schools of Elyria indicates that the most general fault that may be found is the fault of verbalism. Teaching is done too much on the basis of words and not enough on the basis of reality. Instead of interlocking with life at every point, of interpreting the world to the child and giving him a meaningful and systematic conception of it, the school moves too much in a groove by itself. Textbooks are looked upon more as an end than a means.

While the teachers as a class possess a high grade of native ability, and while, through their refinement and courtesy, they have a wholesome and elevating influence on the spirit and attitude of their pupils, in respect to the subjects that they are teaching, they lack vision. They face schoolward rather than lifeward, and too often go through their lessons as so many routine tasks to be completed. That the exercises of the school receive their sanction for the requirements of life and that effective instruction can go on only on the basis of interesting and meaningful activity on the part of the children, they often forget. As a consequence they attack reading, com-

position, spelling, arithmetic, geography, etc., too much as set and formal tasks and not enough through the creation of situations that elicit the use and study of these subjects through the satisfaction of needs. Teachers are interpreters of life, and only by leading their pupils actively into an ever-widening control over the content and processes of life, and an appreciative understanding of these can they initiate them into a meaningful mastery of the school arts. Any other basis of instruction centers the attention primarily upon forms and symbols and leads to the fault of verbalism.

The cause of verbalism in teaching is often said to be the prominence of books in the schoolroom. This is true only in a superficial sense, for the prominence of books is in itself only a symptom of deeper causes that lie in the nature of the educative process itself.

The life of the child and the life of the adult are in some respects far apart. The achievements of the race in science, art, skill, and ideals, which are the very foundation of adult activity, are not transmitted to the child through the channel of heredity, but must be mastered by him anew.

The agency that has evolved to assist the child in mastering these achievements is the school. It is the function of the school to lead the child into a rounded and meaningful mastery over the life about him. But in performing this function the school is beset with a number of obstacles. These are inherent, and all tend to bring about empty and formal results. They are (1) the isolation of the school; (2) the symbolic nature of much of our subject matter; (3) the confinement of the child; and (4) the limitations of the teacher.

In order that the school adequately may supplement the give-and-take experiences of life and transmit the achievements in science and art, it must be organized into a separate institution and housed in its own building. This places the school largely outside of the very reality over which it should confer comprehension and mastery. Yet this isolation is in a measure unavoidable.

The symbolic nature of subject matter is also largely unavoidable. The achievements of the race in literature and science and the descriptions of events and places from other times and countries are of necessity preserved in books. These contain the largest one of those elements that the informal experiences of life fail to give.

The isolation of the school and the symbolic nature of subject matter both operate to restrict the activity of the child while learning. The child must of necessity spend much of his time poring over books, and he must do this usually in the presence of others who are likewise engaged and must, therefore, not be disturbed. This tends to eliminate motor experiences, without which basal meanings can not be attained.

The case in respect to the teacher is little better. He is a product of the routine of the schools, and he is usually a person who enjoys

this routine for its own sake. Direct experience with the life from which this routine gets its significance he has had but little chance to get, and his knowledge of history, sociology, economics, political science, and educational theory, which might illuminate his work from the theoretical side, is usually very limited. Add to this the fact that he has to teach so many subjects, that he has time to master none, which is certainly the case in the upper grades of the elementary school, and the picture is complete.

This diagnosis makes it clear that the educative process is inherently exposed to verbalism. The obstacles in the way can not be removed once for all, but they must be continually met and overcome.

In the first place, the teacher must realize that the processes of the schoolroom are not sufficient unto themselves, but have as their goal the interpretation of the processes of life. The circle of instruction must not be limited to the schoolroom, but must be expanded to embrace reality. The pupil must be led to see that the problems that engage his attention have their setting in the world and not merely in the book. Geography treats of other people and places with which we are interrelated; history traces the development of the customs and institutions in which we are now living; and reading, writing, spelling, language, and arithmetic are tools that are needed both in and out of school. Education is for life, and must in its processes of acquisition interlock with life.

In teaching of this vital sort, books have an important place, but they must be viewed as means and not as ends. They hold a place in teaching similar to that held by guidebooks in travel. Just as it is the function of guidebooks to interpret places and buildings for the traveler, so it is the function of textbooks to interpret nature, institutions, and processes for the student. Both point beyond themselves to the realities which stimulated their existence. The teacher and the personal guide again occupy similar positions.

For the traveler to sit in his room and rest content with reading his guidebook would be absurd. He means to become directly acquainted with the scenes described in his book, and he means to do this through his own activity. The same two aspects are present in effective teaching. The reality studied must in some way be meaningfully present or represented, and the pupils' own sensory, motor, and reflective activities must be enlisted in becoming acquainted with this reality. What are the means available to teachers for providing these two aspects of this work?

On the side of exhibiting reality the following means appear to be available. They are arranged in their order of nearness to reality:

1. Observation of reality—
   a. Through field trips.
   b. Through field assignments.
   c. Through recall of past experience.

2. Specimens:
   a. Temporary: Botanical, geological, class experiments, etc.
   b. Permanent: Seeds, minerals, manufactured articles, etc.
3. Models: Mostly geographical and physiological; globes, maps in relief, models of bodily organs, etc.
4. Pictures:
   a. For class use: Motion pictures, slides, wall pictures.
   b. For individual use: Stereoscopic views, photographs, illustrations in books, etc.
5. Maps and diagrams: In geography and other subjects.
6. First-hand descriptions or sources, mostly in history and geography.

These means should be considered as supplementing, not as displacing, the text. The text, aided by the teacher, is the depository that contains the theory that binds the concrete experiences provided for by these means into a unified and meaningful whole. The text, moreover, presents this theory in a rounded and systematic way and in a form adapted to the educational development of the learner.

Field trips, sometimes inappropriately called school excursions, are well known. They may be effectively used in connection with home and physical geography, nature study, civics, local history, and industrial topics, but they consume much time and are difficult to manage. The same ends may often be just as effectively gained through field assignments in which the pupils are held individually responsible for their observations.

Specimens, models, pictures, and maps, as well as scales, measures, and books may all be classed together as teaching material. No matter how resourceful and efficient the teacher may be, he can not work with empty hands. In his own peculiar way he needs his tools, just as the physician, dentist, or artisan needs his. Investments in teaching material should be regarded in the same light as investments in buildings, grounds, and teachers' salaries. Without an adequate supply of this material and the will to use it, especially in the elementary schools, teaching is likely to degenerate into empty form.

The Elyria schools are poorly supplied with teaching material, and the little that is on hand is seldom used. There are not enough maps and globes to supply even all of its upper-grade teachers; sets of dry and liquid measures were reported from only three of the seven buildings; unabridged dictionaries are few in number, and cyclopedias suitable for elementary-school pupils are lacking altogether. Nature cabinets were seen in two of the buildings, but only one of these appeared to be used, and that by only one teacher.

A globe, a set of maps, an encyclopedia, and reference books suitable for the grade should be found in each room above the third or fourth grade, but specimens, such as grains, seed pods, woods, minerals, metals, manufactured articles, curios, classified pictures, and

the like, may be gathered in one place for the entire building. This means that in each building a school museum should be developed. The specimens and pictures should be labeled and systematically arranged and a card index of them should be kept. The needed cases and shelves could be made by the manual training department, although some would no doubt have to be bought. Perhaps some of the specimens would also have to be purchased, but in the main they should be gathered by the teachers and pupils with little or no expense. The activity of the pupils especially should be enlisted in gathering them. This would be an interesting and educative experience for them. And as an added incentive the label for each specimen should provide a place for the name of the donor.

Elyria is fortunate in having vacant rooms in which the museums could be kept. The school libraries could be kept in the same rooms. In the future a museum and library room should be definitely provided for in each building, and the supervising officers should see to it that the teachers get into the habit of using the material stored there. Merely to gather and store the material would be of little use, and there seems to be an inherent tendency for many teachers to neglect the use of the concrete.

The initiation of the school museum must rest with the teachers and supervisors, but the necessary expenses should be borne by the school board. In the elementary school, and to a large extent also in the high school, the museum is quite as necessary as the library, and it should be provided for and supported in the same way. The administration of the museum must be worked out by the teachers of each building. Some teacher, usually some one other than the principal, should be placed in charge, and specific provision should be made to enlist the cooperation of a few of the older pupils.[1]

In respect to enlisting the activities of the pupils to a greater extent than is now done the following means are suggested: (1) School credit for home work; (2) school and home gardening; (3) shop and laboratory work; (4) dramatic expression; (5) dramatization; (6) supplementary reports in class; (7) class discussion; (8) composition.

It is now well recognized in educational and psychological literature that the act of learning requires expression as well as impression. It requires the use of feeling, volition, and reaction as well as that of the senses and the intellect. Things, processes, and principles are not known until they have been used.

School credit for home work.—If the device known as school credit for home work is to become more than a mere fad in education, it must be linked with the actual work of the school. Correlated home work should be looked upon as an opportunity for using

[1] Helpful suggestions may be found in Perry's "Problems of the Elementary School," ch. 7.

and applying the knowledge gained in the classroom. It should hold a position in physiology and hygiene, domestic art and science, nature study, agriculture, and stock raising similar to that held by laboratory work in physics and chemistry, and it should be made an integral and required part of the work. Credit in hygiene should be given more on the basis of hygienic living, such as washing and bathing regularly, keeping the teeth and finger nails clean; and sleeping with a window open, than on knowledge acquired. Similarly the home work done in cooking and baking, in sewing and cleaning, and in marketing and shopping should count in domestic art and science. Gardening may be made an integral part in the work of nature study and agriculture.

Shopwork.—Shopwork has an established place in manual training and laboratory work in the high-school sciences. More work of this nature is being introduced into the elementary schools of many cities through the adoption of the platoon system, generally known as the Gary plan.

Dramatic expression and dramatization.—Dramatic expression may occasionally be used to good effect in history, civics, and literature, and with younger children in practically all subjects. It consists in acting out the topic under consideration. Periods in history and scenes in literature may be readily acted out. When the pupils memorize set words and speak them in this acting, the process is usually called dramatization. Both of these means are time-consuming, and so must be used in moderation, but as aids in gaining certain meanings they hold an important place.

Reports on topics supplementing the work of the text may often be used in history, geography, nature study, art, and literature. Cyclopedias and other reference books may here find a continual source of usefulness. Either oral or written, these reports afford a real opportunity for composition. Composition, however, has a value far beyond giving practice in writing. It compels one to think a subject through, to organize it, and to make it one's own. It may well form the capstone in the teaching of basal topics in all the school subjects. Bacon placed the right value upon it when he said that reading maketh the full man, speaking the ready man, and writing the exact man. Class discussion is in itself no insignificant means for enlisting the activity of the pupils in the process of learning. Some of the teachers in Elyria are now using this to good effect, but more rely too much on the question-and-answer method and do too much of the talking themselves. These should learn to lift out the problems and relationships in the lessons in hand and to let the pupils wrestle with them. They should regard themselves more as leaders than masters, guiding the discussion by suggestions and questions but not monopolizing it.

Chapter VIII.

CIVIC EDUCATION.

"Elyria, the 100 per cent city," is the slogan emblazoned at night in electric illumination over the city of Elyria, Ohio, and its railway approaches.

On visiting the "special industrial class for boys" in this city a group was found at the blackboard working at problems in interest. When they had taken their seats the observer said: "Boys, I see you know something about percentage."

"Yes," was the reply.

"Then tell me the meaning of an electric sign that I see from my hotel window every night. Do you know what the sign is?"

"Is it 'Elyria the 100 per cent city?'" one boy questioned.

"That's it; what does it mean?"

"It means a perfect city," was the prompt reply.

"Well, is it true?"

"No!" in emphatic chorus.

"Then why the sign?"

"It means that Elyria ought to be a perfect city," one boy ventured after a pause.

"In what way does Elyria fall short of 100 per cent?"

"In cleanness," said one.

"What per cent clean do you think Elyria is?"

"About 70 per cent," one guessed.

"Are there other ways in which Elyria falls short of 100 per cent?"

"In pavements," said one. "In taking care of garbage," said another.

"What is the matter with the pavements?"

"Some streets are not paved at all, and the pavements in other streets are bad."

"And what happens to the garbage?"

"Some of it is thrown over the bank of the river."

"What is wrong with that?"

"It makes the river dirty." "It is not good for the health."

"Does it affect the city's drinking water?"

"No; the drinking water comes from Lake Erie and there isn't any better water."

"Is it pure?"

"Yes."

"It's good to find one way in which the city approaches 100 per cent, isn't it?"

"Yes; and it's a 100 per cent business city, too. There isn't any better business city in the country."

"Are the schools 100 per cent?"

"No."

"Is it possible for a city to be a 100 per cent city without having 100 per cent citizens?"

"No."

Elyria is a fairly typical American community. It is doubtless above the average of cities of its class in some respects; it may be below the average in other respects. It is not imagined that the Elyrian believes in 100 per cent perfection at the present time, or even in the possibility of attaining to that goal literally in the future. But at least an influential portion of the population is ambitious to approximate this high standard of civic efficiency as closely as possible.

The relation between 100 per cent citizens and a 100 per cent city is indeed a vital one. No city can be a 100 per cent city, nor hope even to approximate it, that does not make provision for the citizenship training of its youth. The public school is par excellence the agency which the community has established for this purpose. How far it is accomplishing the purpose in Elyria this chapter is to discuss.

THE SPECIAL INDUSTRIAL CLASS FOR BOYS.

The special industrial class is comprised of boys selected from that group of pupils who, according to the standards of the school, have fallen furthest short of 100 per cent perfection. They are commonly known as "failures." The application of the word "failure" to school children is probably no more common in Elyria than elsewhere, but it is frequently made. A primary teacher remarked in the hearing of her 27 children, "This row [of 6 children, some of them of foreign parentage] are failures." Almost 25 per cent of this class of 6 and 7 year olds are thus stigmatized as failures almost before they have made a start in life. A big boy in high school was pointed out as taking ancient history for the fifth time. His progress in other studies was said to be about equally slow. He is a "failure." He has some excellent qualities and some "interests," but "they are interests for which the school does not provide." In the elementary schools of Elyria 19 pupils are reported (in addition to the 18 boys in the special industrial class) who are three or more years behind their age grades; 71 who are two to three years behind; 162 who are one to two years behind; and 438 who are one-half to one year behind. Together these constitute more than 30 per cent of the enrollment in the elementary grades.

Has not the word "failure" been applied in the wrong place? Which are falling furthest short of the 100 per cent mark, the community's children or the community's schools? Of course, failure on the part of a pupil means failure only in the studies he is taking; happily it does not necessarily mean failure in life. We know that a boy will not necessarily be a failure in life because he does not learn nor like ancient history or algebra, or any other particular subject. But failure in studies does mean retardation, and retardation is very likely to mean discouragement and therefore ultimately failure of a more serious kind. It becomes extremely important, therefore, to discover where the failure lies and to determine what the school and the community can do to remedy it.

Of the 18 boys in the special industrial class, 6 are designated as "unreliable," "untruthful," "bluffer," "truant," "selfish," "lazy," "without ambition"; 1 is reported as "criminal." But even these personal characteristics, to which is attributed in large measure the "failure" of the boys, are themselves the result, in part at least, of physical and social conditions that fall far short of the 100 per cent mark, and the boys can not be held responsible for them. Most of the boys have physical defects that might easily contribute to their backwardness in school. These are mostly preventable or remediable, such as bad teeth and eyes; 100 per cent medical inspection in the early grades might have saved some of these boys. Fully half of the boys, including most of those with bad personal qualities, come from homes that are far from 100 per cent good; in some cases almost 100 per cent bad.

Moreover, there is nothing that is more likely to make a boy a bluffer, or a truant, or lazy, or ambitionless, than the daily grind of work that makes no appeal to his interest in life, or that is not at least relieved by work that makes this appeal. Of the 18 boys in the class, 10 are reported as "fine boys" or "good boys," and another is "doing fine work in this class" although with a bad past record against him. They are in the class merely because they could not "get along" in the regular system of the graded schools, and took no interest in the work offered there.

The special industrial class is inadequately equipped. It does have the use of the well-equipped woodworking shops of the high school; but the room which they occupy for their academic work, while large and light, has not been made attractive for boys. The walls are barren and dismal; there are no pictures or "exhibit materials" that interest boys; the furniture is old and miscellaneous, giving a makeshift appearance and calling forth an apology from the teacher. There is no playground. The boys have no gymnasium work, the high-school gymnasium not being available during school hours, and most of the boys having to work after school.

Nevertheless, in some respects the work in this class is better than much of that seen in the regular graded classes. This is because the "system" has been in larger measure adjusted to the pupils by the organization of their work around their life interests.

Approximately one-half of the school day is given to shopwork and drawing—activities that hold the interest of the boys. The academic work which occupies the other half-day is to a considerable extent organized in relation to the manual work, though much more might be done in this direction. The teacher puts a good deal of vitality into the academic subjects. The geography, for example, is largely industrial geography and is taught in its practical relations to life. It is taken up through such books as Chamberlain's How We Are Fed and How We Are Clothed, which also serve as material for the reading lesson. The subject of reading, which includes language work, spelling, and writing, is based, not upon formal reading or language texts, but upon such supplementary material as Brown's Good Health for Boys and Girls, Jewett's The Body at Work, Gordy's American History, and such magazines as Popular Mechanics and Popular Science. Even trade catalogues describing mechanical apparatus, etc., are made the medium for learning to read and to spell. Burton's Shop Projects Based on Community Problems gives a civic turn to the shopwork.

In other words, the attention of the boys is focused more definitely upon a subject matter that is of direct interest to them because of its relation to life than upon the mechanical processes of learning to read, write, and spell. They are not particularly interested in "learning to read," but they are intensely interested in "learning to read popular mechanics and popular science."

Although the above paragraphs fairly represent the evident aim in the special class, the aim is not attained to the extent that it should be. There seems to be, even here, a fear of departing too widely from the formal course of study prescribed for the regular grades. When asked for the course of study of the boys who were doing eighth grade work, the teacher said "arithmetic, reading, geography, drawing, and manual training." The same reply was given regarding the work of the lower grades. When asked about history, hygiene, and other content subjects, the reply was that these were "supplementary to reading"; and this in spite of the fact that in practice, so far as observation indicated, the reading was really supplementary to the content subjects.

With a group of boys of this sort, at least, why not depart entirely from the formalism which has been a cause of their undoing in the regular grades, and substitute a course of study that might read something like this: Physical development, including both physical training and the study of personal and community hygiene; me-

chanics, including both shop practice and the study of popular mechanics; science, which should be related to physical development and to mechanics and include much nature study and geography; industry, correlated with geography, mechanics, and science, and affording opportunity for a discussion of vocations; and citizenship or community study, based largely upon observation of the community life about them. Then let the processes of learning to read and use the English language and of mathematical calculation become more largely a by-product of the entire course. Why not, in other words, give formal recognition to the principle which the teacher of this class is trying to apply with more or less success with the faulty machinery at his disposal?

THE ELEMENTARY SCHOOLS.

A glance at the elementary course of study (1915) gives the impression that the children of Elyria are constantly engaged from the first grade to the eighth with the formal processes of reading, language, spelling, grammar, number work or arithmetic, and memory training exercises. The community has a right to expect that the product of its schools shall have been taught to read and use the English language and to perform the essential arithmetical processes. Still, the reason why Elyria has a special industrial class for boys is not because of a fear that these 18 boys will not use correct English or know how to compute interest, but because of the fear that these derelicts of the school system will not be good citizens. The chief concern of the community with respect to its schools is whether they are constructively developing a 100 per cent citizenship. That the net influence of Elyria's schools does make for a better citizenship is not questioned, and some of their work is aimed consciously to cultivate good civic qualities and habits. But on the whole the civic educational purpose of public education is obscured and even negatived by the stress laid upon mere formal intellectual discipline.

The only direct civics instruction offered in the elementary schools of Elyria consists of a brief study of the Constitution of the United States appended to the course in American history and the reading of an elementary civics reader during about six weeks of the last half of the eighth grade. It is obvious that very little real preparation for citizenship can be accomplished with children in this brief time. The comments of teachers and principals indicated that much of this work is perfunctory. In the study of the Constitution the children are supposed to learn a few cold facts about the organization of our Government. In the supplementary reading the civics reader is read through with a minimum of discussion, the amount

depending upon the interest of the teacher in the civic content as distinguished from the reading lesson. It can be said with almost literal truth that there is no direct civics instruction worthy of the name in the Elyria elementary schools. A number of the teachers expressed the wish for something more vital.

Of the other elementary social studies, history affords the richest opportunity for direct civic instruction. That provided for in the course of study is as follows:

Fourth grade. Eggleston's Short Stories from American History (supplementary reading).
Fifth grade. Eggleston's Short Stories from American History (supplementary reading).
Sixth grade, B division: Blaisdell's Story of American History (supplementary reading).
Seventh grade, B division: First Steps in History of England (reading).
Seventh grade, A division: American history.
Eighth grade, B division: American history (continued).
Eighth grade, A division: American history (completed).

American history rightly holds the dominant place in the history instruction of an elementary school. In Elyria it is the only history taught, except for the half-year's reading course in First Steps in English History in the seventh grade. A definite civic purpose doubtless dictates the relative prominence given to the subject, for familiarity with the history of our country is supposed to breed patriotism. That the subject as taught in the Elyria schools has a certain civic value is not questioned; but that value is far below what might be derived from it. This again is due to the formalism of instruction, the lack of relation of the subject to the experience of the children and to other subjects of instruction. The children are learning so many pages of facts each day and the teachers (generally speaking) are devoting every energy to "completing the book."

The study of geography begins in the third grade as supplementary reading, the reader being entitled "home geography." The title of this supplementary reading course is justified only because the book used is so entitled. Few of the teachers seem to recognize that "the geographic world is in the neighborhood; it needs only to be discovered." Excursions into the neighborhood to observe nature are rarely made. Teachers who acknowledge the value of such first-hand observation say that it is impracticable under existing conditions. The chief difficulty mentioned is the fact that each teacher has two grades in her care, and is unable to leave one to go out with the other. One teacher spoke of occasional excursions in the immediate neighborhood of the school when a practice teacher is available to take charge of the room.

In the fourth grade geography becomes an independent subject and so continues into the seventh grade. It is supplemented in the

fifth and seventh grades with further "supplementary reading" of a geographical character. But almost without exception it is of the purely textbook type. The textbooks used are among the best published; but the best of textbooks can not vitalize the subject unless their content is constantly interpreted in terms of the pupil's experience, and correlated with other work that the pupil is doing or has done and with subjects about which he is thinking. Some attention is given to a study of occupations in connection with geography, and the industries of Elyria are sometimes discussed to a slight extent. Elyria is an important industrial center, and is in the heart of a great industrial region. This important fact should afford a vital point of departure for much of the geographical study instead of being given mere casual notice.

The course of study suggests that in the sixth grade there should be "discussions through the year in the history of Elyria, its geography, beauties, industries, scenery, growth, institutions of most interest and value." The suggestion does not seem to be followed in an organized way. This sort of study should not be left to chance, nor be limited to the sixth grade. The meaning of our national life, and even of world relations, becomes vastly clearer to children when it is interpreted in the terms of, and in relation to, local community life.

In all of the schools of Elyria one full period a week is set apart for the study or reading of "Current Events." This exercise is too often treated as a mere reading lesson, and too seldom with any vital relation to the work in geography, history, hygiene, etc. Only a few of the teachers make good use of this little paper, yet, as a rule, the children seem to take great pleasure in the current-events hour.

Instruction in hygiene is now given in all grades, varying in different schools and in different grades from 15 minutes to about 40 minutes per week until the eighth grade is reached, when the average time per week for all schools is 72 minutes for the B division and 110 minutes for the A division. In the fourth grade Good Health for Boys and Girls is read as supplementary reading in most of the schools, and in the seventh grade a Primer of Sanitation is read in three schools.

Hygiene instruction has a civic bearing in two ways—because of the close relation between physical fitness and efficient citizenship, and because of the relation of the subject to public hygiene and sanitation.

We are only beginning to appreciate properly the civic responsibility of the school for the physical fitness of the rising generation. It is the foundation of national efficiency in times of peace as in times of war. Civics and health are vitally related, and the schools of the country are gradually awakening to the fact. Instruction in hygiene should be continuous throughout the school course, as it ap-

pears to be in Elyria, and it should be correlated closely with continuous physical training, play, medical inspection, clinics, etc. The excellent, but inadequate, clinical work of the Elyria schools is treated elsewhere in this report (p. 40).

Comparatively little attention is given in Elyria, apparently, to the larger problems of public health and community cooperation through government and otherwise for health conservation.

Reference has been made to the disproportionate emphasis given in the course of study to the formal subjects (the three R's) as compared with the subjects with a distinctly social content. The subject of reading in the Elyria schools has a large social content, and could be made a potent factor in the civic education of the child. The criticism is not that reading is made a channel for social and civic instruction, but that such a large part of the social content of the course of study is included in the reading course and then obscured by the drill in the technique of reading.

As far as could be discovered, the work in language, spelling, writing, arithmetic, and drawing has little, if any, direct or conscious relation to the social life of the pupils, except in the industrial class for boys.

The criticisms that have been made will have a clearer meaning and a more constructive value by contrasting the organization and methods in Elyria with those found elsewhere. Only brief suggestion can be given here.

In the schools of Indianapolis, for example, the children are drilled, and drilled thoroughly, in the use of the English language, but the point first emphasized in the published course of study is that—

> language lessons should be based upon the experience of the pupil. These lessons may be connected with reading, with stories told by the teacher, with nature study, with pictures, and with incidents of home and school.

The aim is—

> to make of education, not a process of instruction in a variety of subjects, but a process of living, of growth, during which the various relations of life are unfolded—civic, geographical, historical, ethical, vocational, etc.

The school life is a life of constructive activity. Soon after school opens in the fall the children of the first grade begin making simple Christmas presents for the various members of their families. They may also furnish a doll's house. Meanwhile, home stories are read and told to the children, including home stories from nature, and conversations are held regarding—

> The family; What parents do for children; how children may show their gratitude; helpfulness; care of toys, furniture, clothing; sharing of pleasures; respect for age; work of each in the service of the whole.

This "doing things and talking about things" not only afford the opportunity and the material for training in the use of English, but

the content relates to group activities and relations in the home, constituting the beginning of a continuous course of social and civic training that runs throughout the grades.

Frequent short excursions in the immediate neighborhood are made, during which the children have opportunity to observe the flowers, the birds, and the animals of the home district, and the rain, snow, frost, clouds, wind. This is the beginning of nature study (sadly lacking in the Elyria schools) and of geography, which are continuous throughout the elementary school and afford further experience materials for training in the use of language.

In the second grade this nature study and home geography are continued but the story of Robinson Crusoe is taken up and studied for five weeks—

the story of a single-handed struggle with nature, emphasizing by contrast our dependence upon community life.

At the same time the children are studying their own home life "in contact with activities of the community":

How the community serves the home. Representatives of the community who come to the home: The milkman, the garbage man, the postman. How the home serves the community: Care of premises; conduct toward neighbors; conduct in stores; etc.

Hiawatha's childhood is also studied in this grade, giving opportunity for a study of Indian family life and a comparison of it with their own home life and the life of Robinson Crusoe.

By means of these and other stories, historical as well as geographical concepts are introduced—the idea of change and development in modes of life, etc. Included in the considerable list of stories of this grade are such as The Carpenter, The Baker, Shoemaker and Elves, The Flax, A Visit to the Weaver, which are correlated with much of the work described above and emphasize occupational life. The children model in sand a village street or a city thoroughfare and engage in clay work and basketry, making objects suggested by the story of Crusoe and of Hiawatha. Meanwhile, they are drilled constantly in the use of language, not as a separate thing, but because they have to use language in reproducing the stories of the grade and in conversation relating to concurrent activities.

Even the learning of the simple arithmetical processes is correlated to some extent with the general civic or social idea of the grade. The young children frequently make visits to the grocery or market on errands for the home. In one second-grade class visited the children were reporting to the teacher the current prices of meats, groceries, and provisions of various kinds. "Committees" of children were made responsible for ascertaining the prices of particular articles, taken largely from the sales checks accompanying each purchase. Boys whose fathers had groceries or meat markets were sometimes called upon to verify doubtful reports. The data thus gathered were used as the basis for arithmetical work.

Even in the first grade the teachers are instructed to—

> teach the relative value of numbers through 10, by games, building, drawing, and pictures. Also, incidentally, in the general work of the school, in arranging and distributing material, and in all situations where a knowledge of numbers is necessary. The teacher must take the time to direct the activities of the children in such a way as to make necessary the learning of numbers in certain exercises.

A description of the organization of social study in the elementary grades of Indianapolis is given in Bulletin, 1915, No. 17, United States Bureau of Education. Suffice it to say here that it culminates in the eighth grade with a course in "community civics, which is intimately correlated with the other work of the same grade and is in truth a 'crowning course' in the organized civic education of the child in the elementary schools."[1] From first grade to eighth the civic value of the course of study lies in its organization around the social experience of the children. In gathering materials for the lessons, whether in civics or arithmetic; in conferring with parents; in errands to the store; in choosing committees to do certain things; in comparing experiences; and in many other ways, the pupils not only get practice in group action and in dealing with real situations, but they also acquire a fund of experience which serves as a basis for much of their instruction.

The formal type of textbook instruction prevalent in the Elyria schools is inconsistent with such group activity, and really precludes it. Moreover, where instruction has so little relation to the pupil's experience and surroundings one would hardly expect to find much exhibit material, or other material aids, in the classroom. One teacher held in her hand a cotton pod during a lesson on the cotton-growing States, which is noteworthy because of the exceptional occurrence of such use of illustrative materials. In another room a small table contained a few old magazines and perhaps a dozen ancient stereoscopic views of no particular educational value. The teacher said these were for the amusement of the children in leisure time and not used in connection with instruction. In a first-year high-school history classroom, a machine for projecting images of opaque objects upon a screen was observed. The teacher said this was used by a science class that occupied the same room at another period; it had not occurred to her that it could be a valuable ally in her own work. The teachers of Elyria have apparently not learned

[1] The Board of Education of Indianapolis publishes pamphlets containing the courses of study in the several subjects of the curriculum—English, mathematics, geography, history, civics—with full instructions to teachers as to method of handling.

The chapter on civic education in the report of the United States Commissioner of Education on the schools of San Francisco discusses in detail the course of social study and the methods of instruction.

See also "The Teaching of Community Civics," Bulletin, 1915, No. 23, and "Social Studies in Secondary Education," Bulletin, 1916, No. 28, U. S. Bureau of Education.

of the rich variety of material aids available to keep the children's minds centered upon the realities of life; or the methods of instruction preclude the use of such material except in an artificial manner.

THE HIGH SCHOOL.

THE COURSE OF STUDY.

The Elyria High School offers the following social studies:

First Year.—General history, including ancient, medieval, and modern European history; entire year; textbook, Myers's General History.

Second Year.—English history; entire year; textbook, Wrong's History of the British Nation.

Industrial history; second half-year; textbook, Moore's Industrial History of the American People.

Commercial geography; second half-year; textbook, Brigham's Commercial Geography.

Commercial law; first half-year; textbook, Goro's Commercial Law.

Third Year.—No social study offered.

Fourth Year.—American history; entire year; textbook, Channing's History of the United States.

Many pupils defer second-year subjects until the third year, and some third-year pupils take American history.

There is no separate course in civics or government, though some attention is given to the subject in American history. Neither is there a course in economics, though there are three courses of definite economic content.

The high-school pupils have choice of four curricula which are designated in the last published course of study (1915) as "classical," "science," "commercial," and "industrial." At present there seems to be no definite recognition of the science course, a "mixed" course being mentioned instead, which seems to include pupils who are not definitely enrolled in any of the other three courses.

Of 600 pupils responding to an inquiry, 216 reported taking the classical, 89 the commercial, 198 the industrial, and 89 a "mixed" course.

The curricula differ little with respect to the social studies included. General history is required of all pupils, except that it is said to be optional with science in the commercial course. English history is required of classical pupils only. It is elective for all others. Subjects that have a peculiarly important relation to commercial and industrial training, such as commercial geography and industrial history, are elected equally, and in some cases to a greater extent, by classical pupils.

The following tables are based on returns obtained directly from the pupils. They are not absolutely accurate. It was discovered too late to be remedied that some pupils reported twice from different

rooms. Such cases are probably not sufficiently numerous to vitiate the general conclusions. At the time of the inquiry the total enrollment in the school was close to 650; the number of individual reports received is 600.

No table is shown for general history, inasmuch as it is said to be a required course except for commercial students, who may elect science instead. Conflicting statements were made on this point. From the returns obtained the following facts appear: 95 per cent of all first-year pupils are taking or have had general history; 92 per cent of all second-year pupils and 88 per cent of all third and fourth year pupils are taking or have taken the subject. The subject is taken almost as generally by pupils in the commercial course as by others (90 per cent in the first year, 91 per cent in the second year).

TABLE 1.—*English history—Number of pupils in each of the four curricula who are taking or have taken it.*[1]

Pupils.	Classical.		Commercial.		Industrial.		Mixed.		Total.	
	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.
Second year:										
Boys	23	18	6	0	46	11	12	4	87	33
Girls	35	32	18	0	15	0	12	2	80	34
Total	58	50	24	0	61	11	24	6	167	67
Third year:										
Boys	14	13	6	0	25	2	15	8	60	23
Girls	38	27	4	1	14	6	14	11	70	45
Total	52	40	10	1	39	8	29	19	130	68
Fourth year:										
Boys	7	4	2	0	15	1	11	4	35	9
Girls	24	17	3	0	9	4	13	8	49	29
Total	31	21	5	0	24	5	24	12	84	38

[1] Only 2 first-year pupils are taking the subject.

Although English history is "required" of classical pupils, only about two-thirds of the present fourth-year classical pupils have taken it. Only 1 out of 39 commercial pupils and 24 out of 64 industrial pupils in the last three years of the high-school course have taken the subject. English history is more popular with the girls than with the boys. In the second year, 34 out of 80 girls have elected the subject, as against 33 out of 87 boys; in the third year, 45 out of 70 girls, as against 23 out of 60 boys; and in the fourth year, 29 out of 49 girls, as against 9 out of 35 boys.

TABLE 2.—*American history—Number of pupils in each of the four curricula who are taking or have taken it.*[1]

Pupils.	Classical.		Commercial.		Industrial.		Mixed.		Total.	
	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.
Third year:										
Boys	14	1	6	0	25	1	15	6	60	8
Girls	38	4	4	0	14	0	14	2	70	6
Total	52	5	10	0	39	1	29	8	130	14
Fourth year:										
Boys	7	4	2	1	15	4	11	4	35	13
Girls	24	9	3	0	9	4	13	6	49	19
Total	31	13	5	1	24	8	24	10	84	32

[1] Only 4 of the first and second year pupils have taken the subject.

Only 32 of the 84 pupils in the present fourth-year class and 14 out of the 130 in the third-year class have elected American history. The records of the classes graduating in the past five years show that fully 50 per cent of the pupils entering the high school do not reach the third year and therefore have no course in American history. However, those who take the course in industrial history get an aspect of United States history (see Table 3.)

TABLE 3.—*Industrial history—Number of pupils in each of the four curricula who are taking or have taken it.*[1]

Pupils.	Classical.		Commercial.		Industrial.		Mixed.		Total.	
	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.
Second year:										
Boys	23	3	6	1	46	0	12	1	87	5
Girls	35	1	18	1	15	0	12	0	80	2
Total	58	4	24	2	61	0	24	1	167	7
Third year:										
Boys	14	1	6	1	25	1	15	4	60	7
Girls	38	7	4	0	14	1	14	2	70	10
Total	52	8	10	1	39	2	29	6	130	17
Fourth year:										
Boys	7	0	2	2	15	13	11	5	35	20
Girls	24	1	3	3	9	0	13	7	49	11
Total	31	1	5	5	24	13	24	12	84	31

[1] No pupils in the first year have taken industrial history.

Industrial history of the United States is offered as a half-year course in the second year. Only 7 out of 167 pupils in the present second-year class are taking it; 4 of these are classical pupils, 2 commercial pupils, and no industrial pupils. Of the 17 in the third year who have elected this subject 8 are classical (7 of them girls), 1 commercial, and 2 industrial. The other 6 are not classified. In the fourth-year class, four-sevenths of the boys have taken this subject, and less than one-fourth of the girls. Of the 31 fourth-year pupils who are now taking this subject, 13 are industrial, 5 commercial, and only 1 classical; 12 are unclassified.

The teacher of this class asserted that it is composed largely of pupils who have failed in geometry. That is, it seems to be a sort of refuge for those who have marked inability in the latter subject but who must have something to do, instead of a positive opportunity for those for whom industrial history might have especial importance.

TABLE 4.—*Commercial geography.—Number of pupils in each of the four curricula who are taking or have taken it.*[1]

Pupils.	Classical.		Commercial.		Industrial.		Mixed.		Total.	
	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.
Second year:										
Boys	23	0	6	1	46	0	12	1	87	2
Girls	35	0	18	2	15	0	12	0	80	2
Total	58	0	24	3	61	0	24	1	167	4
Third year:										
Boys	14	0	6	6	25	1	15	4	60	11
Girls	38	0	4	1	14	0	14	1	70	2
Total	52	0	10	7	39	1	29	5	130	13
Fourth year:										
Boys	7	0	2	2	15	2	11	4	35	8
Girls	24	0	3	3	9	2	13	6	49	11
Total	31	0	5	5	24	4	24	10	84	19

[1] No pupils in the first year have taken this subject.

TABLE 5.—*Commercial law—Number of pupils in each of the four curricula who are taking or have taken it.*

Pupils.	Classical.		Commercial.		Industrial.		Mixed.		Total.	
	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.	Number reported.	Number taking the subject.
First year:										
Boys	36	1	11	0	46	1	5	0	98	2
Girls	39	10	39	1	28	2	7	1	113	14
Total	75	11	50	1	74	3	12	1	211	16
Second year:										
Boys	24	0	16	0	46	2	12	0	87	2
Girls	25	0	18	0	15	0	12	0	80	0
Total	58	0	24	0	61	2	24	0	167	2
Third year:										
Boys	14	8	6	2	25	16	15	9	60	35
Girls	38	35	4	3	14	12	14	11	70	61
Total	52	43	10	5	39	28	29	20	130	96
Fourth year:										
Boys	7	3	2	2	15	3	11	2	35	10
Girls	24	15	3	3	9	5	13	5	49	28
Total	31	18	5	5	24	8	24	7	84	38

An interesting feature of this table is the remarkable popularity of commercial law shown among the girls, and especially girls of the classical course.

TABLE 6.—*Number of social studies taken by the members of the present senior class during their high-school course.*

Pupils.	Social studies.
No pupil has taken	All 6
2 of the 35 boys and 1 of the 49 girls have taken	5
6 of the 35 boys and 14 of the 49 girls have taken	4
7 of the 35 boys and 17 of the 49 girls have taken	3
16 of the 35 boys and 12 of the 49 girls have taken	2
4 of the 35 boys and 5 of the 49 girls have taken	1

It is clear from this table that the number of social studies offered indicates little as to the number taken by the pupils. Nearly one-half of the boys have taken only two social studies, and only one-fifth of them have taken three out of the six offered. The girls have taken more; more than one-third of them have taken three, and two-sevenths of them have taken four. But almost one-fourth of the girls have had but two.

The members of the present senior class have made the following combinations of their social studies during their high-school course:

TABLE 7.—*Combinations of social studies by the members of the senior class.*

History—General, English, American, industrial; geography; law.	Boys.	Girls.
Combinations of 6 social studies.		
General, English, American, industrial history; geography; ———	2	0
General, English, American, ——— history; geography; law	0	1
Combinations of 4 social studies.		
General, English, American, ——— history; ———; law	1	6
General, English, American, ——— history; geography; ———	0	1
General, English, American, industrial history; ———; ———	1	0
General, English, ———, industrial history; geography; ———	0	3
General, ———, American, industrial history; ———; law	1	0
General, ———, ———, industrial history; geography; law	2	2
General, ———, American, industrial history; geography; ———	0	2
———, ———, American, industrial history; geography; law	1	0
Combinations of 3 social studies.		
General, English, American, ——— history, ———; ———	2	2
General, English, ———, ——— history; ———; law	0	7
General, English, ———, industrial history; ———; ———	1	2
General, ———, American, ——— history; ———; law	1	4
General, ———, American, industrial history; ———; ———	1	0
General, ———, ———, industrial history; ———; law	1	0
General, ———, ———, industrial history; geography; ———	1	0
General, ———, ———, ——— history; geography; law	0	1
———, ———, ———, industrial history; geography; law	0	1
Combinations of 2 social studies.		
General, English, ———, ——— history; ———; ———	1	6
General, ———, American, ——— history; ———; ———	3	1
General, ———, ———, industrial history; ———; ———	7	0
General, ———, ———, ——— history; geography; ———	2	0
General, ———, ———, ——— history; ———; law	3	2
———, English, ———, ——— history; ———; law	0	1
———, ———, American, ——— history; ———; law	0	1
———, ———, ———, industrial history; ———; law	0	1
Those taking 1 social study.		
General, ———, ———, ——— history; ———; ———	1	3
———, English, ———, ——— history; ———; ———	1	0
———, ———, American, ——— history; ———; ———	0	1
———, ———, ———, industrial history; ———; ———	2	0
———, ———, ———, ——— history; ———; law	0	1

Number of boys and girls of present senior class taking history course.

Subjects.	Of 35 boys.	Of 49 girls.
General history is taken by	31	43
American history	13	19
English history	9	29
American and English history	6	10
American and industrial history	6	2
Industrial history of the United States	20	11
American, English, and industrial history	3	0

Conclusions.—The foregoing tables indicate that, while the high-school course of study is organized in several curricula apparently to provide for the requirements of well-marked groups of pupils, and while several social studies are offered that have special relation to industrial and commercial life, subjects are not elected nor com-

binations of subjects made by individual pupils with sufficient regard to their relation to each other or to the pupils' own aims and requirements. The tables also show the wide divergence between the social studies *offered* and those *taken*.

Too few pupils are receiving instruction in American history. This is especially significant from the standpoint of education for citizenship.

No instruction is given at all in modern or recent European history, except a very inadequate amount at the end of the course in general history. Social study, other than history, is very inadequately provided for.

METHODS OF INSTRUCTION.

Whatever their other values, the social studies, including history, present rich opportunity to prepare the pupil for citizenship. The extent to which this opportunity is realized depends in part upon the organization of the course of study, as discussed in the previous section, but even more upon methods of instruction.

Undoubtedly more attention should be given to a consideration of our governments than is given casually in the Elyria High School in connection with American history. Yet much of the instruction in government given in American high schools is of relatively small value as a means of training for active, effective citizenship. The mere introduction of a separate course in government is of small importance as compared with the development of the full civic value of the social studies already offered.

American history.—"To produce a fine type of citizen" is given by the teacher of American history as the chief aim of instruction in that subject. Frequent observation of the work of the classes, full discussion with the teacher, and some slight discussion with the pupils themselves indicated that an intelligent effort is made to realize this aim.

Opportunity is found to teach the pupils something about the nature of our Government. Biographical study, which may be a fruitful source of patriotic and civic inspiration, also finds its place. But the chief point of excellence is that, although the purpose of helping the class to understand past events and conditions was apparent, a purpose was even more evident to interpret present conditions and problems in the light of the past. Instruction in these classes is limited by the scope of the textbook less than in any others observed. The starting point of the lesson is just as likely to be a situation existing to-day, or an occurrence of yesterday, as an event of the period under consideration. And whether the starting point is in the present or in the past, whether it is something in the textbook or a piece of news in the morning paper, the relations between past

and present are emphasized. It is this interpretation, not merely of the present but especially of the pupil's present experience, that gives to history instruction one of its chief civic values and opportunities.

A second point of excellence in the American-history instruction is the conscious development of civic traits and habits. There is more discussion in these classes than in most of the classes visited, discussion of a kind to develop judgment and initiative on the part of the pupil. An unusual spirit of cooperation prevails. The community spirit is marked, and the relation between teacher and pupils is that of cordial cooperation for class ends. For example, when the teacher was asked for certain data regarding pupil activities her pupils were called into service at once to compile the information, which was placed at the disposal of the investigator the next day, and the class was interested in the effort. This method of obtaining information may not seem remarkable, but the point is that it seemed to be habitual in these classes; it was a matter of course that all had an interest in the question in hand.

Even in the American-history classes, however, there were times when "information for its own sake" seemed to be the only end in view; there was not so much spontaneous discussion as there should be; the lack of reference books and other equipment prevents the full development of initiative and cooperation in the preparation of material for class use, and the pupils are thrown too much upon the textbook and upon what the teacher tells them.

It is to be regretted that the training afforded by this work in American history reaches such a small number of the pupils in the high school. Perhaps one reason for it is that all pupils have studied American history in the grammar grades. This point was discussed by the observer with one of the American-history classes. The pupils showed an unusual appreciation of the relation that ought to exist between the grammar-school work and that of the fourth year of the high school. They felt that there was not, and should not be, any duplication. Their greater maturity and widened social experience give them a perspective that the grammar-school pupil can not have.

English history.—There are four classes in English history. Three of these are taught by the teacher of American history, and the work is characterized in general by the same methods observed in the American-history classes. But there is an appreciably greater suggestion of information for its own sake. The fourth class in English history was more narrowly a textbook study.

In general it would seem that English history is overemphasized in the Elyria High School, especially in comparison with American history, while at the same time its full value as a factor in the social and civic education of the pupil is not attained. On the other

hand, there is almost complete neglect of the subject in the education of the pupils in the commercial department, which is unfortunate, in view of the wealth of material which it presents in close relation to the interests of this group of pupils.

General history.—The course in general history includes the entire range of European history from antiquity to the present time. One of the teachers said, "Owing to the immense amount of material to be covered, we give very inadequate treatment to the period from 1815 to the present. The plan followed is essentially that of the textbook." The textbook is supplemented to a very slight extent by outside reading: there is very little reference work, and that largely by pupils with special topics. There are not enough maps for all the rooms where history is taught, and other supplementary helps are inadequate.

The work done has little relation to present life. In one class visited the subject was the invasion of Europe by the barbarians. It was entirely a memory lesson, and the pupils experienced great difficulty in remembering the names of the different invaders; and they did not seem to care. The observer asked the class, "Why are you studying these barbarians?"

After the first manifest surprise at such a question, one pupil replied, "Statesmen need to know because history repeats itself."

"But you are not a statesman. Why do *you* need to know?"

After some hesitation others replied, "To learn the origin of our language; to learn about the development of civilization."

When pressed, the boy who gave the last answer denied that he had any particular interest in the development of civilization. Thinking of the other answer, the observer asked, "Have you ever heard the word 'vandal' before to-day's lesson?" No one replied to this for some time, and then one girl said she had heard the word "vandalism," and agreed that it came from the name of the Vandals, giving a satisfactory reason for it.

"How many of you read the newspapers?" Many hands went up.

"How many of you have seen the word 'Hun' in the newspapers in connection with the great war in Europe?" None had.

"Are any of you descended from the Huns, or the Saracens, or the Iberians, or the Teutons, or other barbarians mentioned?" The idea seemed an entirely new one to the class, and for some time no response came. One boy finally said that "probably" he was descended from the Teutons.

This particular incident may have little significance, and certainly no generalizations can be made from it. But it illustrates the impression gained that most of the work these pupils were doing in general history is a matter of uninteresting routine, with no direct value in their present processes of growth.

It should be said that the teachers themselves, as well as the principal and the superintendent, are highly dissatisfied with the general history course and contemplate a change. They feel that "the period covered is far too long for any adequate understanding by 14-year-old pupils in nine months' study," and that "the time we can give to any one topic is too short to permit any but the most fragmentary treatment." The teachers complain of "lack of freedom in selecting and omitting topics and in apportioning the time needed for a topic without being hampered by the necessity of reaching a certain point at some stated day."

Economic subjects.—At the time of the survey there was one class each in industrial history and commercial geography. The content of these subjects is vitally related to life and to other subjects in the curriculum. Instruction in such subjects should be based largely upon observation and experience, and should contribute much, directly and indirectly, to civic training. In fact, however, the work seemed to have little civic value. It is doubtful if it even gives the pupils much usable information. Even from the standpoint of mental discipline, these particular courses are ineffective. In one lesson, for example, the subject in commercial geography was "concentration of industry in the United States." A half dozen pupils were sent to the blackboard to put on an outline, consisting of a list of cities with their characteristic industries. The outlines were placed on the board in bad form with many errors. It was entirely memory work, poorly done. One boy knew nothing of the subject, and copied freely from his neighbors. These pupils were at the board during most of the period, getting no benefit from the recitation that was going on simultaneously, and their outlines were not referred to during the period. Meanwhile the pupils in their seats were engaged in recitations, in which no thought whatever was apparent, no discussion took place, and little interest manifested either by the one reciting or by the class. Words were used without understanding. Difficulties were put off to be "looked up to-morrow."

Class work of this kind, taken in connection with the fact that pupils are placed in the class in industrial history for no better reason than that they have failed in geometry, raises the question of the utility of offering these courses, at least in their present form. Yet the commercial and industrial aspects of geography and history, or the geographical and historical relations of economic life, should occupy an important place in education. They need reorganization in relation to the other studes of the curriculum and to the life interests of the pupils.

SUGGESTIONS FOR A COURSE OF STUDY.

A thorough reorganization of the course of study in both elementary and high schools is desirable. The following suggestions are offered with particular reference to the social studies or those whose content has a direct civic bearing:

The organization of the 12 years of elementary and secondary education in three "cycles," as suggested in the report of the committee on social studies of the National Education Association[1] has decided advantages. It is in conformity with the present tendency toward a 6-3-3 organization, with provision for junior and senior high schools. But whether this organization is adopted throughout or not, the cycle arrangement of social studies still holds good. One of its chief advantages is that it provides for a certain comprehensiveness and completeness of civic training through social study for pupils who do not complete the entire school course. It also conforms roughly to well-marked periods of physiological and social development in the child.

Grades 1-6: The elementary cycle.—In this period as little emphasis as possible should be placed upon the division of the child's work into "subjects," especially the formal "disciplinary subjects," and as much emphasis as possible placed upon the child's life experience as the organizing principle of all his school work.[2] Through observation, experience, story, and discussion, the child in this period should acquire a familiarity with the natural world about him and man's struggle with it; with changes that have occurred in customs of living; with occupational life and the necessity for industry and thrift; with group relations as seen in the family, the school, the neighborhood, and the community at large, and the necessity for order, organization and government. Thus, in this period the whole field of social science (though not *as* science) is covered in elementary and concrete terms—geography, history, economics, civics. The formation of civic habits and the accumulation of civic experience by means of varied group activities bear an important relation to the instruction given in this cycle.

Grades 7-9: The junior cycle.—One important reason for grouping the first year of the high school with the two grammar grades is to give real continuity to elementary and secondary education. The work offered in both seventh and eighth grades and in the ninth grade should supply the pupil with a motive for continuing his schooling. This should be its relation to real life and experience. The same aspects of life that have entered into the study of the earlier cycle should enter into this, but more prominently and inten-

[1] See U. S. Bu. of Educ. Bul., 1916, No. 28, pp. 11-14.
[2] See pages 175 and 176, above. Also U. S. Bu. of Educ., Bul., 1915, No. 17, and 1916, No. 28, pp. 12, 49, 50.

sively. Observation and activity should still afford a basis for the work. A well-organized course in community civics should be developed in the grammar grades—not a formal textbook study under that name but a real study of the children's own community, with observation, analysis, inference as the controlling method. National concepts should also enter into the study. Both European and American history should contribute to the child's understanding of life in these grammar grades, and geography has its relations to both history and civics as to life itself.

In the ninth year the course in general history should be dropped. If any history as such is offered in this year, it should either cover a shorter period or it should concentrate upon fewer phases of human development for commercial and industrial pupils; for example, upon commercial and industrial aspects of history, and especially of American history.

It is urged, however, that no history be offered in the ninth year, and that instead a course be developed that will grow naturally out of the work of the two preceding grades, and that will take as its point of departure the economic interest that is developing in practically all boys and girls at this age. It also should be based as fully as possible upon observation and experience. A course of this sort will be more difficult to formulate than a history course, because little suggestion can be obtained from existing textbooks, but its value will compensate for the effort.

The course should be based upon observation of the occupational activities of the community, the vocations of the children's parents, or those in which the children show conspicuous interest. It would come to include national and world-wide aspects of industry, trade, and transportation. It would afford opportunity to consider the geographical relations of commerce and industry (commercial geography) and the historical changes that have occurred in these fields (economic history). This would obviate the necessity for separate courses in these subjects later, while giving to their subject matter the spark of life. Withal the course should have a distinct and constant civic bearing, including not only certain elements of commercial law but such questions as the health of the worker, child labor, etc., and the necessity for Government control.

A course of this kind should not be limited to commercial and industrial pupils, but should have peculiar value for them.

Grades 10–12: The senior cycle.—For the senior cycle the general recommendations of the National Education Association committee on social studies are suggested as a guide.[1] It is urged that the principles there discussed be carefully considered in planning a reorganization of the Elyria High School.

[1] U. S. Bu. of Educ. Bul., 1916, No. 28, pp. 35–53.

PUPIL ACTIVITIES.

ELEMENTARY SCHOOLS.

The school presents the essential conditions of community life; it should afford practice in community living. Class exercises fall short of their opportunity as a means of civic education unless they stimulate initiative in matters pertaining to group needs, cultivate a sense of personal responsibility for the group welfare, train in habits of cooperation, and by their very activities afford the starting point and the materials for much of the instruction.

Manual activities play a very small part in elementary education in Elyria. This is the more surprising in view of the elaborate shop equipment of the high school. The value of manual work lies not merely in the manual dexterity it develops but also in the basis of reality which it may afford for all the other work of the school and in the opportunity which it presents for group action. This is recognized in the special industrial class for boys, half of whose time is given to manual work. In the elementary schools a small amount of manual work is provided in the seventh and eighth grades. Drawing is taught throughout the grades, though the special teacher in this subject has recently been eliminated. Most of this work is stereotyped and artificial; it has little relation to the pupils' interests, to the life of the community, or to the other work of the school.

In Pittsburgh the children have made, in connection with their drawing work, working plans for the improvement of their door-yards and gardens; that is, they have used their drawing as a means for actual participation in a movement for community improvement. In Indianapolis several years ago the school children of the city wrote competitive compositions regarding the site of local historical interest most worthy of commemoration by a tablet. This involved local historical study. When the site was thus determined, the pupils in the art departments of the high schools made designs for the tablet. The design adjudged the best was adopted for the tablet that now marks the spot where Lincoln made an historical address.

The "busy work" of the children in the early grades of the Elyria schools is barren. Certain well-known devices are used (colored pasteboard disks, etc.) for teaching number and perhaps for sense development. But they are so used as to deaden, rather than to stimulate, initiative, cooperation, etc. Little opportunity is offered for natural life activities, such as children engage in, which might be utilized as a means of social education, and as a basis for the more formal instruction of the school.

The list of activities in which the children of the primary grades in Elyria engage outside of school is surprisingly long. As the children reach the upper grades the range of this outside activity broadens,

and occupational activities enter in increasing proportion. The children enter more and more into the actual current of the community life. It is just at this time when the social studies, geography, history, civics, become a more definite part of the school work. But there is, in Elyria, little relation between what the children do in school and what they do outside of school. The schools of Elyria are working hard by certain methods to prepare for life, but they are doing practically nothing to participate in life and to make the life of reality educational. It is only by doing the latter that the former can be accomplished effectively.

Much of the child's activity outside of school is play activity. It is as much the business of the school to provide for organized play as for organized instruction. It has deep significance in relation to education for citizenship.

The playground supervisor and the special teacher of physical training were eliminated last year because of lack of funds. The elementary schools of the city are well provided with playground space. In some cases it has not been properly drained and is practically useless in wet weather. Playground apparatus is inadequate and it has been allowed to deteriorate. Ice-skating ponds and tennis courts have been provided in some of the playgrounds. But there is no supervision of the play of the children except by the principal and teachers, and this consists of no more, in some cases, than "watching through the windows."

Until a year ago five of the school playgrounds were kept open in the summer and were in charge of a woman supervisor who organized folk dances and gave special attention to the girls. There was also a man supervisor for each playground to direct the activities of the boys. All of this was eliminated as one of the first acts of retrenchment. The importance of the public playground as a civic educational factor will increase with the growth of Elyria as an industrial center, and with the rapid increase of the foreign population.

The value of gardening as a direct means of civic education is no less than its value in other directions. It represents one of the somewhat limited number of activities in which children can make an appreciable contribution to the economic and civic progress of the community at the present time. The beautification of neighborhood and city, the utilization of idle land, the conservation of natural resources, an appreciation of industry and thrift, responsibility for the care of public property and of property belonging to others, cooperation with the departments of public health, public works, parks, etc.—these are among the things of civic importance for which gardening presents an opportunity.

A school savings-bank system has just been installed in the elementary schools of Elyria, and will later be extended to the high

school. The civic value of this department of school activity, if wisely administered, is obvious.

In some of the elementary schools a good deal is done by principals and teachers to cultivate a real community spirit among the pupils. There is in no school any organized form of pupil government; but in some cases effort is made, with success, to develop in the pupils a sense of their own responsibility for the welfare of the school, the care of its property, and the safety of younger children.

This kind of civic influence may be illustrated by the McKinley School, where, perhaps, more of this sort of thing is done than in other schools. The principal is justly proud of the condition of the toilets and other parts of the basement, which are scrupulously clean and with no sign of defacement. This is in part due to excellent sanitary arrangements and to good janitor service; but the pupils have a recognized part in it. The principal gets her results by friendly talks with the boys and girls, and by the dissemination through the school of a wholesome family or community spirit, for which she must, of course, have the sympathetic cooperation of the teachers.

There is in this school an organization known as the "Cut-K-Cs" (clean-up-and-keep-clean), composed of pupils of the three upper grades, with a captain. It looks after the school grounds in the spring, and in a measure polices the school. One boy is reported as having been transformed, by the captaincy of this organization, from a rather lawless individual into a leader with unusual genius for control.

There was formerly adjacent to this school a frog pond which made access to the building difficult in bad weather, and would, according to the principal, have made it difficult for the fire department to render effective service in case of fire. The boys of the school went to the chief of police and to members of the council and obtained a remedy.

At this school there is also, in the spring, what is known as "Burning Day." On this day a fireman from the city department is detailed to supervise the boys in burning the weeds from vacant areas in the neighborhood of the school. In this school there is, as in all others, a monthly fire drill.

Excellent relations have been established between the police and fire departments of the city and the public schools. The chiefs of both departments have taken pains to cultivate the friendship of the school children. They give occasional talks in the schools regarding public safety and the work of their departments, and otherwise cooperate in what is really a good piece of civic education. On the other hand, the children cooperate with the fire department in the spring "clean up."

These sporadic activities are among the most valuable civic-educational influences in the schools of Elyria. They should be organized and extended. They should also be connected with regular instructional work bearing on community life and based on observation. It should especially be related to such work as that suggested in the course of study for the sixth year, "Discussions * * * of the history of Elyria, its geography, beauties, industries, institutions." In other words, a real course in community civics. Organized work of this kind would be no small factor in justifying the city's slogan, "Elyria, the 100 per cent city."

HIGH SCHOOL ACTIVITIES.

The high school of Elyria offers an elaborate course of manual training, with well-equipped shops. A course in domestic science is offered for the girls. Although the boys learn the use of tools and the processes of the machine shop, there is no evidence that the work is related in any definite way to the actual industrial life of the community. Nor is it related to the other work of the school. There is, for example, a course in industrial history; but it is given by a teacher who has nothing to do with the manual work and who makes no point of connection with it. The economic and civic aspects of industry, which might find an effective point of departure in the school shops, receive practically no attention.

What the girls learn of homemaking has, of course, a definite civic value; but it is doubtful whether there is much organized effort to make them conscious of it.

The agricultural courses given in the school are too academic, and are not connected definitely with actual farming or gardening activities. Neither is sufficient attention given in these courses or in relation to them, to the community problems of rural life. The teacher in charge says that in one course some attention is given to cooperative activities, such as cooperative buying and selling; and that in another course, largely for girls who expect to teach, about two weeks at the end of the course are given to a discussion of community making.

The Elyria High School is not administered on a basis of pupil self-government. The principal expressed the opinion that the pupils are not prepared to assume any large measure of responsibility for the management of the school. It would not be safe, he thinks, to leave the study hall, for example, without a teacher in charge; chaos would reign. And yet the study hall was observed at certain periods when the 100 or 200 pupils present were quietly at work with no confusion, although the teacher in charge was absent from the room. This apparent refutation of the general statement

of the principal may be explained by the personal influence of certain teachers. It was noted that the teachers whose influence was in the direction of pupil responsibility in the study hall are those who have developed the highest degree of teamwork in their regular classes.

If high-school pupils do not know how to assume responsibility for conduct, it suggests that they need training in this respect. If the high school has one obligation more than another, it is to prepare its pupils for participation in a democracy. Such training can be had only by practice. The high school should give experience in self-management in the largest measure possible, and should increase the opportunity for it as the pupils show themselves competent for it.

In the cases observed where there was a larger degree of self-management than usual there was a suggestion that the motive was perhaps chiefly that of personal loyalty to a particular teacher. This motive is much better than no motive, but it is better if right community conduct spring from a proper perception of the nature and meaning of community life. This can be developed effectively only by instruction, based on observation, analysis, and inference. Instruction and practice in community life and community control are needed side by side in high-school life.

The allegation that high-school pupils are incapable of self-management is further refuted by the fact that in their own organizations they do exhibit capability, sometimes remarkable capability, for self-management. In practically every high school there are pupils with talent for leadership. Why boys and girls organized in a club almost unerringly discover their capable leaders and proceed to organize and manage their business effectively, while they need watching and have no sense of responsibility in a study hall or class, is a question worthy of consideration. It is doubtless largely a matter of motive. The club they recognize as theirs; while they have been brought up in the tradition that the responsibility for the class is the teacher's.

There are in the Elyria High School 11 pupil organizations that are managed more or less completely by the pupils with varying degrees of teacher supervision.

1. *Athletic association.*—Every pupil is a member. Meetings, two or three a year. Pupil officers elected by the association: President, vice president, secretary, pupil manager. The latter has charge of all contests, schedules, and tickets, and accompanies the teams on all trips. The principal acts as treasurer, and the coach is a teacher.

There are five school teams: Football, basket ball, track, tennis, and swimming. There are also class teams in football, basket ball, and track. Interclass and interschool games occur. Elyria High School belongs to the Northern Ohio High-School League.

The athletics is self-supporting, no contributions being sought from business men or others; $500 now in treasury. A movement is under way to acquire an athletic field. Alumni interested.

2. *Hi-Y clubs.*—Y. M. C. A. clubs for high-school boys: One for freshmen and sophomores with about 50 members, and one for juniors and seniors with about 70 members.

Purpose, as stated by a member: (1) "To clean up the school and the city common of all profane language, dirty stories, cliques of bad character, and the cigarette." (2) "To help the boys, through talks from business and professional men, public officials, and others, to decide on a life work." (3) Bible study. (4) Closer fellowship.

Meetings weekly at the Y. M. C. A., with a dinner and a talk by some man, followed by Bible study in charge of a high-school teacher. A number of social functions during the year.

Each club elects officers from its own members. Speakers are chosen or recommended by the boys. All business conducted by the boys. All work and social affairs planned and managed by committees. All service at meals under direction of a committee.

General supervision by boys' secretary of the Y. M. C. A. Bible class in charge of a high-school teacher. No other high-school supervision, though the principal and the superintendent attend many meetings and are in sympathy.

3. *Y-Hi clubs.*—Y. W. C. A. clubs for high-school girls: One for freshmen and sophomores with about 60 members, one for juniors and seniors with 35 members.

Purpose, as stated by a member: "To aid each member to be her best self; to help the other girl to be her best self; to promote true friendship; to maintain a good scholarship and democracy throughout the school; to have the right kind of a good time and engage in a definite social purpose."

Meetings weekly at the Y. W. C. A. similar to those of the Hi-Y clubs. Classes in "Christian citizenship" are mentioned. The social functions seem to be fewer than in the Hi-Y clubs.

Each club elects officers and has committees. Among the latter is a committee on community work, under which are mentioned missions and giving aid grade-school visitation.

The Y. W. C. A. secretary has general supervision and directs Bible study. Usually a high-school teacher acts as general adviser.

4. *Beta Phi Club.*—About 50 members.

Purpose: "To develop the literary taste and abilities of the members. However, this purpose is not carried out, and there is talk of reorganization along the original lines."

Weekly meetings with literary programs. Two of three parties during the year.

Elects its own officers. "Is supposed to be under the general supervision of the faculty."

5. *English Club.*—With 58 members, who are "passing" in all subjects and have a grade of 90 or above in English.

Purpose: "To promote good English among the members, to spread the gospel of good English in the school, to create a taste for good literature."

Two meetings each month. Had charge of school Christmas entertainment and gave a Christmas mask.

Officers elected by the club. Committees arrange programs.

The English teachers are honorary members, and one of them always meets with the program committee.

6. "*The Elyrian.*"—The school paper. Nine literary editors, three artists, three business managers. All of these pupils of high standing, elected by the pupils but recommended by the English teachers, who have supervision.

7. *Orchestra.*—Has 23 members. Plays at all school functions, gives a concert on the first Monday of each month in the chapel, gives a public concert every year to raise money, and gives concerts in small neighboring towns.

In charge of the music director, who consults the members regarding music and engagements. A pupil is secretary and treasurer and manages all financial business. The principal has general supervision.

8. *Glee clubs.*—One for boys, one for girls; 20 members in former, 30 in the latter.

Practice once a week; sing in chapel; give one concert.

Pupil officers and committees to work with the music director who has charge.

Pupils may get credit for graduation for work in the orchestra and glee clubs, and for literary or society work when approved by the instructors.

It is obvious that such organizations as these present opportunity for the training of pupils in group action, in parliamentary procedure, and in modes of self-government. Doubtless they could do much more in these directions than they do. It is noteworthy that most of these organizations have in the foreground of purpose the interest of the school as a whole. The athletic and musical organizations especially tend to develop "school spirit." Pupil organizations become dangerous only when they divert attention from the fundamental interests, purposes, and ideals of the school, or when they undermine that democracy for which the American high school stands in principle.

It is said that there are no secret societies in the high school. There are two officially recognized school social functions each year, the senior-junior reception and the junior-senior reception. These are arranged for and managed by the two classes, with faculty supervision. It is said that other "parties" have frequently been given by and for boys and girls who attend high school, which have been called high-school affairs, but which have tended to interfere with, rather than to promote, the interests of the school. The school authorities have endeavored to make it plain to parents that responsibility for them does not rest with the school. The pupils themselves could do much more to regulate a situation of this kind than can be done by mere prohibition on the part of the authorities; and they doubtless would do it, if they were made conscious of the general social situation involved.

Organized debating has absolutely no place in the Elyria High School, as far as could be discovered. There are no debating classes or clubs of any sort. It is said that a former administration of the high school was positively opposed to them for some reason. As a means of civic training public discussion and debate have the highest value because of the stimulus to study public questions, and be-

cause of the opportunity presented for practice in team work, in the management of the necessary organization, in public speaking, and in the use of public documents and other source materials.

The Young Men's and Young Women's Christian Associations are among the most potent influences for good citizenship in Elyria. The work they are doing for the boys and girls of the high school, as well as for young men and women outside of school, is most commendable. It is unfortunate, however, that a high school as well equipped in other respects as that in Elyria should be wholly dependent upon these associations for the physical training of its pupils. All high-school gymnasium work is done in the gymnasiums of the two associations, under the direction of their physical directors. The work is elective, and at present about 50 boys are enrolled. The number of girls enrolled was not stated. The board of education pays to the association $2 for each pupil enrolled.

The Y. M. C. A. also attempts, with a fair measure of success, to provide for another need which the school itself should look after more carefully. This is in providing a place during the lunch period for boys who do not go home. These are principally boys who attend the high school from surrounding towns and rural districts. The Y. M. C. A. has a rural club for such boys, who take lunch together at the association building. The Y. W. C. A. does something similar for the girls.

About one-third of the high-school pupils are tuition pupils, which means that they come from outside the city limits. The care of these pupils during their idle time while in town is a matter of supreme importance. There are in Elyria certain well known loafing places which threaten the citizenship of boys who come within their influence, and which tend to counteract whatever civic training the schools may afford. The Y. M. C. A. is doing a great work in this particular direction; but the high school should do even more, not by formal prohibitions against these places, but by providing an effective substitute.

In the first place, the lunch period of an hour and a half is unnecessarily long. An hour is ample even for pupils who go home to lunch. Those who lunch at the school or at the near-by Y. M. C. A. have time on their hands. But the long lunch period would not be so bad if the school provided adequate means of spending it profitably as well as enjoyably. The school gynasium should be a valuable asset in this connection, turned into an informal recreation room at this time. So also would a well-equipped library and reading room, with current literature, newspapers, and books, and a place, in the gymnasium or elsewhere, for games of the quieter sort and for conversation. All of this should be under supervision, but the kind of

supervision that allows large freedom and the opportunity for self-government.

The high school has a lunch room which is operated by two members (pupils) of the domestic science department selected by the domestic science teacher. Milk, cocoa, soup, and sometimes other articles of food are provided at small cost. The proceeds are turned over to the principal, but the girls themselves keep the accounts. About 200 take lunch in the room, though all do not buy. The girls who manage the lunch room receive school credit for it.

Of the 16 credits required for graduation from the Elyria High School, one may be secured by accessory or home tasks. The list of such tasks for which credit may be received is rather extensive and of wide range (see Course of Study, 1914–15, pp. 32, 33). An examination of the records of 84 boys and girls who have received such credits shows that the following activities have been accepted for from one-eighth of a credit to an entire credit:

Clerking in store, farm work (sometimes stated in general terms and sometimes as specific farm tasks), working in shops, mowing lawn regularly through the season, care of an automobile, regularly preparing meals, making beds, doing the home laundry work, care of horses and cows, poultry raising, drafting in factory, operating machines, nursing, office work, building, painting, shingling, acting as time keeper, selecting and testing seed corn for 5 acres, sign painting, bookkeeping, sewing, teaching basketry, canning fruit, entering hat in domestic contest, work in mill, making cement steps, making tennis court, travel with description, work on a lake boat, attending furnace in a school building, work in canning factory.

This list is not exhaustive. In some cases vague statements are made, such as "worked every day in the week," "home work," etc. The list does not include regular music lessons or work in the glee clubs and choruses, for which a large number of pupils received credit. The largest number of credits was giving for clerking in store (27 pupils), and the next for farm work (16 pupils). Next to these come mowing lawns, shop work, and home work (5 pupils each).

An attempt has been made to safeguard the giving of credits for this outside work by requiring advance approval from superintendent or principal, by requiring vouchers from instructors or parents or employers, by inspection of work done, or by requiring an essay on the subject of the work done. It is difficult to see, however, why high-school credit should be given for some of the things done. Why should credit be given for the mere fact that a boy or a girl has mowed a lawn every week for an entire season? If credit is to be given for outside work it should depend absolutely upon what the pupil gets out of the work in educational values, and this can hardly be safely determined by the mere written statement of an employer or even of a parent.

The country boy who is taking a course in agriculture in the high school should find a laboratory in the farm on which he works, but the educational value of his farm work will depend upon how the school uses his actual farm experience in connection with the instruction given in the school, and also upon the supervision he receives in his farm work from some agricultural or gardening supervisor provided by the school. The farmer has little time to give organized instruction to the boy, even if he knew how to do so; in most cases he does not. The same thing is true of the boy or girl who finds employment during the summer, or at other times in the commercial or industrial life of the community. The school may do more harm than good by merely giving credit for work done outside; but if it uses the experience gained by the boy or girl in the course of such employment as a basis for its own educational work it will make the education of the youth vastly more vital.

THE PUBLIC LIBRARY.

Elyria has a good public library of 30,000 volumes, which seems to be kept very well up to date by the annual acquisition of new books in all fields. But it is badly housed, and at the present time is serving the schools and the community only to a slight extent. The terms fixed by the donor of the building have prevented the library board from selling it or devoting it to other uses, thereby perpetuating its use long after it has been outgrown. The building and site are said to be worth about $25,000 or $30,000. There is an endowment of $10,000. The first floor of the building is rented to the electric light company for office use. And until the past year (1916) the board of education has made an annual appropriation of $4,000 to the library.

The shortage of funds for public-school purposes last year led the board of education to discontinue its appropriation for the library. This resulted in placing the library on a subscription basis, an individual membership fee of $1 a year being charged for the privilege of drawing one book per week, and a family membership fee of $3 a year for the privilege of drawing three books of fiction and two others per week. The card holders fell at once from 4,000 to 400. Moreover, the library staff was reduced from three assistants on full time to two on half time, in addition to the librarian, who gives all her time as formerly. The hours during which the library is open have also been reduced materially. Teachers formerly held cards which entitled them to 10 books at a time for the use of their classes; now they have no privileges other than those of regular members. Boxes of books (traveling libraries) were formerly sent to the grade schools and exchanged two or three times a year; but this is no longer done.

It seems remarkable that a city enjoying the reputation for public spirit possessed by Elyria, and as generous as it has been in contributing large sums of money for public enterprises, should have allowed the almost complete, even if only temporary, destruction of the usefulness of its library for the lack of a few thousand dollars.

It is said that the legal technicalities preventing the disposal of the old library building are about to be overcome, and that a site has been selected for a new building. The librarian, who was trained in the New York Public Library and served there and who was librarian at Oberlin for several years, is enthusiastic about plans for the future in spite of the discouragements of the present. In her report for 1915–16 she recommends the development of a branch system. There is great need for a branch in the industrial and foreign district of the city. Practically no provision has been made by the city for the peculiar educational needs of this section of the city. Through the cooperation of Jewish citizens a beginning has been made in the collection of a library of Yiddish books. Similar enterprise in behalf of other foreign groups is desirable.

The librarian reports that the library is used by elementary school children only to a very slight extent. The discontinuance of the box libraries for the grade schools was a misfortune, for they had an important influence on the reading of the children. Yet these box libraries were never made as useful as they might have been. There were not enough books to supply the demand. The teachers had nothing to do with the selection of the books for the box libraries. No attempt seems to have been made to select books relative to the work that was being done in the schools by the children.

The high school has a very inadequately equipped library of its own. Under any circumstances, however, the public library should be in a sense an annex of the high school. The public librarian reports that the high-school pupils do use the library to a considerable extent, especially in connection with the work in English and history, which confirms the reports obtained at the school. The public library should perform a much larger and more definite service in the education of the youth of Elyria than it has ever performed. With the erection of the new building, it should be possible to develop a plan of intimate cooperation.

In connection with the community study recommended by this report for the schools of Elyria, one feature of the new library might well be a department devoted to the history, industries, and social and political life of Elyria and Lorain County. Such department should have not only all available literature relating to local life, but should be arranged for the display of exhibits illustrative of that life. The civic value of such department might be made very great not only for the schools but for the entire population.

EDUCATION OF THE FOREIGNER.

A new Elyria is growing up west of the river, of which the old Elyria seems hardly conscious. This is the factory district. Its population consists of recently arrived foreigners, chiefly of Slavic extraction. This new part of Elyria will inevitably modify, is already modifying, the community life of the city as a whole. The importance of the problem which this new population presents can hardly be overestimated. It is the problem of assimilating the new population into the citizenship of the community to the mutual advantage of both.

The problem is in large measure an educational one. So far, Elyria has done little to meet the situation. There is no school in this western district of the city. At present, these foreign children are concentrated almost entirely in the Franklin School, with a few in the Gates School. In the Franklin School almost 100 of them are reported, four-fifths of them in the first three grades. Why there are not more in the upper grades is not clear, but it may suggest elimination because of retardation; for many of these non-English-speaking children are overage for their grades. These non-English-speaking children are enrolled in the same classes with the native born, and are subjected to the same instruction. The foreign children are unable to keep up, and the native-born children are kept back by their slower classmates.

Until a school building is provided for the district occupied by the foreign population, separate classes should be organized in the Franklin School for the foreign children in the lower grades until they have acquired facility in the use of the English language and are able to compete on favorable terms with the American children. But there is the greatest urgency for a school in their own district. A temporary schoolhouse has been suggested, but it has not met with the approval of the board of education. A course of study should be developed that is more closely adapted to the needs of this group of children. The aim should be to keep them in school as long as possible and to fit them with care for American citizenship. It must be remembered that these children afford one of the most effective channels through which to reach their parents. Instruction should be given them as soon as they are able to understand it, which they will take home and discuss there. It should include work in community civics adapted to their own conditions of life.

Excellent but inadequate work is done for this foreign population by the social settlement in the district, and by the night school conducted there under the auspices of the board of education. Such evening classes for adult foreigners should be increased, especially for teaching English and citizenship, and arrangements should be

made with the employers whereby more general and more regular attendance upon these classes may be secured.

Another problem is presented by foreigners, many of them girls and young women, who live in surrounding towns but come into Elyria to work. Exact information is not available on this point, but there is evidence that there are many foreign girls who come into Elyria every day by electric lines and work in industries where the conditions of work and life are not always good. It may seem that Elyria has no responsibility educationally for those who live outside of her limits. But these girls (and men too) work in and for Elyria; the industries in which they are employed belong to Elyria; they contribute to the community life of Elyria. Some of them will marry and remain in Elyria. The community life of Elyria is not limited to its own boundaries, but ramifies into and is influenced by that of the surrounding region in a remarkable manner. There is a civic problem here of the utmost importance and interest. If the public-school authorities can not handle it effectively alone, they should at least cooperate with the Y. W. C. A. and the Y. M. C. A. and other available agencies, first, in securing the best possible working conditions for this class of workers, and, second, in securing the cooperation of employers in the organization of industrial clubs and civic clubs for both young men and young women, through which a considerable amount of instruction could be given.

CONCLUSIONS.

1. The schools of Elyria make little provision for organized constructive training for the responsibilities of citizenship, except as a by-product of formal studies.

2. The course of study and the methods of instruction greatly overemphasize mental discipline as a means of preparing for life, while failing to make the present citizenship of the children educational.

3. Definite, direct instruction in regard to the civic relations and the agencies of civic life should be given in both elementary and high schools to a much larger extent than is now the case. It should be based as largely as possible upon observation and experience. But the entire curriculum should make its contribution to the civic education of the pupil.

4. The single textbook occupies a too controlling place throughout the elementary and high schools.

5. The educational value of pupil activities, both in and out of school, especially from the standpoint of education for citizenship, is not realized nor fully appreciated in either elementary or high school.

6. The teachers of social studies are greatly handicapped by lack of library equipment and material aids to instruction. But they

are apparently unappreciative of the wealth of material aids available and that could be accumulated largely by the pupils themselves to their own profit and interest.

7. The public library should be, but is not at present, a valuable asset in the civic education of school children and of the community at large.

8. Little provision is made to help and supervise the teachers in service. It is peculiarly important that such provision be made in relation to the vital work of civic education.

9. There is some exceptionally good history instruction in the high school. But in general the social studies of the high school are not organized or taught in a way to develop their full intrinsic civic value or to meet the special needs of distinctive groups of pupils.

10. The civic welfare of Elyria demands prompt provision of adequate and appropriate educational advantages for the recently arrived and rapidly growing foreign population.

11. A thorough reorganization of the course of study in both elementary and high schools is desirable.

RECOMMENDATIONS.

It is recommended—

1. That a committee be appointed by the superintendent of schools to reorganize the course of study in both elementary and high schools, with a view to making civic education a more conspicuous aim. Especial attention should be given to the continuity of high-school work with that of the elementary school and to the cycle plan of organization. The committee should include teachers as well as supervisors of both elementary and secondary schools.

2. That community civics be made definitely a part of the work of the grammar grades or junior high school.

3. That special attention be given to the development of a course of social study for the ninth year (first year high school) along the lines suggested on page 193.

4. That during the time necessary for the development of the said ninth-year course, a course in community civics be given also in the ninth year. The ninth-year pupils will not have had community civics in the grammar grades. This means that for one year, while the new ninth-year course is being developed, community civics would be taught in both grammar grades and first-year high school.

5. That a department of social studies be created in the high school, including history with the other social studies.

6. That a head of the department of social studies be appointed who would have supervision over the organization and teaching of the social studies in the grammar school as well as in the high school (junior and senior cycles).

It is probable that a competent person for this position can be selected from the present high-school staff of teachers, and that by relieving her of a part of her class work, time could be found for her supervisory duties, without greatly increasing the expense. Some additional compensation should be given, however, for this supervisory work.

7. That frequent conferences be held for the teachers of the social studies in the high school and grammar grades (or junior and senior high schools) for the discussion of organization, methods, material aids, available literature, etc. These conferences should be under the immediate direction of the head of the department of social studies.

8. That the teachers of social studies be provided with much-needed equipment, both in library facilities and material aids.

9. That closer and more effective cooperation be established between the public schools and the public library.

10. That the special industrial class for boys be provided with better equipment (furniture, books, pictures, etc.), and that the teacher of this class be included in the conferences of teachers of social studies.

11. That separate classes for non-English-speaking children be organized in the early grades of the Franklin school.

12. That classes or clubs for debate be organized in the high school, with pupil management under faculty supervision; and that all debates, discussions, and business meetings be conducted according to correct parliamentary procedure.

13. That a large degree of pupil participation in school management be accorded.

14. That evening classes for adult foreigners, to include instruction in American citizenship, be organized as rapidly as possible, and that steps be taken to secure effective cooperation in the matter from employers of foreign labor.

15. That the community center and community forum be developed, and the use of the school buildings for this purpose be granted.

16. That supervisors of play activities be reinstated, the summer playgrounds reopened, and the playground apparatus be supplemented to meet actual needs.

Chapter IX.

SCHOOL AND HOME GARDENING.

FARM PRODUCTS OF LORAIN COUNTY.

Lorain County is a county of cities and villages. In 1910 the total population of the cities of Lorain, Elyria, Oberlin, and Amherst was 50,179, and that of all other incorporated villages and of rural districts in the county was only 25,858. Because of this large city population the farmers have excellent local markets. A comparison of the farm products of the county shows that general farming, cereal, forage, and live-stock production rank highest. Specialized and intensive cultivation of vegetables for the markets of the cities of the county has not been developed. The farms are large; and computed on the basis of cash value given in the 1910 Census, the county produces only $5.83 worth of vegetables per capita, or a very small proportion of the local consumption. Vegetables are high in price because of the lack of local production. Prices are without doubt regulated to a large extent by the large city markets in Cleveland, not far away. A good idea of the status of vegetable growing in the county may be obtained from the following tables of size of farms and cash value of the principal crops:

Size of farms in Lorain County.

Under 3 acres	7	100–174 acres	760
3–9 acres	233	175–259 acres	205
10–19 acres	256	260–499 acres	56
20–49 acres	750	1,000 acres or over	1
50–99 acres	1,291	500–999 acres	7

Money value of principal farm products of Lorain County.

Cereals	$1,448,097
Other grains and seeds	12,915
Hay and forage	916,200
Vegetables	443,654
Fruits and nuts	218,892
All other crops	167,719
Total	3,207,567

CHARACTER OF THE SOIL OF ELYRIA.

The land area of 4,075 acres within the corporate limits of Elyria is ideal for gardening. With the exception of the cuts made by the two river valleys, the area is comparatively level. Three slight elevations run across the town, marking the original positions of the lake front. The soil is generally fertile, although it differs in the several sections of the city. The level plain, much of which has been recently used for grain farming, is heavy; the tops of the lake-front ridges are lighter, and ideal garden soil is to be found on the lots near the rivers. This is especially true where the river banks are lowest along the West Branch.

Even in its present condition, practically all of the land in the city is well adapted to vegetable growing, and with soil improvement, including drainage on the level areas, very large crops might be produced. During most seasons, the rainfall is ample for the production of crops, if the moisture is conserved by cultivation. To irrigate a garden for any length of time would reduce the profit greatly, for water charges are made at the meter rate of 20 cents per thousand gallons.

LAND AVAILABLE FOR HOME GARDENING.

Although the industrial progress of the city has been marked, land values have not increased rapidly. There is still much room for expansion, and the building lots are of generous size. The majority of the lots range from 40 by 120 feet to 50 by 150 feet, although some of those in the Gates School district are smaller, and the older homes on Middle and Washington Avenues have much larger grounds. Very few apartments have been built. In 1910, there were 3,239 dwellings for housing 3,519 families. Only 280 families were then living in apartments or in dwellings with other families. The population increased from 14,825 in 1910 to 18,618 in 1916, and the increase in number of dwellings seems to have kept pace with that of population.

The only section of the city that might be considered congested is the Hungarian village, to the west of the Fair Grounds. The streets in the older part of the city are planted with shade trees, and many of the homes are well decorated with flowering vines and shrubbery. The newer section still lacks these attractions which help to make a homelike neighborhood. There are few alleys, and back lots are comparatively free from shade that would interfere with productive gardening.

The school districts were used as units in studying the availability of land for gardening (see table on p. 212). Reports were received

from 1,431 children. Of those only 75 lived in flats, tenements, or apartments where the land must be used by two or more families; practically all other children have some garden space, and in many cases the space is large. The space available for gardening in the home back yard was measured by 986 children. The average number of square feet per child was found to be 4,791.

The only available map of the city had not been corrected to date and the two districts omitted were not platted in house lots at the time the map was made. The house lots of all 40 blocks were measured, showing that there is an average of 1.64 acres of available garden land per block. If this land were cultivated to produce as low an average as 1 cent per square foot of vegetable foods, the total production per block would be $714.38. With well-directed, careful work, this amount can be increased tenfold. The public-school teachers stated that nearly all children could have a home garden and that it would be comparatively easy to find vacant lots for all children who have no home ground. Large tracts for school gardens are also available and could be secured for small rentals. The grounds of most of the schools are large, but this land would serve the greatest number by being left for playgrounds.

Available land for gardening.

Schools.	Children reporting.	Living in flats, tenements, and apartments.	Size of building lots in the district.	Children who measured back-yard space.	Average number of square feet of back-yard space per child.	Number of blocks studied from map of city.	Average number of acres per block.
Hamilton	193	4	40 by 120	170	5,517	9	2.01
Franklin	340	30	50 by 150	247	4,381	12	1.91
McKinley	296	19	50 by 130	158	2,696	3	.83
Garfield	58	0	40 by 135	28	4,750	(a)	
Ridge	120	7	50 by 130	99	8,444	6	1.36
Gates	222	8	20 by 120	137	4,016	10	2.07
Jefferson	202	7	50 by 150	147	3,738	(a)	
Total	1,431	75	.....	986	4,791	40	1.64

[a] Measurements made by high-school students in the mechanical drawing classes.
[b] Not platted.

COST OF VEGETABLE FOODS FOR AN ELYRIA FAMILY.

In order to determine the cost of vegetables to Elyria families, the place of production, competition of salesmen, and methods of purchase of vegetables and small fruits were considered. These facts have a direct influence on the price of the foods to the consumer, and the attempt has been made to obtain reliable figures from three sources. Nine grocers were interviewed; questionnaires were sent to 280 housewives, and the public-school teachers were asked to investigate and report on the cost of vegetables, both canned and fresh, used in one year by a family of five persons.

A study of the grocers' reports shows a very great variation in the place and method of purchase. The large stores in the center of town obtain their supplies principally through commission houses, and small stores in outlying sections of the city purchase largely from the farmers. An average of the answers of all grocers who reported shows that 38 per cent of the vegetables sold are purchased of farmers and 62 per cent are furnished to the storekeepers by commission men. The city of Elyria does not have a farmers' market. The retail price of vegetables is fixed as a rule by the grocers. City ordinances permit farmers to sell farm produce without a license, but the number of farmers who take advantage of the privilege in a systematic way seems to be very small. In seasons of oversupply of certain crops, the farmers sell directly to the homes, but such selling is intermittent. The grocers are unanimous in stating that from 66 to 75 per cent of all vegetables consumed in the city are sold through their stores. On this point the average of the housewives' statements gives 65 per cent to the grocers, 11.4 per cent to the farmers, and 22.6 per cent as grown in the home garden.

Although the individual estimates of costs of vegetables varied, the averages of the reports of grocers, housewives, and teachers are remarkably uniform. The grocers' estimates averaged $138.91 as the cost of canned and fresh vegetables for a family of five persons for one year; the housewives' estimates averaged $135.05; and the teachers' estimates averaged $133.57. When compared with other food studies, these figures seem high, but averages here given were taken directly from statements received from the sources above mentioned. A similar study was made in Richmond, Ind., in April, 1916. Berries were included with the canned and fresh vegetables, and the total cost for a family of five persons for one year was estimated by grocers and housewives of Richmond at $138.88.

OCCUPATION OF THE SCHOOL CHILDREN OUT OF SCHOOL HOURS.

Under the direction of the teachers, 685 boys and 741 girls of the fourth, fifth, sixth, seventh, and eighth grades reported on their occupations after school hours, on Saturday, and during the summer vacation. These occupations were classified. Those requiring a definite amount of time each day, such as delivering papers, work in stores, etc., were listed as regular employment. It should be noted that many of those require only small portions of children's time. Those that were indefinite and irregular, such as odd jobs, picking of berries, etc., were listed as irregular employment. The children also stated how many hours they were engaged in home duties per week and whether or not they were paid for their home work. The reports of boys and girls are shown in separate tables.

Boys.—Of the 685 boys reporting (see table on page 215), 186 claim to have some occupation after school and on Saturday. The occupations of 40 of these boys were classified as irregular, while those of the other 147 were of such a nature as to constitute regular duties. Only 27 per cent of all the school boys have occupations that add money to the family treasury, and only 21 per cent had regular occupations. During the summer vacation a larger number of boys are engaged in gainful occupations. Of the 302 who are employed, 218 have regular duties and 84 work only a part of the time. In the summer, 44 per cent of the boys help the home-income by earning money and in 32 per cent this earning is regular. The average weekly earnings of the boys after school and on Saturday was $1.74, and the average during the summer vacation was $2.28 per week.

With the elimination of agricultural activities of the home, there seems to be very little home work for the city boy. The care of a furnace in winter and the mowing of lawns in summer are the only possible "man's work" in many city homes. When these occupations become the duties of the boy they require only a few minutes two or three times per day or a few hours once or twice per week. Forty-one per cent, or 280, of the boys in the upper grades of the Elyria elementary schools state that they have absolutely no home employment. The average time that boys are employed at home is 43 minutes per day. One hundred and eighty-five boys receive some pay for home work.

Girls.—Of the 741 girls reporting, 40 claim some after school or Saturday occupation outside the home by which money is earned. In the case of 24, this employment requires a definite time each day, while 16 worked at irregular intervals. The average earnings during the school term were $1.01 per week. In the summer vacation, 112 girls had gainful employment, that of 63 being classified as regular and of 49 as irregular. The average earnings per week during the summer were $1.71. Two hundred and seven girls had definite duties at home, requiring an average of six hours per week. If it is assumed that the girls who work at home and in gainful occupations outside the home are in all cases different individuals, there are then left 422 girls who have no employment whatsoever.

Number of children employed—By schools.

BOYS.

School.	After school.					In vacation.					
	Total number reporting.	Total number employed.	Regular employment.	Irregular employment.	Average earnings per week of those employed.	Total number employed.	Regular employment.	Irregular employment.	Average earnings per week of those employed.	Number having definite home work.	Average number hours home work per week of those reporting any definite home duties
Hamilton	91	25	19	6	$1.86	62	36	26	$1.79	30	6½
Franklin	169	52	39	13	1.85	93	65	28	2.59	42	4½
McKinley	152	52	41	11	2.03	68	49	19	2.28	37	3½
Garfield	29	3	2	0	1.50	4	4	0	1.88	7	7½
Ridge	56	4	4	0	1.36	5	5	0	1.66	15	4
Gates	98	29	26	3	2.11	29	24	5	2.54	28	3
Jefferson	90	22	15	7	1.60	41	35	6	2.26	26	6½
Total	685	186	146	40	1.74	302	218	84	2.28	185	5

GIRLS.

Hamilton	102	1	1	0	$3.00	23	8	15	$1.42	32	6
Franklin	171	13	13	0	1.09	20	15	5	2.28	30	6½
McKinley	143	5	5	0	1.05	37	22	15	1.54	53	5
Garfield	29	0	0	0	0	1	1	0	1.00	7	9
Ridge	60	2	2	0	1.00	7	3	4	1.37	21	4
Gates	124	5	2	3	.59	11	4	7	1.70	29	4½
Jefferson	112	14	1	13	.36	13	10	3	2.66	35	7
Total	741	40	24	16	1.01	112	63	49	1.71	207	6

Occupations of boys.

Occupation.	After school.	In vacation.	Occupation.	After school.	In vacation.
Selling newspapers	88	64	As elevator boy		1
Work in stores	31	49	As errand boy	3	2
Work in factories	2	9	Shopwork		3
Work on farms		35	Caddying	2	4
As delivery boy	31	43	As stable boy	1	2
Printing	1		Selling vegetables	1	3
As janitor	3		Selling seed	1	
Carrying meals	7	1	Emptying ashes	2	
Work in restaurant		2	Garage work		2
Work on ice wagon		1	Distribute handbills		1
Picking berries	1	5	Office boy		3
As messenger boy		1	Apprentice brick mason		1
Mowing lawn	1	39	Driving team		1
Boxing	1		Other occupations not enumerated	8	34
As usher in theater	1				
Bowling alley	1		Total	186	302
Garden work		2			
Driving cows		2			

The total number of boys reporting was 685.

Occupations of girls.

Occupation.	After school.	In vacation.	Occupation.	After school.	In vacation.
Housework	6	19	Carrying wash	1	3
Store work	12	23	Work on farm		2
As errand girl	4	17	Work in shop		4
Nursing	5	13	Work in laundry	1	1
Carrying lunches	8		Wrapping gum	1	
Picking berries		16	Canvassing	1	
Office work		1	Selling candy		1
Crocheting		2	Other occupations	2	6
Catching fish to sell		1			
Selling tickets in theater		1	Total	40	112
Gardening		2			

The total number of girls reporting was 741.

Juvenile court offenses from the several municipalities of Lorain County.

City.	Population in 1910.	Per cent of total population.	Percentage of juvenile court cases
Lorain	28,883	38.0	57.2
Elyria	14,825	19.5	18.8
Oberlin	4,365	5.7	11.3
Amherst	2,106	2.8	5.2
Other incorporated villages and rural districts	25,858	34.0	7.5
Total in county	76,037	100.0	100.0

RELATION OF IDLENESS TO JUVENILE OFFENSES.[1]

Since the establishment of the Lorain County juvenile court April 14, 1913, official cases have been filed against 247 individuals. A person having more than one case charged against him has been counted but once. Of those before the court, 177 were boys and 70 were girls. That juvenile delinquency has increased with centralization of population is shown conclusively by the fact that 57.2 per cent of the cases were from Lorain City, 18.8 per cent from Elyria, 11.3 per cent from Oberlin, 5.2 per cent from Amherst, and 7.5 per cent from all other incorporated villages and rural districts. When the 1910 census was compiled, the population of the four cities was 50,179, while that of the other villages and rural districts was 25,857, and yet the relation of juvenile court cases is 92.5 per cent for the cities and 7.5 per cent for the villages and country districts.

In studying the individual official cases, the causes leading up to the offenses have been more interesting than the cases themselves. Of the 247 cases before the court, the cause of 155 was given as bad associations, gangs, or idleness; 68 per cent were brought up before

[1] The juvenile court judge and chief probation officer cooperated in the preparation of this section. Both spent much time in studying and tabulating the court records. A part of this section is an abstract of their report.

the court through drink of parents, poor home conditions, or desertion. In more than half of these last cases, the children were very young and the fault rested with the parent and not the child. Desire for adventure was given as the contributing cause for court action against 10 children, drink for 5, immorality and degeneracy for 6, and stubbornness for 3. Idleness, which has fostered the formation of bad associations, has been the cause of 62.75 per cent of all the cases recorded and of 86.5 per cent of those that were clearly the fault of the child.

Causes of juvenile court cases.

	Children.
Desertion or poor home conditions	68
Idleness, bad associations, gangs	155
Adventure	10
Drink	5
Immorality	3
Degeneracy	3
Stubbornness	3
Total	247

Aside from the definite court records, the juvenile court officials have furnished the following additional information:

The foregoing official cases represent only a part of the work of the juvenile court officials. During the same period there have been about 600 unofficial complaints covering truancy, minor offenses against law and order, and slight acts of misconduct which have not been taken up by the court, but have required personal interviews and official calls by the probation officer. No official record is made of these minor offenses, and only cases of severe and semisevere nature are called to the court's attention. Of these trivial crimes and petty offenses, the probation officer estimates that not over 25 are from the strictly rural districts, 100 from incorporated villages, and the balance of 475 from the larger villages and cities of the county.

The number of official cases increases with the age of the child. As the child becomes older, the offenses become more serious, and the court must deal more severely with them in the interest of law and order. From birth to the 14th year (see table on page 218) only 95 cases are recorded, and of these 48 were the fault of parents or guardians. From 14 to 18 the records show 152 official cases. In the case of the unofficial offenses, the larger number, 450, are committed in the 11th, 12th, and 13th years. In the majority of these cases the child is not conscious of wrongdoing and, what to society is a misdemeanor, is to him only the spirit of play. It is interesting to note in this connection that the height of the unofficial court offenses coincides exactly with the height of the period of psychological interest in gardening.

Ages of the children brought to the attention of the juvenile court.

Ages of children.	Official cases.	Unofficial cases.
Birth to 10 years of age, inclusive	49	60
11, 12, and 13 years of age	46	450
14 and 15 years of age	72	60
16 and 17 years of age	80	30
Total	247	600

EFFORTS TO PROMOTE GARDENING.

The many gardens at Elyria homes and the comparatively large number owned and cared for by the children themselves may be attributed in great measure to the work of the members of the Elyria Home Garden Association. Very few of the children, however, do garden work to earn money.[1] This association was organized in March, 1907, and its aims are (1) to make waste places of the city useful and beautiful; (2) to give knowledge of gardening for pleasure and profit; (3) to train children to cultivate the soil and to call attention to the educational and economic value of soil cultivation.

For the first few years prizes were given for the best home gardens and committees from the association visited and judged the gardens for which prizes were claimed. During two garden seasons a trained gardener was employed to oversee the preparation of the soil and to give advice to those who entered the contest. As the city expanded over a wider area, it was impossible for the visiting committee to give the time required to visit the gardens of all contestants. The prize contests were then reorganized. A fair was held in the height of the productive season and prizes awarded for the best displays of flowers and vegetables. These garden fairs are usually held in the Young Men's Christian Association or some other centrally located building. Ninety-six exhibitors took part in the contest in 1915.

The Home Garden Association has also distributed packages of seeds to the school children, 14,000 packages being sold to them in 1915 at 1 cent each. Because of the unfavorable weather conditions in 1916, the exhibition contest was not held, and the prize money was used to purchase 700 flowering bulbs, which were given to the schools for school-ground decoration.

AGRICULTURAL INTERESTS OF THE HOMES THAT MIGHT BECOME SCHOOL-DIRECTED PROJECTS.

Of the 1,431 children, 435 have gardens of their own at home.[1] At 770 of the homes of school children reporting the parents or chil-

[1] Few of the children consider gardening as an employment bringing financial returns. Many of them seem to have limited their garden work to the demands of the prize contests.

dren made a garden last year. It was impossible to get an exact report on the products of these gardens, but the average money value seems to have been small, for the gardens were planted to crops which take much ground,[1] and companion and succession cropping was not practiced.

Poultry was kept by either parents or children in 185 homes, pigeons in 48, and rabbits in 91.

Agricultural interests of the home that might become school-directed projects.

Schools.	Children reported.			Parents or children's gardens.	Children who own a garden.	Other home interests.		
	Boys.	Girls.	Total.			Poultry.	Pigeons.	Rabbits.
Hamilton	91	102	193	116	65	24	5	13
Franklin	169	171	340	160	86	21	8	15
McKinley	152	144	296	151	91	32	7	19
Garfield	29	29	58	24	21	7	1	2
Ridge	60	60	120	74	34	22	4	16
Gates	98	124	222	124	67	41	13	9
Jefferson	90	112	202	131	71	38	10	16
Total	689	742	1,431	770	435	185	48	91

LABOR INCOME OF ELYRIA WORKINGMEN.

The earning power of the wage-earning members of a family has much to do with the possibility of educating the children of that family. If this wage-earning power is low, the chances are that the children will be obliged to leave school to become wage earners before they have received sufficient education to make efficient citizens. The labor income has increased during the past year, but in most cases it has not kept pace with the increasing prices of commodities and the cost of living. In the poorer families any money that can be earned by the healthful, educative employment of the children during vacation hours will tend to increase the length of school attendance of the children of that family. The following table of labor incomes of workingmen has been compiled from information supplied by the leading employers of labor in Elyria:

Unskilled labor, lowest type, 10 or 11 hour day	$2.25
Unskilled labor, average type, 10-hour day	3.00
Unskilled labor, higher type, 10-hour day	4.00
Mechanics, 8-hour day	4.00 to 5.00
Bricklayers, 70 to 80 cents per hour, 8-hour day	5.60 to 6.40
City employees, many of low efficiency, 8-hour day	3.00

[1] In Middle Western towns vegetable gardens are usually planted on field-crop plans and yield less than one-third of the amount that could be produced by intensive methods.

NUMBER OF CHILDREN WHO LEAVE SCHOOL BEFORE COMPLETING THE EIGHT GRADES.

The reports of school principals show that an average of about 20 pupils, nearly 1 per cent of the enrollment, leave school each year. The principal cause of leaving is loss of interest in school work or financial necessity. Considering the size of the city, this number is not large. The grade schools lack in special interests and activities that hold the "hand-minded" child. This work is specially featured in the high school, but that is too far away to seem attainable to the retarded pupil, especially at the times when he fails to gain promotion. Only a small number leave because of financial necessity, but it is important to make an effort to continue the school life of the few by aiding them to earn while still in school. The recognition by the schools of the special active interest of children would do much to retain those who leave school because of loss of interest.

BOYHOOD OCCUPATIONS OF SUCCESSFUL BUSINESS MEN OF ELYRIA.

Mr. Patterson, president of the National Cash Register Co., of Dayton, Ohio, makes the following statement in regard to the starting of children's gardens by that company:

> After an investigation of the successes and failures of the men who had been boys with me, I was impressed by the fact that there had been scarcely a failure among those boys who had been responsible for some farm or garden "chores." I decided that in a very rough neighborhood I would make the experiment of using the surplus energy of the boys in practical garden work and let them have the products of their steady work and business energy. So gratifying was the result that the garden is to-day a marked feature of the welfare work for the employees of the National Cash Register Co.

In order to compare the boyhood occupations of the successful business men of Elyria to-day with the occupations of children now in school, question blanks were sent to 41 business men whose names were furnished by the secretary of the chamber of commerce. Replies were received to 29 of these questionnaires. Five men spent the period of their youth between the ages of 9 to 14 in the city, 12 lived in villages, and 12 lived on farms. Eleven boys were employed in occupations outside the home, 3 of whom were farm boys working in town. Of the 29 boys, 24 state that they had regular home duties, and only 2, both from the city, claim that they had no regular duties either in the home or outside. It is interesting to note that, of the 12 farm boys, all had regular farm chores and 3 earned extra money in the village. Of the 12 village boys, 11 had home duties, such as the care of a horse, cow, poultry, or a garden, and the twelfth had employment outside the home.

In regard to the duties of his early life, one of the men added the following note to his questionnaire: "As far back as I can remember there was something to do about the house and garden. There were

no idle boys in those days. Every household contained one or more boys who were kept busy."

THE OBLIGATIONS OF THE CITY HIGH SCHOOL IN TRAINING ITS PUPILS FOR COUNTRY LIFE.

In the Elyria High School there is each year a large group of tuition-paying students from the surrounding country districts. In 1910 there were 161 of these students; in 1911, 187; in 1912, 171; in 1914, 166; in 1915, 202; and in 1916, 183. Of the total enrollment of 602 high-school students in the fall of 1916, nearly one-third, 183, were out-of-town students. All of these students come from farm homes or small rural villages and should have the opportunity to study vocational agricultural subjects. City students are well represented in agricultural classes, as one-half of the number enrolled are Elyria boys and girls. One high-school teacher gives his full teaching time to agriculture. The agricultural courses now given in the high school do not form the center of a complete course of study, but students in any of the four courses of study (classical, scientific, commercial, industrial) may elect the subject during the junior and senior years. Five courses are offered, one in general agriculture, three in horticulture, and one in animal husbandry. Because the subject is elective in the last two years of the course, the same students seldom complete more than two courses, and it is impossible to lead the pupils to a definite end by a series of progressive interrelating steps. Agriculture has become subordinate to other courses and it is not taught as a major course from a vocational standpoint. This lack of systematic arrangement of courses and the fact that home projects are not required has led, in some cases, to the election of agriculture simply to make up a required number of credits. Fifty-nine per cent of the students taking agricultural courses state that they elected it for its cultural value, 28 per cent for its vocational value, and 13 per cent because the State law requires all teachers to study the subject.

The agricultural classes were visited to determine the relation of the agricultural teaching to the out-of-school activities of the pupils. Of the 112 students present on the days the classes were visited, exactly half live in the city of Elyria and half were from the country districts. Of the city students, 26 were employed in money-earning occupations outside the home, and 15 had some regular work at home. Not any of this work had direct agricultural bearing. Of the country students, 45 had home work and 1 was employed away from home. None of the city students have home projects from which they receive the profits, while 30 country students have some form of home projects, and 18 carry the work throughout the year and receive the profits. Sixty-five of the students stated that they desired to

conduct a home project under the direction of the agricultural teacher.

VALUE OF SCHOOL-DIRECTED HOME GARDENING TO ELYRIA CHILDREN.

Economic.—Reports were received from 1,431 children, 986 of whom could have home garden plats of 1,000 square feet or more. All children who have no back-yard space could be supplied with space on vacant lots. If all the 1,431 children were taught to make gardens and each child grew an average of $20 worth of vegetables a total value of $28,620 would be produced on waste land by children who now waste most of this time. Considering the amount of land available, many children might net as high as $100 per season for their garden work and the average for all might very easily be made as much as $50, a total of $71,550.

One teacher is able to direct the garden work of from 150 to 200 children, and from 6 to 8 trained teachers would be needed to work after school, on Saturdays, and during the summer vacation. An additional salary of about $250 would probably be sufficient for the extra work of each of these teachers, or a total cost to the school department of from $1,500 to $2,000. From a purely financial standpoint, an expenditure of from $1,500 to $2,000 for a return of from $28,620 to $71,550 should be good business. In case the children average a net return of only $10, the net money value to the community would be $14,310, or from seven to nine times the cost in teachers' salaries.

Health.—To improve the health of the children through out-of-door exercise would be of enough value to warrant all expenditures for garden teaching. To be mentally strong, the child must be physically healthy. A child working with feet in the soil, head in the sunshine, and lungs filled with fresh air will have redder blood coursing through his veins, eat better, sleep better, and grow into stronger manhood than one who works in mill or shop or idles his time away. The most real of all experiences comes to the child through accomplishing a worthy task that has definite relation to his life.

Mental training.—Most of the present-day city occupations open to children usually cease to be educative when they become productive. In the shop and factory, the same thing must be done in exactly the same way, day after day. In the street trades, there is very little chance for real occupational growth, and the acquiring of the "business sense," commonly spoken of, is often really the formation of habits of taking advantage of, or defrauding, others. In the garden, on the other hand, conditions are not the same from hour to hour. Each day brings new duties and problems, and each year old methods must be improved and new products may be added. The child is not taking advantage of another for his own gain, but is coping

with nature's forces and learning nature's innumerable lessons, and at the same time contributing much to the comfort and pleasure of others.

Habits of industry.—Of the total number of children, 1,426, who reported on occupations, 15.8 per cent worked during the out-of-school hours and 29 per cent were employed in the vacation. The time of both boys and girls was occupied less than one hour per day by duties in the home. Studies of the out-of-school employment of children seem to show that, as the city grows in size, the possibilities for productive occupation decrease, and that the decrease is in direct ratio to the size of the city.

The boy without regular work is apt to become the man without a job. In order that the man may be a successful worker, the child needs real occupation when in the habit-forming period. The cultivation of the back yards and vacant lots of the city would furnish regular occupation for many children who have no occupation or have been excluded from harmful pursuits by child-labor laws.

The making of a successful garden requires daily work. Weeds must be subdued, the soil must be mulched, and crops must be harvested at the right time. From such regular work the child forms early the habit of industry.

Moral influences.—No other one thing reveals quite so clearly to the child his place in life's plan as work with living, growing things. Through the use and sale of garden products, he learns to value dollars in terms of labor. To learn to earn one's own living honestly is a fundamental basis of morality. The evils of community, State, and Nation come not from those who have learned to live by their own labor, but from those who wish to profit only from the labor of others.

SUMMARY OF FINDINGS.

1. The farming district about Elyria does not furnish enough vegetable food to meet the demands of the city. Thus, there is a good opportunity for vocational training in intensive gardening.

2. Within the city of Elyria the greater part of the ground is fertile and well adapted to the production of vegetables under intensive methods of cultivation.

3. There is enough land available for all children in the public schools to have all the space which they are able to cultivate. Only a small percentage of the children live in apartments, flats, or tenements, and it would be comparatively easy for teachers to find enough space for these children on the large platted areas which have not yet been built upon. The most congested area, the Hungarian village, has open areas on all sides, besides a large plat owned by the public school department, which might be used for children's gardens or family garden plats. The schools are so located that a teacher

could visit all the gardens of the children without traveling long distances.

4. The cost to an Elyria family for vegetables is such that it would be of great economic value if a large part of this food were produced in the back yards or on near-by vacant lots.

5. Twelve hundred children have no regular money-earning work after school hours and 1,012 are not employed during vacation.

6. Idleness has caused the largest number of the official juvenile court cases by the association of the boys into gangs or with older men or women of bad repute. Of the 600 unofficial cases handled by the probation officer, the greatest number of offenses occur about the twelfth year, at exactly the age at which it is easiest to arouse interest in gardening.

7. Much interest in gardening has been created by the efforts of the Elyria Home Garden Association, but because of the growth of the city the work now needs to be put on a stronger financial basis.

8. Because of the large number of home gardens, conducted either by parents or children, and the large number of small animals kept for their economic value, it would be very easy to start home project work with the present equipment.

9. The labor incomes of Elyria workingmen, although higher than formerly, have not kept pace with the increased price of commodities and are not sufficient to pay what ought to be considered necessary expenses for their support of their families.

10. The children leaving school each year because of the economic conditions of the home might be retained in school if these children could help support their parents by their work during out-of-school hours.

11. During their boyhood, the business men of to-day were very largely engaged in home duties of an agricultural nature. With the increase in the size of the city and the elimination of agricultural activities, the amount of available work for children has been very much reduced.

12. Nearly a third of the students enrolled in the Elyria High School come from the surrounding country districts. Under the present arrangement of agricultural classes, these students are not receiving satisfactory training for country life. The present courses are very largely of an academic nature and have very little real influence on the home work of the boys and girls, especially during the vacation periods, when the direction of home project work should be of the greatest value.

RECOMMENDATIONS.

1. *High school.*—Agriculture as a vocational subject should have a much more prominent place in the high-school course of study.

The subject should form the center of a course rather than be an elective in many courses.

2. The agricultural instructor should be employed for 12 months each year.

3. The full time of the agricultural instructor should be given to his subject, and he should not be burdened with other duties.

4. The course should be so arranged that by combining the students graduating in odd years in a single class and the even-year pupils in another class one instructor could direct the project work and study of each of his pupils during a full half of the school time through a four years' course. The following diagram adapted from the bulletin of the Massachusetts Board of Education, 1912, No. 4, will make this method of class grouping clear. The projects recommended in this chart proceed from the simple to the complex, and form a logical method of approach to the subject. They are: Kitchen garden, first year; small animals, second year; farm animals and farm crops, third year; and fruit growing and market gardening, fourth year.

A METHOD OF GROUPING CLASSES IN AGRICULTURE.

School years ending 1918, 1920, and other even years. First and second year pupils, one-half school time.	School years ending 1920, 1922, and other even years. Third and fourth year pupils, one-half school time.
Agricultural science and projects applied to a given community: Kitchen gardening: Vegetables, small fruits. Ornamental planting: Shrubbery, flowering plants, lawns. Farm shopwork: Making and repairing for home and school use hotbeds and cold frames, etc.	Agricultural science and projects applied to a given community: Farm animals: Types, breeding, management. Farm buildings: Sanitation and conveniences, plans, construction, upkeep. Farm crops for keeping the animals—rotations, balancing, cultivation, etc. Farm machines and implements—their use and repair.
School years ending 1919, 1921, and other odd years. First and second year pupils, one-half school time.	School years ending 1921, 1923, and other odd years. Third and fourth year pupils, one-half school time.
Agricultural science and projects applied to a given community: Small animals: Poultry, sheep, swine, bees—types, breeding, management, rations, etc. Buildings and equipment for small animals—plans, cost, etc. Home-grown crops for small animals—kinds, quantities, seeds, soils, place in farm crop, rotation, fertilizing, tillage, harvesting, storage. Farm shopwork and other construction.	Agricultural science and projects applied to a given community: Fruit growing: Orcharding and small fruits not before dealt with—propagation, cultivation, packing, etc. Market gardening: Markets, soils, seeds, fertilizers, tillage. Buildings and appliances: Plans, devices, implements, and machines—cost, use, and upkeep. Farm shopwork and other construction.

5. All high-school students in agricultural courses should be required to conduct home projects, and credits should be withheld until the projects have been completed and approved by the instructor.

6. The students in the high-school agricultural department should give half time to the study of agriculture vocationally and half to the study of cultural subjects. The following division of time recommended in the Massachusetts Board of Education Bulletin, 1916, No. 23, has proved very satisfactory in communities similar to Elyria:

DIVISION OF TIME RECOMMENDED FOR STUDENTS IN AGRICULTURE.

Part 1—Intensive Training, 50 per cent of pupil's time.	Part 2—Extensive Training, 50 per cent of pupil's time
Project study and project work, centering on—	**Cultural and good citizenship training, selected from one or more of the regular high-school courses, and dealing with such subjects as—**
(1) Projects of the pupils.	English, every year.
A. At home, as a rule.	Social science, including community civics and economics.
B. Near home, occasionally.	
C. Pupil responsible, but supervised by instructor.	Natural science, including elementary science, biology, physics, and chemistry.
(2) Projects of the department.	
A. At the high school, rarely.	Drawing, free-hand and mechanical.
B. Neighborhood demonstration, as of pruning, spraying, hotbed making, and greenhouse work.	Shopwork.
C. Instructor responsible, but uses projects for group instruction in observation and practice work.	Business, including typewriting, business forms, and filing, bookkeeping, commercial geography and commercial law.
(3) Substitutes for projects.	Physical training.
A. Work on approved farms, with agreed-upon educational duties, as cost-accounting one or more cows or one or more crops.	Music.
B. Employer chiefly responsible, but supervision by instructor.	Recreation.
(4) Remark.—The agricultural instructor must, as a rule, assume full responsibility for teaching the "related study" required for the proper understanding and execution of his pupils. He must generally teach his boys the vital correlation between their projects and such subjects and activities as arithmetic, biology, chemistry, entomology, drawing, shopwork, accounting, filing, farm journal reading, and agricultural economics.	

Elementary schools.—1. The high-school agricultural department should be the central influence in the promotion and direction of school-directed home gardening in the elementary schools.

2. The high-school teacher of agriculture should conduct practical after-school classes for the training of home-garden teachers in the grades.

3. One regular grade teacher, after having received sufficient garden training, should direct the home gardening of the children in the school to which she is assigned. This work should be done after

school, on Saturday, and during the summer vacation, and the teacher should receive additional compensation for it.

4. A part-time garden teacher should be provided for each of the following schools: Hamilton, Jefferson, Gage, Franklin, McKinley. One teacher should conduct the work in the Garford and Ridge Schools.

5. A careful record of the money value of the crops raised should be kept in order to prove the financial, as well as the educational, success.

6. The gardening should be made as intensive as possible, and should continue through the maximum number of days possible in this climate. Winter gardening should be encouraged.

Cost.—The only additional costs involved in the recommendation of this report are:

Extra salary of high-school teacher of agriculture for three summer months	$450 to $600
Salary for extra time of six regular teachers working after school, Saturdays, and during vacations	900 to 1,200
Total	1,350 to 1,800

Chapter X.

MUSIC IN THE PUBLIC SCHOOLS.

THE NATURE AND VALUE OF MUSIC.

Man has always sought to create beauty. In tone, in clay, in pigments, and in many other media he has wrought forms to satisfy some peculiar craving of his spirit. This longing is unselfish, unworldly. The values sought are not utilitarian. They belong to a realm of aspiration distinct from the world of material demands.

Music is close to the idealistic nature of man, for it voices what is within rather than what is without. It is a voice for the expression of fundamental states of feeling which neither words nor graphic forms can so well express.

In its vocal forms, especially in opera, and in some instrumental forms, music may, indeed, seize upon incidents and situations in life and exalt and intensify their emotional aspects. But always music transcends the incident or situation in that it adds beauty—beauty of tone and beauty of tonal design—that was not inherent in the situation itself.

In so far as music quickens profound emotional powers, it energizes to action, for feeling is the mainspring of action; and in so far as it elevates mood from the worldly plane to the plane of the idealistic, it stimulates action along regenerative lines. That it has such capacities makes it of no small moment to education.

The values of music are not to be attained vicariously. Each must experience them for himself, as listener or participant. To take part in musical performance enormously increases the value of music to the individual; and the chorus singing and orchestral playing that have come into our public schools are therefore agencies that work powerfully toward the attainment of these values.

Value as a socializing force.—"One touch of nature makes the whole world kin," we say. This touch of nature is simply something which evokes a mood that is good and universally experienced. It is these broad, universal, human moods with which music deals; and consequently people exhibit, under the appeal of music, a closeness of sympathy and a unity of feeling that surpass any other unity ordinarily experienced. The fact that music can enlist the participation of large numbers of people at the same time, though they be young

and old and diverse in many ways, is again a matter of profound significance. In a cosmopolitan community the hour of song in the public schools, or of community chorus practice by adults, may be the only time when complete social solidarity is attained by a community group.

Value of leisure.—The character of modern industrial and commercial life tends toward the mechanization of human life. In many callings men are never so little their own true selves as when they are at work. It is during the leisure hours that the individual powers and qualities are restored and developed. Music holds a safe and strong regenerative power for the individual during these hours immeasurably greater than the wearing excitements into which he is so often led.

Value as a vocational subject.—The number of graduates from our public schools who practice music vocationally is out of all proportion to the provision made in most schools for their instruction; and the generous provision is made for other subjects of assumed vocational importance, which, in vocational outcome, are not in advance of music. A much greater degree of attention is due to music as a vocational subject alone.

DEPARTMENTAL MUSIC IN PUBLIC SCHOOLS.

A department of music in a public-school system should be organized and should function in such a way as to attain the values stated or implied in the foregoing section. Its success in such attainment will be dependent upon two general factors, each of which is susceptible of many subdivisions.

The first factor is pedagogical. The specific ideals that characterize and direct the work of the department; the ideals of the school authorities and of the teachers who administer the course; the musical education and training of both special and regular teachers; their pedagogical knowledge and ability; the nature and extent of the course of study as dependent upon the professional ideals and knowledge that prevail; all of these considerations and many more operate powerfully in shaping results, both as to their extent and quality.

The second factor is one of organization and equipment. The number of supervisors and teachers employed in the department; the plan of organization; the equipment provided, such as music books, sheet music for choruses and orchestras, pianos, organs and orchestral instruments, pitch pipes, staff liners, blank music writing paper, etc.; these are some of the considerations grouped under the second factor.

The first factor obviously forecasts the possible outcome of the teaching done, on the basis of qualitative result; the other forecasts it on the basis of quantitative result.

Ordinarily the two maintain a somewhat balanced relationship; for teaching that is rich in quality is likely to attract to itself adequate equipment; and, on the other hand, quantity of provision is likely to imply either a large present interest or an enthusiasm toward building up an interest that in itself promises much. In Elyria there has been an artificial disturbance of these relations; and because it seems necessary to discuss present conditions and future possibilities in Elyria from two standpoints, the foregoing somewhat arbitrary division is made.

BASIS OF THE REPORT ON MUSIC.

This report is based upon observations made in visits to the seven elementary schools and the high school in Elyria. Of the 59 rooms in the elementary schools, 55 were visited, and in all but 3 of them some exhibition of the work in music was given, sometimes by means of a formal and extended music recitation, at other times by the singing of songs alone, or by the singing of both songs and sight-reading exercises. In the high school some assembly singing was heard and several visits and conferences with the members of the educational staff yielded valuable information; but no opportunity occurred to hear the high-school orchestra or the high-school choruses and glee clubs. A parent-teachers' meeting attended at the close of an afternoon session in one elementary school yielded interesting suggestions. In another school one of the classes (listed as unvisited in the foregoing statement) was found assembled and listening to an interesting lecture-recital given by the teacher in charge with the aid of a phonograph just purchased. Highly valuable information was acquired also in conferences with persons interested and informed as to conditions who were not members of the regular educational staff.

MUSIC IN THE ELEMENTARY SCHOOLS.

Elyria has had music in her public schools for a number of years, and a competent supervisor has been employed during the past 14 years at least. Beginning in September, 1916, the services of the supervisor were discontinued. A survey of conditions made after a semester had passed during which no specialist was directing the work, must necessarily be guarded against assumptions that rest upon ignorance of the amount of change caused by the modification in the school system. The first fact noted was the spirit of the teachers under the change. There was little or no feeling of relaxation. Instead there was a feeling of greater responsibility incurred and of greater obligation for extra effort. Doubtless the teachers were moved not only by the characteristic sense of fidelity to a trust, but

also by inclination; for any teacher who loves children and has felt the kinship between the spirit of childhood and the spirit of music will not willingly relinquish it. This leads to a comment upon the spirit of the Elyria schools in general. It is professional and humanistic. In this the schools provide the indispensable condition in which music, art, literature, and liberalizing influences generally may develop. School systems can be found in which the spirit is so rigorously hard and formal that liberalizing influences obtain no foothold and can make no growth. This is not the case in Elyria.

The methods and practice of teaching do not make full capital out of this general spirit and intention (conscious or subconscious) of the school system and the community. The method is often incongruous with it, and with a proper plan of music instruction, in that it approaches an art problem in a scientific spirit, and presents music primarily as a technical problem of staff notation and sight singing, rather than as an art in which there must be richness of experience and freedom and grace of expression. The practices are at times misdirected by this unfortunate bias of method, and are marked also by some lack of skill and efficiency. There is further a deplorably meager equipment of music books and contributory musical material, and the time given to music, while adequate in the lower grades, is insufficient in the higher grades. To offset these deficiencies there are at present but two influences, namely, the fine spirit of the teaching staff and the occasional presence of teachers of unusual musical ability and training.

For pupils in the first year of school the course very properly prescribes nothing but rote songs until the last month of the school year, when the scale by syllables is taught by rote. In the second year rote singing is continued, but a parallel course of instruction in staff notation is begun and developed on the blackboard.

Several features of instruction that are open to criticism were observed so frequently in the work for these two years that they may be said to be prevalent. The rote songs were often not well chosen, and when they were not bad in themselves they were presented often from a wrong standpoint. A short discussion of principles is unavoidable here, if the reader and the writer are to arrive at a common basis of understanding.

In so far as music (mainly in song) connects itself with incidents and situations of life and dilates upon their emotional significence, it covers a range of moods that are common to all the arts, and indeed, to ordinary sentimental experience. Now, the musician cares but little for the worldly incident; that is but the trigger that releases in the composer the flow of real tonal beauty. But to the layman, less sensitive and less trained to respond to purely musical beauty, the incident itself assumes paramount importance, for it belongs to

ordinary nonmusical experience. The grade teacher, quite defensibly, belongs normally to the laity. A song entitled "Snow" is likely to appeal to her because of her interest in snow rather than her interest in song. The tune, being a negligible factor, may consequently not be carefully scrutinized and evaluated. Many a shoddy and vulgar tune has thus crept into school music.

But the mischief does not stop here. If music is the first consideration, beautiful tone, necessitating good voice management and graceful, delicate shading and phrasing will be demanded. On the other hand, if pictorial or narrative function is primarily the aim, beautiful singing is less important than impulsive declamation. To enter into a song, on this basis, a child does not need primarily to train his ear and modulate his voice accurately and beautifully so much as he needs to visualize and dramatize a situation. But the situation, so visualized, is likely to distract his attention from anything tonal that may be happening.

The selection of "barnyard" songs and songs of like ungentle realistic character, violent "motion" songs, loud and unmusical singing, many monotones, and much use of the chest voice, are some of the signs that frequently mark the adoption of this wrong principle.

Applied to the Elyria schools, the most that should be said is that there is some uncertainty as to basic principles in selecting and teaching rote songs. The majority of the songs are good; but the occasional presentation of an unmusical song in a dramatized manner, often with the employment of laboriously contrived motions, implies that choice does not rest upon irrevocable conviction. Again, songs that were musically excellent were often given with a focus of attention upon the worldly incident rather than upon the tonal beauty that alone gave them merit. The vocal quality and practice was, in the main, very good. It was vitiated occasionally by emphasis upon the wrong values in the manner just described. More frequently a faulty and indefensible practice of another sort was observed. This was the failure to use a pitch pipe. Song after song was started by guess by the teacher, invariably in too low a key. Probably two-thirds of the singing heard from first and second year classes was below the favorable range for children's voices, and so was not only productive of poor tone but was developing wrong vocal methods. In only three of these rooms was a pitch pipe used. Often the teacher gave the command to sing without giving any pitch whatever, leaving the guessing of the pitch to the children. After a few measures the group, in such cases, would unite with the strongest voice.

No desk copies of rote song books for use by the teacher were observed anywhere. Inquiry elicited the information that none had ever been provided. Prior to this year the supervisor of music had hectographed rote songs from various sources, and the songs thus

laboriously provided were the only ones generally available. The board of education should reflect that these songs are frequently copyrighted and are not open to reproduction. Such songs still comprise the course, but are occasionally supplemented by songs of doubtful value obtained by teachers from educational journals and other sources.

The proportion of monotones in the lower grades and throughout the elementary schools is somewhat larger than it should be. The dramatic rather than the musical and vocal conception of song and the failure to use pitch pipes are doubtless largely responsible. Discussions with teachers disclosed no definite and generally accepted convictions and methods of practice with regard to monotones. Only the slightest trace was found of the ancient fallacy that monotones are defective of ear—are unmusical or tone deaf. It was generally held that they are curable and therefore are inept vocally rather than defective aurally. Again, in relation to this feature of work; the teachers as a class were uncertain and lacked a clearly outlined creed. Results were, therefore, very uneven, for they depended upon such capabilities and training as the individual teacher might have previously acquired and not upon any present help provided by the Elyria school system.

The position for singing generally required of the pupils in the lower grades was faulty. Each pupil must clasp his hands behind his back. This may lead to good discipline, but it results in a stiff and constrained position that is detrimental to good breathing and singing. In the higher grades the necessity for handling books led to the abandonment of this position.

The introduction of staff notation in the second year is in accord with approved educational practice, but the manner of study is not. Technical study is not based upon the rote song experience previously gained, but it becomes a separate and unrelated form of study. Sight reading is made to depend upon analytical reckoning up and down the degrees of the staff, instead of upon unreasoned and immediate knowledge gained through more and more detailed observation upon the notational aspects of familiar songs and studies. The method followed causes the pupil to conquer music by the use of purely rational processes and requires that his freedom of musical expression (except for the contemporaneous course in rote singing) wait upon a technical mastery so gained. It is a method that has been generally abandoned, for the same reason that the alphabet method in reading has been abandoned.

The first two years in the elementary school should be years of musical experience. They should give the child the use of his singing voice and pleasure in song as a means of expression; they should accustom his ear to beauty of tone and store his mind with memories

of pure tonal procedure as it lives in a wide repertoire of beautiful rote songs for children, many of them folk songs, many of them by such writers as Schumann, Reinecke, Taubert, Nevin, and Mrs. Gaynor; they should bring to him in the second year a view of the staff and of staff notation, and his attention should then be called to the correlation between tonal processes and the visual symbols of the staff, until the musical forms symbolized are called to his mind quickly by the appearance of the notation. Sight reading as a mathematical computation of staff relationship from which musical feeling and intuition are absent or in which they play no helpful part is not then or at any later period a necessary or appropriate practice. This does not mean that children are not to be taught to read music; for all can and should be taught to read it accurately and fluently. It means only that musical feeling and study of the technic of music should never be divorced, especially in the earlier years.

In the third year in the Elyria schools music books are placed in the hands of the pupils, and the course assumes in general the formal outlines within which it is to be developed during the succeeding years of the elementary school. It is unnecessary to discuss the work of these years separately. The important comments are general and apply to all years equally. Comment applying to features characteristic of specific years will be explicitly referred to those years.

Beginning in the third year the presentation by the teachers of music in many keys naturally brought about a more frequent use of pitch pipes. It is of course, impossible to do the work well without constant use of the pitch pipe, but such use is not yet fully established in Elyria, even in the later years of school life. In fewer than two-thirds of the rooms in all the higher grades was the pitch pipe used. The singing was frequently below pitch and of wrong vocal quality in consequence.

The spirit and manner of technical instruction begun in the second year is maintained throughout the succeeding years. An assumption that underlies this method is that eventually a scientific technical power will be attained that will be at the service of the student for the adequate expression of his musical nature. Incidentally this implies that musical feeling is already in the student, needs no special exercise for its development, and will lie dormant without diminution until technical attainment unlocks the doors and permits it to step forth in joyous freedom. But musical feeling, like musical technic, must be developed step by step; and again, there is the ominous possibility that a technical mastery may never be gained, and that all may be lost. Exactly this is happening, in moderate degree, in Elyria. Technic, divorced from free musical expression, endeavors to fit itself as a vehicle for that expression, but remains

always below the point at which the student's musical nature must be seized for its proper development. There is consequently in Elyria not enough joyous singing nor enough live interest and vigorous development in technical work. Music stands defeated by technic; and technic has lost its old faith in its ability to reach the goal of union with music, and is dejected.

The cure is to reverse the process and expect musical practice, with study of that practice, to lead to technic rather than to expect a study of technic to lead to musical practice.

The lack of joyous, beautifully finished singing was, as may be supposed from the foregoing, more conspicuous in Elyria than the lack of technical knowledge or even of technical ability. Some beautiful singing was heard, especially in lower-grade rooms; but since singing, especially in the higher grades, is restricted to the range of technical conquest, the pupils are not trained to use the ear as a corrective and guide in their singing, but only the rational intellect. Until it informs them of error they remain seemingly unconscious of error, or at least unresponsive to the testimony of the ear. If they sing altogether by ear, as I heard some few classes do on a song or two, the lack of their familiar scientific means of measurement and evaluation puts them again at a loss. The remedy is to approach music as an art of tonal expression, and cultivate a refined sense of hearing. The ear should first recognize right from wrong; the mind should provide explanation of the cause.

Knowledge of elementary theory, that is of kinds of notes and rests, measures, key signatures, keys, chromatic signs, etc., is very good and fairly uniform. Ability to sing at sight is excellent in some rooms and quite poor in others, but the average is very fair. These two phases of study are properly inseparable, but in many cases they were treated separately. For instance, a feature of instruction frequently observed was a preliminary quiz on some song to be sung as to its kind of measure, its notes and their length, its keys, etc. Often this was followed by concerted *reading*, not singing, of the syllable names of the notes. There is no harm in such a quiz, provided the knowledge essential to the answers is not purely academic. If it represents a memorizing process only, and the knowledge implied does not spring out of extensive practical experience in singing at sight, it is nothing but a formal memory drill, representing no musical power, and for which practice in using the knowledge talked about might be well substituted. As to the toneless naming of syllables, it is a barren and time-wasting process. The syllable names to all the notes in a book might be so named without giving the slightest increase in musical power to the student. Syllables are valuable when associated with tones to such a point that the syllable suggests the tone and the tone suggests the syllable. If the pupils

would merely look at their books and sing silently, as a preparation for singing audibly, they would probably think both syllable names and tones, and rhythm in addition. Mere speaking of the syllable names is certain to drive the thought of the tone from their minds; and the rhythmic movement is of course not considered. The sequel to such preparation was often what might be anticipated: the pupils answered the questions and spoke the names correctly and then failed to sing the song or study in time and in tune. The preparation had not prepared; it was merely doing something else first. When the pupils did not fail after such preliminaries, it was evident that they would not have failed anyway, as they could invariably sing other studies equally well without such formal preliminaries.

Two-part singing is successful, though not uniformly so. The average accomplishment, however, is good. Three-part singing, with treble voices, is less uniform, and the average attainment is moderate. The work observed, indeed, was below the standard of moderate, but it would be unfair to estimate net results from the work heard. No phase of school music is more seriously disturbed by the shifting of pupils at the beginning of a new term than part singing, and this survey of the music was made just following the beginning of a new semester. Power, however, may be estimated at such a time much more accurately than attainment; and from the power exhibited as well as some attainments noted it is probable that the three-part singing is better than moderate, rather than poorer.

Although part singing is successfully developed in the schools of Elyria, it is yet open to one fundamental objection. The general practice, systematically carried out, places all the boys on the lower part or parts, all the girls on the higher. Whether the pupils are assigned such parts by the teachers, or whether the classification is left, as I was informed it is, to the choice of the pupils, with the result stated, the plan is seriously faulty. It begins by affirming, or at least condoning, a palpable untruth, namely, that the unchanged voices of the boys are different from those of girls and are lower in pitch. It proceeds then to warp the voices of the boys toward their lower range and consequently toward a mode of voice production fundamentally vicious for children. Meanwhile the girls, although safe vocally, are weakened negatively in their growth in musical power to a deplorable degree; for training in carrying a lower part is of inestimable value in any system of instruction in music. There is absolutely no basis in fact for this scheme of classification, for the voices are equal, boys and girls alike. Any group singing a second part of one song, or throughout one week, should sing the first part for an equal period following. All would thus develop their entire normal vocal range and have opportunity to develop equal musical power. In three-part singing a similar plan should be adopted and

applied to all voices except an occasional unusual one, perhaps a changed voice or a treble voice of exceptional register. In the sixth year, and still more in the seventh, there will be such voices and they should be individually examined and classified. All the others, lacking distinctive features of range, should be treated uniformly.

There is no plan in theory or practice, so far as could be seen, for caring for the changing voices of boys in the seventh and eighth grades. The work with classes that include such voices is below normal standards. Such splendid results can be obtained with these boys under expert management that it is depressing to see ability and interest come to naught through lack of guidance. There is more than a present musical loss, more than a musical loss present or to come, in such failure. To change a boy from an embarrassed humiliated person, possessed of a growing conviction that he is unmusical, and a consequent growing distaste for music that may even lead to rebellion against the music hour and the constraints of the school in general, into an unashamed lad, filled with interest, proud of his knowledge and new-found vocal technic, somewhat overeager and overconfident, indeed, about singing, and certain that he is quite musical—to do all this is to do much more than merely secure a present satisfactory musical result. Often it means to awaken a new personality; and at the least it means to add some capacity for enjoyment to a boy's life at just the time when he was about to renounce it with disdainful bitterness.

MUSICAL INSTRUMENTS.

An aspect of aridity appears in the elementary schools, with respect to music, because of the small provision made for musical instruments. One good new piano was seen; and one school principal had herself provided a piano in the room in which she was teaching, and was giving to most of the classes in her school lessons in her own room, where the piano could be used greatly to enrich the lessons. The seven kindergarten pianos were not examined. Use of such pianos is ordinarily restricted to the kindergarten alone, but if those in Elyria are in good enough condition to be used, they might otherwise be put into service, for the kindergartens have been abandoned. No reed organs were found. Five schools were found to possess phonographs, but these serve other purposes than pianos or organs and can not be considered as substitutes for them.

A piano or organ in the schoolroom lends to the music in that room exactly what it would lend in a home. Its mere presence adds interest and charm to the atmosphere, and its use not only broadens the musical horizon and adds to musical enjoyment, but is also an invaluable aid in giving technical instruction. The development of community relationships in the school, through informal recitals by

individual pupils for the benefit of the other pupils, is an additional value.

No report was obtained of the number of pupils in the elementary schools studying orchestral instruments, but the number of such students in the high school probably implies a large number among the younger pupils. Beyond permitting some eighth-year students to play in the high-school orchestra, no systematic encouragement is given to orchestral playing among elementary pupils. This field, which is important though not large, is consequently undeveloped.

No printed course of study in music has been provided in recent years. So long as a supervisor of music was employed, the lack of an official outline probably worked but little harm. Without a supervisor the lack of an outline is sure to lead to chaotic conditions.

MUSIC IN THE HIGH SCHOOL.

All music in the high school is elective. Chorus practice, orchestra ensemble, boys' glee club, girls' glee club, the study of music under outside teachers, and the practice of ensemble music in organizations outside the school are the forms of work open to election. All are credit courses, and the credit is equal to that offered in other subjects for an equal amount of effort and accomplishment.

The plan is thoroughly modern in its point of view, particularly with reference to its recognition of the study or practice of music outside the school. In breadth it loses only by the lack of instruction in harmony and musical appreciation within the school. With the addition of these the ground plan of work would be equal to that of the most advanced schools.

The high-school enrollment as reported for February, 1917, was 635. This number, and the fact that music is elective and represents an unconstrained interest on the part of the pupils electing it, should be kept in mind in connection with the following discussion.

Chorus practice within the school receives one 45-minute period per week for each group enrolling for it. There are four groups, one for each of the high-school years. The election within these groups for February, 1917, was as follows: Freshmen, 42; sophomores, 41; juniors, 60; seniors, 48; total, 191.

The boys' glee club at the same period numbered 20, the girls' glee club 28. Each of these organizations devotes about one hour and a quarter per week to practice.

In this same semester the high-school orchestra numbered 26 members, the instrumentation including all the string parts, first and second clarinets, first and second cornets, one horn, one trombone, drums, and piano. This instrumentation is exceptionally good in its inclusion of viola and horn, unusual in its lacking flute. Further discussion of this matter of instrumentation will follow later.

An investigation was made as to the number of students in the high school studying music under outside teachers or participating in outside musical activities, as singing in choruses or choirs, or playing in orchestras or bands. The results were astonishing. They are summarized in the following: Studying or practicing, piano, 44; violin, 16; viola, 1; 'cello, 2; bass, 1; clarinet, 4; cornet, 2; drums, 2; total, 72. Reporting orchestra, not specifying instrument, 3; reporting music lessons, specifying instrument, 1; reporting instrumental (probably piano), 1; grand total, 77.

From the total, 77, should be subtracted 7, as one pupil reported (and was counted for) both piano and cello, one reported piano and violin, one piano and viola, two piano and clarinet, and one piano, bass, and drums. The number of individuals engaged is therefore 70. To these may be added 1 practicing mandolin and 1 practicing banjo, not counted because these instruments are not recognized in serious musical literature. Also 1 student reported practicing the ukelele; but as this student reported piano also, she was not disqualified.

Turning to those following exclusively some form of vocal practice outside the school, this report was compiled: Singing in choral organizations—church choir, 15; Sunday school, 2; glee clubs, 2; total, 19; taking voice lessons, 1; grand total, 20.

In addition, seven in the instrumental list also reported membership in some outside choral organization, thus adding to the high-school membership of outside organizations, but without involving any more high-school pupils.

One student reported "music in school and also outside of school," but without specifying its nature.

The whole report shows that 91 high-school students engage in the study or practice of music outside of the school, and in doing this fill by double activity about 100 places as students or participants in concerted practice. This is about one-seventh of the total enrollment of the high school.

If it is assumed that all the 91 are included in the choruses, glee clubs, and orchestra within the school, which is probable, and that, in addition, the glee clubs are composed of members selected from the high-school choruses, thus further lessening the total number of individuals enlisted, it appears that at least 217 individual students elect music in or out of school, or both. This is over one-third the entire high-school enrollment. In other words, one out of every three pupils voluntarily embraces music in some form; and this, notwithstanding that music is not vigorously promoted by the school system, is very meagerly supplied and equipped in both the elementary schools and high school, and has been abandoned as of comparatively little importance since the school treasury began to run low. No subject upon which parents spend so much effort and money in an endeavor to

educate their children in it has so remained outside the circle of studies recognized as essential in the school curriculum.

The high school owns a piano, one horn, and drums. The horn was mentioned in a foregoing paragraph. It is safe to say that its tones would not be there to enrich the orchestra if it were not owned by the school. Further progress in wealth of instrumentation is only possible if additional instruments, such as oboes, bassoons, and timpani, are owned by the school. Parents will not buy them, but once in the school students can always be found to study and play them.

The horn and drums were purchased with the proceeds of concerts given by the high-school orchestra. Music stands and the orchestral music used have likewise been purchased from funds similarly raised. Yet the high-school orchestra plays for the graduation exercises of the school, for which otherwise a professional orchestra would be hired. In addition to this material contribution, it graces many school functions, engages community interest for the school, and gives the essentials of a valuable musical understanding, not only to the members of the orchestra but to the entire school as well. Its work has been serious and of high purpose. The music studied, as represented in the programs of the annual concerts is of very high standard. If school support were at all commensurate with the benefits received by the school the orchestra would doubtless advance to a point that would make it the pride of the city.

The chorus work, like the orchestra work, is conducted on part of the time of one teacher. Like the orchestra work, also, it is seriously and ably conducted and meagerly supported. What was said in the foregoing paragraph of the functions and values of a school orchestra may be applied as well to school choruses. Even more than the orchestra, because of the greater numbers involved, they help to socialize a school and foster a desirable school spirit, all the while maintaining their function of educating the students musically. The interest of the students is shown in Elyria by the numbers electing the various classes. Incidentally a great number of these reported that they did not need the credit given for the work, but were taking a full course to which their music was added. If such interest and endeavor were properly encouraged, some notable chorus work could be done; and with a well-supported orchestra, which could play the accompaniments, a delightful field of musical endeavor would be opened. Meanwhile, despite present conditions, the chorus manages to be of much benefit to the churches and the choral music of the city generally. It need not be doubted that additional support would bring forth disproportionately large dividends.

Specialized study of music under outside teachers by high-school pupils is coming very generally in the United States to receive credit, and that this provision is made by the Elyria schools is a matter

for congratulation. No feature in all school administration, however, requires greater safeguarding than this, if the schools are to be protected in their standards of work and in the values of their credit awards. One of two plans is usually adopted. Either an accredited list of outside teachers is made, or a list of standard music material is prescribed for all teachers and pupils. Both plans are open to objection. If teachers are accredited, the line between the accepted and rejected teachers soon becomes difficult to draw and more difficult to maintain. If the material for teaching is specified, and at best this can be done only for piano, there will be numerous objections to it from the teachers, who will be alienated.

Examination of the work done by the pupil is indispensable to the proper working of the first plan. This plan is followed in Elyria, but examinations of the pupil are not given. The teachers must have the approval of the Conservatory of Music of Oberlin, Ohio, and doubtless their ability is duly ascertained. But if there be not further supervision, no renewal of the accrediting of a teacher from time to time, it is obvious that poor work may be done and never be disclosed.

Examinations should certainly be given; but they may cause expense, which either the school or the pupils must bear; and they may cause protests from all the teachers of examined pupils except those who are for the time serving as examiners. Local spirit alone will solve the question of expense; but the examinations can be made acceptable by a plan now suggested.

This plan requires that written reports be made each month, by pupil, parent, and teacher, of the lessons, material, hours of practice, etc. The report should be made in duplicate on a blank form provided, and one copy is signed by pupil, parent, and teacher, the duplicate copy is returned unsigned. An identification number is on each copy.

All supervision and criticism of the course laid out, and all examinations over the work of the course are conducted from observations of the unsigned copy of the card. In the examinations the pupil should be kept from the view of the examiners, who judge of his work by ear alone. The most authoritative musicians may and should be the examiners; and they can usually be secured because no accusation of unfairness or prejudice can be raised against them. All verdicts are written on the backs of the unsigned cards and are transmitted to the teacher of music through the high-school principal's office. The office alone, therefore, can connect the verdict with the particular teacher or pupil involved.

It can not be said that the Elyria schools are crediting bad work; but it must be said that they are crediting work regarding the value of which they have no positive knowledge. The school has a right

to know exactly for what its credit is given, and it is its duty to know. The practice in Elyria, admirable as it is in general intent, is subject to criticism in this respect.

THE SCHOOLS IN RELATION TO THE COMMUNITY.

As the Elyria schools are not now promoting music vigorously, either in the elementary schools or in the high school, it is perhaps superfluous to make comment or suggest possibilities with reference to community music. A better financial day may dawn, however, and in that case the few suggestions made here may not be useless.

The socializing value of music need not again be asserted. It remains to point out that in the public schools alone can the people meet on an equal basis, as equal owners and proprietors, and undertake with entire appropriateness an educational effort in their own behalf, at their own expense. Choruses and orchestras, groups for the study of theoretical music or seeking to attain appreciation of music, may well be organized and may meet in the school buildings after day-school hours. The cost is not great, for instruction and conducting will often be donated. The school system need, therefore, provide little but the schoolroom and light and heat, as a minimum. If even this be impossible, opportunity should at least be given the community to use its school buildings at cost of service, if it so wishes, and public announcement of this opportunity might be made.

That the community at large has much community spirit and is in sympathetic relations with the school community was evident at several points. In one elementary school the pupils of the eighth grade sang for a parent-teachers' meeting held in the school at the close of the afternoon session. The great interest with which the singing was received and the cordial cooperative spirit manifested between parents and teachers revealed clearly an almost ideal social solidarity. The parent-teacher associations have also cooperated with schools in raising funds by school and community programs for the purchase of one new piano and five phonographs, that are distributed among a like number of elementary schools. In such endeavors it is not the purchase itself that alone is important; the cooperative effort is of such value that if no funds were raised the community would be hardly less the gainer. The close association of the high-school musical organizations with the community has already been noted.

So, following much comment and much criticism, one comes back to the reflection with which this review began, that the fine community life in which music, the most social of the arts, should find its most fertile soil, is present in Elyria. Also the music is there, revealed in individual interest and in the ranking accorded it in the high school; but yet it is singularly undeveloped. The cause seems to be little expenditure has been made for its maintenance and de-

velopment, an expenditure small in former years, and reduced almost to nothing at present. Whether such extreme economy was wholly unavoidable the writer can not judge, but certainly almost all the shortcomings criticized in this review were due either to lack of supervision or lack of supplies or equipment and such criticisms can not be held to reflect discredit upon the members of the teaching staff in whom the fault would otherwise seem superficially to lie.

RECOMMENDATIONS.

SECTION I. IMPROVEMENTS POSSIBLE AT SLIGHT EXPENSE, THROUGH EXTENSION OF THE ACTIVITIES OF THE DEPARTMENT AS AT PRESENT CONSTITUTED.

Elementary schools.—1. A detailed printed manual and course of study in music should be prepared for the elementary school-teachers. This course of study should be prepared by one thoroughly conversant with present conditions, preferably the former supervisor of music. It should outline basic work for each grade, by weeks, and give instructions and suggestions as to methods and practice. In short it should take the place, as far as possible, of the supervisor of music.

The manual should prescribe the time to be given to music in each grade. Not less than 75 minutes a week in lower grades and 100 minutes in seventh and eighth grades is recommended. The manual should give all possible directions for the examination, classification, and treatment of the changing voice and for the treatment of monotones.

2. Supplementing the manual, meetings of teachers by grades should be held. A competent instructor, preferably the former supervisor of music, should be engaged to instruct the teachers in these meetings in all details of the work in music for a coming period of weeks. One meeting a month for each grade would be sufficient, if the printed outline recommended were also provided; but one meeting a semester would be better than none.

3. A copy of each of several rote song books should be provided each teacher of the first and second grades. The songs in these books that are to be used should be outlined in the printed course of study, or in some other competent, official way. Classifications by grades (first or second), by seasons, and as to practicability of use without instrumental accompaniment should be included in the information given in the outline of the song work.

4. Pitch pipes, preferably such as give almost all tones of the chromatic scale, should be provided all teachers. For hygienic reasons pitch pipes should be assigned to teachers, not to rooms, and in cases of transfer the pitch pipe should go with the teacher. The teachers should be instructed to use the pitch pipes sufficiently to be sure that every song is sung at the pitch in which it is written.

5. All rote songs outlined should be good as music as a first condition. The words should also be good as literature. A wide range of topics and interests can be covered by songs that meet both these two conditions. Rote songs should be performed in such a way as to make them beautiful, vocally and musically.

6. A more systematic effort to cure monotones should be made. This effort could best be directed through the outlines and the teachers' meetings recommended. Each row of pupils in a primary schoolroom should be graded, the monotones being assigned the front seats, the good singers the back seats. The monotones should be assisted by the teacher and by the children who sing correctly, to abandon the speaking-voice level in favor of the light, high, singing-voice level of the child.

7. The position of the pupils for singing should be improved. The forearms, to the elbows, should rest upon the desks. The pupils should sit lightly and easily erect, be "tall above the hips," forward on the seats, so far as the curve in the seats permits, and keep their backs straight, but not necessarily perpendicular. They should *not* incline backward from the perpendicular, but rather forward.

8. Technical study should be made specific rather than general and abstract. It should result from the desire to master a song, should spring from the song and be undertaken in relation to the particular song, and should not precede whole groups of songs as a general basis from which the songs take rise. It should proceed from the particular to the general, instead of the reverse, as now.

9. In two-part and three-part singing with treble voices each row should contain some boys and some girls, and no one group of rows should be assigned any one particular part for a longer continuous period than a week. All pupils in such classes may well sing together, first on the alto, then on the soprano, in working out a song, and then divide when the parts are to be sung together. The same plan should be applied to practice on three-part songs.

10. Systematic individual singing should be practiced in all the first six grades at least. The plan should insure hearing each pupil in a room at least once a week. Music that has been mastered by the class as a whole should be used for such practice. Instruction of each pupil, as his turn comes, should not be attempted. Errors should be noted, but the effort should not be made to drill the individual until the errors are overcome. Drill should be secured by the repetition by different pupils of the same phrase or period of song. Self-consciousness will not be generated, but will be obviated or overcome, if this practice is adopted from the first year on. In rooms where part-singing is a feature, two pupils or more, one for each part, in parallel seats of adjoining rows should sing together, forming duets, trios, or quartets.

11. Changing voices in the seventh and eighth year classes should be studied individually and should be assigned to appropriate and practicable parts. Teachers of these classes should receive specific instruction from the printed outline and in the grade meetings.

12. The organization and development of orchestral groups in the elementary schools should be encouraged. In schools which have some teacher who is musical and knows the rudiments of orchestral technic the orchestra could be rehearsed once a week by this teacher, who should receive additional compensation for such service.

13. The requirements in music for elementary school teachers should be greatly increased. At present 10 lessons only are required in that part of the prospective teachers' training which precedes a finishing term of six weeks in a normal school; and the 10 lessons are considered extra and are not given integral credit.[1] In addition to the present requirements, at least one year of music in the high school should be a prerequisite of admission to the teachers' training class, the course to lead to certified knowledge of elementary theory and ability to read music at sight. In lieu of this course, satisfactory evidence of an equal attainment gained elsewhere should be accepted. No teacher should be accepted in the elementary school system who does not give satisfactory evidence of the possession of this same measure of musical knowledge and ability. This requirement is doubly necessary when no supervisor of music is employed.

High school.—14. All music for the orchestra should be purchased from school funds, and the provision of such music should be liberal. Music stands should be purchased out of school funds, as permanent equipment for the high-school auditorium. Each contribution of money from the orchestra, acquired by giving concerts, and used for the purchase of school-owned instruments, should be increased by the contribution of an equal amount from the school funds, the whole to be devoted to the purchase of school-owned instruments. Music for the glee clubs should be purchased from the school funds.

15. Chorus practice should receive two 45-minute periods per week for each group rehearsing.

16. Supervision and examination of the specialized study of music under outside teachers should be far more strict and searching. Some plan of authoritative examination which would be above criticism as to its impersonal and unprejudiced character should be immediately adopted and followed.

The community.—17. Official printed announcement should be made by the school authorities to the effect that the high-school auditorium will be open one night per week throughout the school year for the use of a large community chorus, devoted to the practice of serious choral music. The school system should provide the conductor for

[1] See Course of Study, High School, Elyria, Ohio, 1916–17, p. 10.

this chorus out of school funds, by increasing the annual salary of some competent member of the present staff of teachers or by engaging a conductor on a part-time basis. High-school pupils should be eligible to this chorus if recommended by the high-school teacher of music. Expense to members of the chorus should be for music only. Though the school system can not create a public attitude toward such a community activity, it should at least provide opportunity for its development if popular interests should exist.

Similar announcement should be made regarding a proposed community orchestra, to be operated under the same plan and provisions as the community chorus.

SECTION II. IMPROVEMENTS POSSIBLE ONLY AT CONSIDERABLE EXPENSE AND INVOLVING RECONSTRUCTION OF THE DEPARTMENT.

1. Provide a piano for each floor of each elementary school.

2. Provide a portable reed organ for each elementary school.

3. In addition to the teachers' desk copies of rote songbooks recommended in Section I, supplementary books of songs graded in harmony with the textbooks now in use should be purchased. A set of 45 or 50 copies of each of such supplementary books should be purchased for each elementary school. A set could be made to serve several rooms of appropriate grade in each school by carrying it from room to room.

4. At least one set of such supplementary publications should be available for every class of grades two to six. At least two sets of such supplementary publications should be available for classes of grades seven and eight. The supplementary books for the latter grades should present material appropriate to a wide range of vocal conditions.

5. A supervisor of music should be employed who should be in general direction of all the music in the elementary schools and high school. In addition to issuing a printed outline, and instructing elementary teachers in grade meetings, the supervisor should visit each schoolroom once a fortnight or once in every three weeks. In these visits the supervisor should give model lessons, supervise lessons given by the regular teacher, and give counsel for the improvement of such teaching.

6. The supervisor of music should teach some of the high-school classes in music.

7. An assistant teacher of music should be employed on part time in the high school.

8. A course in harmony and a course in musical appreciation and history should be added to the present offerings. These courses should be elective and those who take them should recite three hours per week in each course, and should receive credit equal, hour for hour, with academic subjects.

Chapter XI.

DRAWING AND ART EDUCATION.

Art education means the appreciation and practice of those principles of order and beauty that are everlasting, with the quality of sincere and loving expression, to the end that boys and girls may grow up to love beauty and express it in all phases of their existence. Thus will our homes become objects of artistic creation, our dress more appropriate and tasteful, our manufactured products enhanced in value, our places of business more attractive, our advertising and printed matter more pleasing, until whole communities express their æsthetic nature in towns and cities that speak beauty on every side and rival those beauty spots in Europe that have found art quality such a precious and profitable possession.

A SUPERVISOR OF DRAWING.

Elyria had for some years followed the practice, adopted in most cities, of engaging a supervisor of drawing to take charge of this special work in the grades. Visits were made and instruction given to both teachers and pupils on alternate weeks, with the exception of the seventh grade, where lessons were given weekly. For financial reasons this supervisor, with others, was discontinued during the past school year. In order that the work in this subject might not suffer the full consequences of such elimination, the superintendent, with commendable sympathy and intelligence, made arrangements for a supply of one of the best of recent drawing-book publications. These were ordered by the school board and purchased by the pupils in each grade from the first to the seventh, inclusive. These books are regarded as a temporary expedient. They are successful to the degree that the teacher is able to interpret them to her pupils. Some teachers with more experience use them to great advantage, while in other cases less confident ones reduce them to most servile copy books. In this latter case, the free spontaneous expression of childhood is restricted and confined, perhaps for all time, since this period of flexibility and spontaneous impulse is such a fleeting one.

The grade teachers, without exception, deserve the greatest commendation for their good spirit, interest in the subject, and their

accomplishment under circumstances which have made the work difficult for many of them. As a rule grade teachers are trained to feel confidence in their ability to teach writing, but drawing and art expression have not been made a feature in the equipment of many. Nearly all the grade teachers of Elyria expressed regard for the value of the work, a feeling of loss that the supervisor's help and inspiration had been taken from them, and a hope that such help would soon be restored.

ART INSTRUCTION IN THE EIGHTH GRADE.

The entire omission of any art expression in the eighth grades of the city is exceptional and contrary to practice in other cities. This condition was occasioned by a belief that under existing circumstances a partial substitute was offered in the shopwork for the boys of this grade, and the sewing work for the girls. Such elimination is to be deplored for the more mature expression possible in this grade should link the previous work in the grades with the special opportunities of the high school. This link is broken, and the continuity and sequence disturbed. Refined expression and appreciation of good design and color should be regarded as a necessary equipment in the productive lives of these boys and girls.

There is some variation in the time allowance for art work, but the average is about as follows: Three 30 or two 45 minute periods, a total of 90 minutes per week in grades 1, 2, and 3; 60 minutes per week in grades 4, 5, and 6; 45 minutes per week in grade 7, where art expression in the school life of the pupil in Elyria ends. In most cases this loss is never repaired in later life.

ELEMENTARY INDUSTRIAL ACTIVITIES.

There has been, for years, a generally accepted belief that joyous self expression is essential to childhood and child growth. Primary rooms have become hives of happy industry where children tell in picture language the stories they have heard and read; where they learn reality through plastic clay, and model many things as man did in the childhood of art; where sand tables express some phase of primitive life—the farm, the harvest season, or possibly the children of other lands. With the exception of a very little paper cutting, such opportunities are not provided for the children in the Elyria schools, and their absence is recorded with particular regret. This condition is due in part to meager equipment and supplies, which would prevent even the most enlightened teacher from securing the charming product which these children are capable of creating, and in the creation of which they would experience such rich development.

CORRELATIVE EXPRESSION.

Articulated expression not only adds interest to any subject, but is the vehicle by which mere information may become permanent knowledge and reality itself to the learner. This vital knowledge comes by the way of experience, and this articulated expression is such experience. This principle, generally recognized in map drawing, should not stop there, but should be applied all through geography, language, and literature, history work, etc. Instead of abstract words real images are formed, and thus the pencil becomes an instrument with which to visualize and think into the very realities of life. The lessons of neatness and order, learned through good design teaching, should likewise be translated into beautiful school work—better placing and spacing in written work, and a neatness, care, and real art quality in everything produced.

Included under this heading are all the opportunities for attractive cover designs for numerous booklets, from the spelling lessons and nature leaflets in the primary grades to the history and cooking notes in the advanced grades. Very few of such opportunities are grasped as they should be in the schools of Elyria. This is due in part to teachers' training that may have been defective in this respect, and in part to inadequate supplies, and to lack of supervision.

SUPPLIES AND EQUIPMENT.

The grade rooms of the city are supplied with comparatively inexpensive manila drawing paper. Some water colors have been supplied in each building but in such meager quantities that several rooms are required to use a single set. Colored crayons are purchased by the children. Supplies purchased directly by the individual naturally cost much more than supplies purchased and supplied by the school board.

The variously tinted drawing and construction papers that are such an incentive to art expression and contribute so much to the attractiveness of the result are greatly missed; likewise are objects of interesting form and color that would furnish material for general representative drawing.

Sand tables are in but one or two classrooms in the city. As a consequence the children have no means for community expression suggested by so much of the language, nature study, and geography work in primary grades. The single table observed was a good piece of work by an interested and handy janitor.

Elyria has had good supervision in the past; the ability of her teachers to give elementary instruction in art is as good as the average; her children are as able as any; but their possible accomplishment is limited to the degre that worthy and adequate supplies are limited.

SCHOOLROOM INTERIORS.

We must aim to create a beautiful environment for our boys and girls if we would have them grow up and respond to beauty and express it. The schoolroom which offers nothing but bare walls has departed little from the schoolroom of the past. The walls must be cheery and supply backgrounds of charm for worthy pictures appropriately framed. Some plants and a vase or two, expressive of good design and color, are necessary factors in creating this very desirable environment. Wall paper should be barred from schoolrooms. Walls should be tinted with soft-toned water colors or painted with oil to give a hard, washable surface.

A number of rooms are well supplied with pictures, and in a number of cases these have been procured with money raised by exhibitions. The manual-training department has rendered commendable assistance by framing some of the prints. Teachers deserve great credit for purchasing and caring for the many plants which give such a softening and cheering impression in otherwise cold and formal schoolrooms. In some rooms, principals and teachers, with the assistance of janitors or manual-training teachers, have erected exhibition panels for school work. These invite the orderly and effective display of drawings, written work, etc.

HIGH-SCHOOL ARTS AND CRAFTS COURSE.

This work is offered for four years in what is known as the industrial course. The course is elective, and is provided for girls only. As a consequence the boys of Elyria, after leaving the seventh grade, receive no instruction in free-hand drawing, design, color, and art appreciation, which is so vital in developing the taste that one should find manifested in school shopwork and later in home building and furnishing and in modern business life and in manufactured products. Under the circumstances, the sympathy and intelligent efforts of the dean of the manual-training department to supply this need in a measure is recognized as very commendable.

The number of girls electing this course is fairly proportionate to the number electing classical or commercial courses, and commensurate with such optional choice in other cities. This enrollment, however, appears to be falling off rapidly. Continuity of good art work through all the grades, with special attention paid in the eighth grade and a sympathetic guidance for all entering high school, would develop and direct the natural inclination of a larger number, both boys and girls, toward these excellent art courses.

The course offered in the arts and various crafts is carried out along the lines of the best thought and practices in other cities. The intimate correlation with the work in household arts is to be espe-

cially commended, with the hope that other articulation with the boys' handwork may be equally well established. The two teachers engaged in this work are well trained and capable, and they are endowed with capacity for growth that should mean a continuation of good sincere efforts and progressive ideas.

RECOMMENDATIONS.

The restoration, at the earliest possible moment, of a supervisor of art instruction is recommended.

The most fascinating material for inducing expression should be provided. A course of study should be arranged that would win the respectful attention and appreciation through its application to the home, the dress, the school and its varied interests, manufactured products even to town planning and civic beautification.

Through exhibitions of school work and through other means of appropriate publicity the entire community should be kept informed and made appreciative of the intrinsic value of art education.

Serious consideration should be given to the profit such a supervisor makes for a community, as well as to the saving effected through his judicious and economical choice, purchase, and distribution of supplies.

The blackboard should grow in favor as a means for the teacher to elucidate her thought and give graphic expression to her ideas. The pupils likewise should use it as a means for securing freedom in drawing.

At least one hour of art work per week should be required in the eighth grade. This work should embody to some extent design and color related to the boys' shopwork and the girls' home arts work.

In the eighth year, as well as in the fifth, sixth, and seventh years, additional time should be given to drawings illustrating important facts in history, geography, and science work. Lettering, design, and color should be applied to appropriate covers for these notes.

Some art study should be planned and continued through the grades that will create a love for the world's best art, and some acquaintance with the principles and facts underlying it.

Elective courses of such nature should be offered in the high school that any boy or girl may select, under guidance, any work in drawing, design, color, or any of the crafts that would be of service.

Consideration should be given to the probability that the time allotted for the arts and crafts in the industrial course is disproportionately large, compared with the needs and slower processes in the domestic arts.

Some of the pottery products of the craft shop should be donated to some of the grade schools to supply the need for drawing models and school decoration.

There should be established and always continued the closest understanding, articulation of effort, and harmonizing spirit between the work and workers in the high schools and the grade schools.

Students who expect to become teachers should be required to receive preparatory art instruction in the high school, and later in the training course they should receive instruction in methods and practice in teaching art. That instruction should be at least commensurate with the offerings and requirements in other lines. Much of the promise for art education in the future depends upon the ability and interest of the grade teacher.

While the general aim is a broad, democratic one, watchful care should be given to discovering and conserving those who have special gifts, and would, through their higher attainments, bring credit to themselves and the city that made such high attainment possible.

Chapter XII.

HOME ECONOMICS.

EXISTING CONDITIONS.

Sewing is a required study for all seventh and eighth grade girls. It is also given to the small group of girls classified as retarded. Sewing was in the course for girls of the sixth grade until the demand for retrenchments in school expenditures necessitated its elimination. The board of education, finding it impossible to employ an extra teacher for industrial training for the boys of the sixth grade, also abolished the sixth-grade sewing.

Cooking is given in the high-school course, and only to those who elect the entire home-economics course. Sewing and millinery are included in the home-economics work of the high school. Owing to the fact that the home-economics course of the high school is of recent inauguration, not all lines of work have been fully developed.

SEWING IN THE SEVENTH AND EIGHTH GRADES.

Teacher, Miss Geneva E. Chamberlain; salary, $900; employed 10 years. Time, 1 period (1½ hours) per week.

Grade 7B.—1. Model of hemstitching. 2. Application. Hemstitched guest towel or dresser cover with design in cross stitch. 3. Model of seams. French seams. Overcast seams. 4. Making of kimona-nightdress.

Grade 7A.—1. Buttonhole model. 2. Making of kimona. 3. Making of large dress apron.

Grade 8B.—1. Making of underwear set. (*a*) Drawers. Fell seams. (*b*) Petticoat and corset cover or princess slip. (*c*) Crocheted trimming for set and embroidered design if desired.

Grade 8A.—1. Making of cooking uniform. (*a*) Apron. (*b*) Cap. (*c*) Half-sleeves. 2. Middy blouses.

HIGH-SCHOOL COURSE IN HOME ECONOMICS.

Teachers.—One instructor in food preparation and dressmaking, salary, $750; employed 2 years. One instructor in applied design (metal work, clay, linen, millinery), salary, $850; employed 3 years; one assistant, salary, $800; employed 3 years.

Periods per week.—First year: Art, 3; cooking, 2. Second year: Art, 2; millinery, 2; sewing, 1. Third year: Art, 3; household economics (chiefly advanced food preparation), 2. Fourth year (elective): Millinery, 2; advanced sewing, 3; advanced art, 2—one teacher; advanced art, 3—another teacher.

First year.

Domestic science.—Cooking: First and second semesters.—A. Use of textbook. B. Practical cooking lessons. C. Housekeeping. D. Personal hygiene. E. Family table service and menu making. F. Excursions to local markets.

Fine arts.—General: First semester.—A. Plant study. B. Pottery designing and application in clay. C. Designing developed from study of unit. (*a*) Square. (*b*) Circle. (*c*) Border. (*d*) All-over pattern. (*e*) Field pattern.

Second semester.—A. Freehand perspective. B. Object drawing. C. Art history. D. Basketry. E. Lettering. F. Theory of color. G. Pose drawing. H. Stenciling. I. Flower drawing.

Second year.

Fine arts.—Design and crafts: First semester.—A. Review of principles of design. Theory of color. B. Costume designing. C. Bookbinding. D. Applied design, leather.

Second semester.—A. Costume design. B. Applied design, textiles. C. Advanced reed work.

Domestic art.—Millinery: First semester.—A. Drafting of patterns. B. Designing of winter hat. Its application. C. Designing and making of ornament.

Second semester.—A. Wire frame making. B. Designing of spring hat. Its application. C. Embroidery designs applied.

Second semester.—Sewing: A. Machine and hand work. B. Fundamental stitches; making of samples for notebooks. C. Use of commercial patterns. D. Making of undergarments. (*a*) Choice of material, trimmings, and pattern. (*b*) Estimate of cost. E. Making of middy blouse (from design made in fine arts class).

Third year.

Fine arts.—Design and crafts: First semester.—A. Review of principles of: Design and theory of color; house plans; period furniture; constructive and applied design; metal.

Second semester.—A. Interior decorating. B. Constructive and applied design; jewelry.

Domestic science.—Household economics: A. Advanced cooking. B. Invalid cooking. C. Luncheon box. D. Planning and serving meals. E. Marketing. F. Fuel value of foods and requirements. G. Household management. H. Family budget.

Fourth year.

Domestic art.—A. Review of notebooks of second year. B. Alteration of commercial patterns. C. Drafting of underclothes patterns. D. Study of textiles. E. Dressmaking.

Advanced millinery—First semester.—A. Winter hat. B. Making of flowers, berries, ornaments, bows.

Second semester.—A. Renovating of hats, ribbons, flowers, feathers. B. Spring hat. C. Wholesale and retail shop study.

Fine arts.—Advanced design; crafts: A. Advanced costume. B. Advanced interior. C. Posters. D. Figure and still-life study. E. Advanced work in crafts.

FAULTS IN THE HIGH-SCHOOL HOME ECONOMICS COURSE.

The courses in arts and crafts are of vital importance to the home economics work and of necessity closely correlated with it; but arts and crafts should not be considered a part of the home economics department. It should be organized as a service department for the

entire school, and its classes should be open alike to the young men and women in all courses.

Under the present organization and division of time, the art studies absorb time rightfully belonging to the home economics studies proper, leaving far too little time for food preparation, clothing and textiles, care of the home, care of the sick, and home administration.

The course is an art course with a home economics inclination; it is not a home economics course strengthened by accessory courses in art. The relation of art instruction to home economics should be similar to that of chemistry, physics, botany, and physiology—absolutely essential but separate and independent. Art should not encroach upon the time rightfully belonging to purely home economics instruction.

It is unreasonable to require that students spend two laboratory periods for one entire year on millinery, when sewing is required but one year and but once a week in that year. The chief function of a millinery course is to teach intelligent choice of materials, and to give to the student ability to handle hat fabrics and trimmings with deftness. One semester of teaching should accomplish this, and further courses should be offered as electives if at all.

Since the students c[illegible]ter without elementary school preparation in cooking, the present food preparation instruction is too limited in extent.

There is an entire absence of courses in household sanitation, personal hygiene, home nursing, and meal service.

SCHOOL LUNCHES.

One hundred and fourteen mothers who answered the questionnaire sent to them believe that a noon lunch served at the school would be advantageous. A casual visitor in Elyria can not fail to notice the large number of unoccupied students who frequent the business district during the long noon period. This noon idleness presents other objectionable possibilities than the waste of time during the best part of the school day.

A lunch served at the high school by the school authorities would have many advantages: It would make possible a shorter noon period and consequently a shorter school day; it would care for the nonresident student in a better manner; and it would make possible the most desirable type of practice in food preparation for the home economic students.

In schools in which the noon lunch is under the direction of the home economics teacher and the regular classes prepare some of the food, it has been found that the food can be sold at a low price and is of excellent quality. It is usually necessary to have some hired

help in order that the time of students need not be used for the heavier tasks.

The room now used by the students as a lunch room would be ample and satisfactory for the purpose. Dr. Bobbitt was right in saying:

> It is sufficiently absurd for the high school to teach textbook dietetics at one hour during the day, and then violate every dictum of such dietetics at the luncheon hour. The domestic science people need to be put in charge of the preparation and the serving of the luncheon. The schools can not afford to throw away such an excellent training opportunity.[1]

ROOMS AND EQUIPMENT.

Elementary schools.—The sewing in the seventh and eighth grades is done at two centers: The one in the Gates School; the other in the old high-school building.

The room at the Gates School into which the classes were moved in October is suitable in every way. There is a good floor, ample blackboard room, an abundance of light, sufficient space, and from it the students have access to water for washing.

The room in use in the old high school is not clean, is heated with difficulty, and the sanitary conditions in the basement make this building a menace to health.

These two centers are reached fairly easily by all children, and the going to and from the classes works a hardship in but few cases.

The tables in use are but temporary, and improved ones are under construction by the boys in the woodworking classes. The chairs are unsuited to the purpose and unsuited to the size of the children. Comfortable chairs are essential for sewing.

At the time of inspection the number of sewing machines was limited to four. Two of these were so old as to be valueless.

The present arrangement, that students in sewing come for one-half of the morning or one-half of the afternoon session, makes the transference from the regular classroom to the sewing room fairly easy, for the students make the change from building to building either at the beginning of a session or at recess.

High school.—The present inclusion of art instruction in the home economics department results in four so-called home economics classrooms in the Technical High School building.

One of these is on the third floor and is fully equipped with modern desks, stoves, and utensils for food preparation classes.

These desks are arranged in the usual hollow square, and are supplied with individual stoves.

Adjoining the laboratory is a room evidently designed as a dining room.

[1] Page 42, "The San Antonio Public School System," Bobbitt.

There is a small hall or entry leading from the dining room to the main hall and a supply pantry is connected with the food laboratory.

One room used for art is on this floor, the others are on the first floor. The room used for sewing and millinery is not so large nor so well lighted as a room devoted to these purposes should be. The equipment is fair for existing needs.

SUGGESTIONS FOR IMPROVEMENT.

The present sewing room in the Gates School or one equally good should be permanently given to the sewing teacher. This room should be supplied with enough machines to have at least one good machine for every four girls. Comfortable chairs of different heights should be supplied, so that the children need not sit in fatiguing positions.

In the Gates building there is considerable space not now profitably used. This is practically true of the teachers' rest rooms on both the first and second floors. The rest room on the first floor is large enough for the teachers. Practice apartments or houses are now considered an essential part of home economics equipment; it is suggested that the rest rooms on the second floor of the Gates building be converted into a practice apartment for the eighth-grade girls. Practice in housekeeping, meal service to teachers, and practical lessons in home nursing could thus be given. The rooms should serve as sewing rooms when so needed. The room adjoining the rest room on the first floor is not in use at present and could be arranged for the use of the medical examiners on their regular visits.

If the old building on the Gates School ground is not unsafe, a room in it should be equipped for general cooking classes. The fact that it does not heat well should be less objectionable for cooking classes than for classes in which the children are quietly seated. In any room arranged for general cooking classes there should be, if possible, a good coal or wood range which may be used for teaching the management of such stoves and for giving additional heat in very cold weather.

The present sewing room in the Lincoln building should be abandoned unless better sanitary conditions can be obtained. If the plumbing of the building can be made modern and sanitary, the present sewing room can be converted with little cost into an admirable practice apartment, and other rooms can be used for general cooking and for sewing. If this building can not be thus adapted, other arrangements should be made immediately.

When a building is placed on the school property in the Hungarian village, especial consideration should be given to convenient and suitable rooms for home economics teaching. If this locality furnishes a

considerable number of school children who do not reach the high school, accommodations should be arranged for classes devoting one-half of each day to home-making lessons. Here, also, classes for adult women and employed girls could profitably be arranged.

In this locality a practice cottage should be constructed which would exhibit good sanitary living conditions such as would be within the reach of workers earning the average wage.

In the high school certain adjustments of rooms could readily be made. If the art courses be restricted as suggested, one room could be made available for other uses. The first-floor room, now used as a sewing room, is too small for the kind of sewing that should be given. There is on the third floor a most desirable room now used as a study room. This room should be equipped with sewing tables, cutting tables, lockers for students' materials, wardrobes for hanging partially made garments, and sewing machines in sufficient numbers to enable the students to work with system and without delay.

With the equipment of the present dining room and with a slight addition to the present laboratory equipment, it will be possible to give practical courses in meal preparation and service. In all schools where this type of work is introduced, it has been found possible to secure a number of teachers who are willing to take their noon meal regularly at the school, and thus afford an opportunity for the students to practice in marketing, cooking, and serving food under conditions approximating those of a home.

Experience in the care of a home should be a part of the home economics course. In the Elyria High School the only practice place easily obtainable is the room now used as a teachers' rest room. Using this as a practice room would interfere but little with its present use and would afford an opportunity for actual practice in household decoration and care.

DESIRABLE CHANGES.

Home economics should be so taught in the grades that an intelligent girl may discover her special abilities and be able to decide whether dressmaking, housekeeping or food preparation is sufficiently interesting to her to influence her to take vocational courses along any of those lines.

It should be so well taught that the girl completing the eighth grade should command the requisite technique for the satisfactory discharge of simple household duties, and be intelligent in her choice of materials and processes.

The high-school course in home economics should establish in the minds of every high-school woman right ideas concerning home administration; the expenditure of money; the principles which should govern the choice of home sites; the furnishing and the

proper maintenance of a home; the relation of the individual home to the community at large; the protection of the health of the occupants of the house and the care of the sick. Her knowledge of food, its choice, purchase, preparation, and service, should be increased, and based on a scientific foundation. Her taste and skill in the fabrication of garments and the choice of textiles should be developed. Her sense of social and economic responsibility and a recognition of her duties as an American citizen should have been awakened.

To accomplish all of this a different type of course in home economics must be established in the Elyria schools, and the following is recommended:

Fifth-grade girls.—Three hours a week in sewing and simple lessons in housekeeping.

Sixth-grade girls.—Three hours a week in clothing and small recipe food preparation.

Seventh-grade girls.—One-half day, twice a week in clothing, food preparation, and lessons in sanitation and personal hygiene.

Eighth-grade girls.—One half day, twice a week in clothing, meal preparation, marketing, and care of the home.

Selected group of students.—Overage or retarded and those who will probably be unable to enter the high school with profit. One-half of each school day in thoroughly practical work in sewing, food preparation, and housekeeping.

Ninth grade or first-year high school.—Two hours daily required of all girls in all courses. This year should be a survey course with time equally divided between foods, textiles, and clothing, and household sanitation and care.

TRANSITION FROM THE PRESENT TO THE NEW CONDITIONS.

Recognizing that so radical a change with its increased cost can not be accomplished within a year, or even two, the following suggestions are offered that it may be attained by the end of three years:

To establish the course as suggested, fifth and sixth grade students will need the same instruction during the first year, and this may consist entirely of sewing done in the classroom by classroom teachers under the direction of the home economics supervisor. This will obviate the need of extra teachers for this work in these classes for the first year.

The seventh-grade students may be given food preparation only during one-half of this first year and sewing only for one-half year, and the same arrangement can be made for the eighth-grade students, thus decreasing by one-half the teaching force required for these classes.

During the first year of reorganization the "survey course" may be given to all first-year high-school girls, and but two lines of elective home economics may be offered to the advanced students. One, a strong course in textiles and clothing, five times a week. Two recitation periods and three double periods for laboratory, equaling one credit. The other course should be one-half year in food prepara-

tion and service, with time divided as before, and one-half year in dietetics and meal service.

During the second year of the transition period the incoming sixth-grade students should have a special teacher and be taught the use of the sewing machine and simple housekeeping. The incoming fifth-grade class should be taught by the regular teachers as during previous year. The seventh and eighth grade work should be managed as during the previous year. The high-school courses should continue as during the first year, with a third year of electives offered for those who have finished the previous two years' elective. This third elective should be devoted to the home. Home administration, home sanitation, home nursing, household furnishing, and decoration should compose this course.

By the third year the complete and well-organized course should be inaugurated with full and regular work throughout the upper four elementary grades and four high-school years. First-year high-school work will then need to be modified to fit the better prepared students coming from the eighth grade.

The fourth-year high-school elective should consist of advanced dressmaking and advanced work in marketing and food preparation.

For the three years above the first, all home economics should be elective and should be recommended especially to those students who will probably not enter a college offering a home economics course.

REQUIRED TEACHING FORCE.

The changes described will necessitate six special teachers of home economics in the grades and three special teachers in the high school, with a supervisor who will teach one-half time. At present four teachers and a part-time supervisor will be sufficient.

One year of art should be required of all students majoring in home economics and should be elective for all students, both young men and young women. Under the present financial conditions in the Elyria schools the desirability of offering so many lines of work in fine arts may well be questioned. It seems probable that for one and perhaps for two years one teacher of fine arts will be able to administer all required work and also offer one or two lines of electives.

OPINIONS OF MOTHERS.

A questionnaire sent to the mothers of students in sewing classes in the grades and in home economics classes in the high school resulted in 134 answers. Of the mothers who answered, 110 were born in the United States, and 24 were foreign born. Many mothers stated that they knew nothing of the work given and hence could not express an opinion as to desirable improvements. The real test of home economics teaching is the degree to which it functions in the home

life of the girl. If its effect is unrecognizable by the mother, there must be some weakness in the teaching.

One hundred mothers thought cooking the most important school study in home economics; yet no food instruction is given below the high school. Only seven considered millinery most important; yet the millinery course is required twice a week for an entire year and is elective in the senior year for an equal time. Sixty mothers emphasize the value of sewing; yet it is given but once a week during one year in the high-school home economics course. Only one mother ranks arts and crafts as of great importance; yet the home economics course requires three days per week in the first year, two days per week in the second year, three days per week in the third year, and offers two elective art courses in the fourth year.

The greater majority of mothers expressed their appreciation of the need of hot lunches, if they are well prepared. At present 183 tuition-paying students in the high school remain in or near the school buildings during the noon intermission. These facts indicate the importance of the opportunity offered the home economics department to give practical instruction in preparing lunches.

ANSWERS BY MOTHERS TO CERTAIN QUESTIONS.

Question. What do you consider the most valuable part of the home economics instruction in the high school?

Answers. One hundred mothers replied, cooking; 60, sewing; 18, housekeeping; 7, millinery; 7, baking; 4, dressmaking; 4, buying; 2, mending; 2, interior decoration; 1, nursing; 1 art and craft work; 1, canning; 5, meal preparation.

Question. What improvement do you suggest?

Answers. Eleven mothers replied, devote more time and work to home economics; 10, better equipment for sewing and cooking; 8, make work more practicable; 8, have cooking and more general housekeeping in the grades; 4, adopt the best methods; 1, eliminate jewelry and metal work; 1, furnish all materials free; 1, substitute sewing for art in the first year if parents so desire; 1, coordination with the home; 1, improved sanitation; 1, improved rooms.

Question. Should the school provide hot lunches for the pupils?

Answer. One hundred and fourteen mothers replied, yes; 13, no.

AFTERNOON AND EVENING CLASSES.

A personal investigation leads to the conclusion that of the hundreds of women workers in Elyria's factories not more than 3 per cent have received high-school education, and very few have a knowledge of home economics. It is true that these workers are not the product of Elyria's schools, and in the majority of cases are not residents of Elyria, but come and go on the interurban and steam lines; yet it is probable that many of these young women and others like them will establish homes and rear families in Elyria and thus become contributors to the problems of the schools of the city.

Elyria has also a rapidly increasing number of wives and mothers who have little knowledge of the English language and but slight familiarity with American ideas of sanitary and attractive homes and American standards for the education and care of children. To these new comers Elyria owes assistance and instruction, since Americanization must start in the home life if it is to be genuine and complete.

Afternoon or evening classes should be maintained for the mothers in different parts of the town. With the right woman in charge, much valuable instruction could be given in the Hungarian section and other classes, for young housekeepers would receive support in different sections of the city.

The Young Women's Christian Association is doing genuine educational work. It may be questioned if it is good policy to leave for a philanthropic association work which is really a community responsibility.

Saturday afternoon classes and perhaps evening classes should be established for the young women in manufacturing establishments. A reasonable charge might be made for instruction given to nonresident students, but to residents of Elyria these extension courses should be free.

RECOMMENDATIONS.

1. Make of arts and crafts a separate elective course in the high school, open to boys as well as girls.
2. Give a prevocational aspect to the instruction in home economics in the grades and in the first high-school year.
3. Make home economics a required subject for all girls from the fifth grade to the first high-school year, inclusive; an elective in the second, third, and fourth high-school years.
4. Make the necessary changes gradually over a period of three years.
5. When the new conditions are fully established, employ one supervisor of home economics teaching part-time, six special teachers of home making in the grades, and three special teachers for home economics in the high school and for night and special classes.
6. Shorten the noon intermission, and provide hot lunches to high-school teachers and students.
7. Organize afternoon and evening classes for adults and for young women employed during the day.
8. Provide more sewing machines, better equipment in particulars enumerated, and make specified changes in the use of rooms.
9. Include laboratories for home economics in all plans for new buildings.
10. Construct a "model cottage" in the Hungarian section of the city and equip a "practice apartment" in the high school.

Chapter XIII.

MANUAL TRAINING.

The latest published course of study for the elementary schools for the year 1914–15, under the caption "Incidental Instruction," states:

All boys in the sixth, seventh, and eighth grades shall be given one lesson each week in mechanical drawing and benchwork.

The girls of the same classes and at the same times shall be given lessons in practical sewing.

During the school year 1916–17 the teaching force was reduced, and the work in manual training was limited to the seventh and eighth grades.

Handwork is not mentioned in the outline of studies for the lower grades. Consequently, nothing is attempted in this direction, with the exception of the occasional experiments of a few of the more energetic and progressive grade teachers.

GRADES 1 TO 6.

While there is considerable diversity in methods of introducing and carrying on the work, there is widespread recognition among educators of the importance of the manual arts in the elementary school. Elyria has followed the example and practice of many other cities in selecting the seventh and eighth years as the point at which to introduce manual training into the elementary school. Nevertheless, a better method of procedure would be to introduce the work first in the lower grades. The more important reasons for this course may be enumerated as follows:

(1) The handwork of the lower grades cost very much less for materials and equipment than the shopwork of the upper grades, and the enrollment in the lower grades is larger than that of the upper grades; consequently a much larger number of pupils can be benefited by the expenditure of a given amount of money in the lower grades than in the upper.

(2) The more intensive manual arts courses of the later years lose much of their effectiveness unless a suitable foundation is laid in the elementary handwork courses.

(3) Even under the most favorable conditions it is difficult to develop numerous points of contact between the shopwork and the other

studies of the seventh and eighth grades and to bring about a natural correlation between the activities of the shop teacher and the regular grade teacher. It is much easier to accomplish these ends in the light of the experience gained in administering the handwork of the earlier grades, where the points of relationship between the handwork and the other phases of school work are more numerous, more patent, and more susceptible of development.

AIMS AND PURPOSES.

Handwork in the elementary school may be employed for the accomplishment of at least three distinct educational ends: (1) To develop manipulative skill and the ability to "do things"; (2) to impart knowledge of materials and processes of construction; and (3) to vitalize the instruction in various subjects of study, such as geography, history, and language.

Young children have neither the muscular control nor the interest to enable them to follow spontaneously a program confined chiefly to the accomplishment of the first of these aims. A high degree of technical skill can be acquired by young children in certain directions, but only at the sacrifice of other values. Nevertheless, the child enjoys the manipulative processes, and although results are crude at first, his ideals are capable of cultivation, and from grade to grade increasing emphasis may be placed on accuracy and precision of workmanship, a progressive technical control keeping pace with a developing muscular system and a growing subjective demand. Necessarily the work also contributes to the child's growth through knowledge of materials and processes employed.

The methods and processes which are utilized to accomplish the third of these aims are well adapted to the instincts and capacities of children in the lower grades. Most children have the ingenuity and the imagination to enjoy these activities and to participate in them with profit. The work includes the arrangement on the sand table of the settings of various stories which form part of the instruction in reading and of scenes and events selected from the fields of history and geography. It includes also the making of small articles that serve some purpose in the schoolroom, as well as the representations of a considerable variety of objects taken up in the course of the regular studies; such as, the implements used in carding, spinning, weaving, etc., methods of transportation, types of tools and utensils, and the like.

Work of this character, like that of the type first mentioned, has a twofold educational value for young children: It serves to illustrate and vitalize the instruction in the regular studies by giving a richness of meaning to words and ideas through concrete expression, thus making the instruction more effective; and it also serves in a very

definite way to extend the child's field of knowledge and experience through acquaintance with a variety of materials, their most obvious properties and uses, and, to a limited extent, their sources and methods of preparation for commercial use.

In general, it may be said that work of the first type is of value chiefly as discipline, for the development of technic, muscular coordination and control, and for the development of ideals, not only of artistic excellence and fitness of an object to its purpose but also of good workmanship and the relation between effort and achievement. It is important in handwork which has these objects in view to maintain constantly progressive ideals of excellence in workmanship and design and to undertake only such constructions and processes as are reasonably within the capacities of the children. Activities of the second type are of value chiefly for the contribution to the effectiveness of instruction in other subjects and for the opportunity afforded for the free play of the child's imagination in self-expression and self-direction. Here also progressive standards of technical excellence should be applied, but not to the extent of discouraging the child from thinking and acting independently. The emphasis should be on spontaneity and the general effect to be produced by the representation rather than upon process and technic.

Both types of work, as suggested herein, have important places in the education of young children, and should be provided in all the elementary schools of Elyria.

GRADES 7 AND 8.

The most serious criticisms that have been directed against current practice in manual training in these grades are that the work tends to become too formal, and that the range of activities covered is too narrowly restricted. The practical difficulties involved in administering a shop under school conditions have frequently led to an objectionable formality in instruction and rigidity in method of procedure, and too often the shop instruction has been limited to a course in woodworking.

With respect to the first criticism, it must be evident that manual training loses much of its educational value when it is reduced to a routine in which the instructor does most of the thinking and planning, while the activities of the pupils consist chiefly in following detailed directions. With respect to the second criticism, it is to be said that, if time permitted, manual training could be made much more interesting and profitable by adding to the woodwork a variety of processes selected from a number of other fields, such as printing and bookbinding, simple metal work, electricity, cement, and concrete.

These criticisms apply to the manual training in the Elyria schools to a certain extent, though it should be made clear that the criticisms apply to the conditions under which the work is done, rather than

to the efficiency of the use which is made of existing facilities and opportunities.

TIME ALLOWANCE.

No provision is made during the current year for handwork below the seventh year. In the seventh and eighth grades one lesson per week is given, nominally 90 minutes in length.

With a school year of 38 weeks the aggregate maximum amount of time for shopwork is 57 hours per year, or 7¼ days of 8 hours each.

Even this small amount of time is subject to diminution because of occasional interruptions. It seems clear, therefore, that the proper conditions have not been provided to insure the maximum benefits from manual training. The fact that results deemed worth while are attainable even under this inadequate allowance of time justifies the contention that more and better results may be expected with more time.

EQUIPMENT.

The equipment for manual training for the seventh and eighth grades consists of two shop centers, one in the high-school building and the other at the Gates School. The former is in use three entire mornings each week, one entire afternoon, and half time on four afternoons—in the aggregate about three-fifths of the regular school time. The latter is in use two mornings each week, or about one-fifth of the regular school time. The time devoted to manual training in these grades could therefore be doubled without using the equipment to its full capacity.

The shops are fitted with work benches and tools adapted to the kinds of work that may be profitably undertaken with classes of boys in the time allowed. The shop in the high-school building is satisfactory. It is near the other shops in the same building, and any item of equipment lacking in the grade shop may be readily procured.

The Gates School shop is located in the old building, which has all the unattractiveness of outlived usefulness. The rooms occupied for manual training are somewhat crowded. A power drill, tool grinder, and circular-saw bench are located in an unheated room, detached from the shop in which the pupils work.

THE COURSE OF STUDY.

The course of study for the seventh and eighth grades consists of the construction of a series of small objects intended for personal or home use. As outlined for 1916–17, these include: *First year:* First semester—pen tray, paper cutter, coat hanger, tie rack; second semester—brush-broom holder, cup-and-saucer rack, pressing board, tool box, and two small pieces of simple furniture, to be selected by the pupil. *Eighth year:* First semester—sled, cutting board; second semester—taboret,

jewel box, and a piece of simple furniture, to be selected by the pupil. Each boy pays the cost of the material in each article he makes for himself. These projects are supplemented from time to time by the construction of various articles of furniture and apparatus for the school, involving sometimes individual and sometimes community effort.

The course has been planned to introduce the use of the principal woodworking hand tools and processes, simple wood finishing, and a few processes in cold metals. The course of study and methods of instruction are similar to those observed in many other cities, the quality of work being somewhat above the average. Under the prevailing conditions of large classes, limited time, and restricted facilities it is difficult to devise courses and methods that will involve a greater variety of activities and accomplish more for the time and energy expended.

The department is making a commendable effort to work out a program for a special ungraded class of boys, meeting one period (45 minutes) daily in the shop. This experiment would undoubtedly be more fruitful of results if the amount of time were doubled or trebled, and the instructor permitted to make an aggressive attack on his problem.

The prevocational aim receives no adequate consideration in the manual-training program, and the same is to be said of vocational guidance.

THE HIGH SCHOOL.

The announcement of the Elyria High School for 1916-17 contains outlines of the following courses:

(1) Classical course, college preparatory: offers the possibility of electing, in the freshman year, one credit in general science or manual training or arts and crafts.

(2) Commercial course: offers the possibility of electing, in the freshman year, one credit in manual training or arts and crafts.

(3) Industrial course, preparing for the engineering college, or for industry; 4.5 credits in mechanical drawing and shopwork, and 11 credits in language, history, mathematics, and science.

(4) In addition to the high-school course there is offered a special or vocational course, six years in length, beginning in grade 7. Approximately one-third of the time in grades 7 and 8 is assigned to shopwork, and one-half of the time in grades 9 to 12 is assigned to shopwork and mechanical drawing.

According to the announcement, boys are assigned to this special course by the superintendent "after careful consideration of each case, including conference with the teacher and parent of the child."

The aim is to fit boys who would otherwise drop out of school for efficient industrial work. It is not presumed that graduates from it will have covered

full apprenticeship course in any line, but it is hoped that they will find an occupation in which they may become good workmen.

The course of study theoretically covers the seventh and eighth grades and four years in the high school. The 13 elementary school boys in attendance, however, were doing sixth as well as seventh and eighth grade work. The time is divided equally between academic and manual work. Arithmetic is effectively correlated with shop problems. A history recitation observed was stimulating and full of interest. The discussion turned on our relations with Germany, and the pupils raised all sorts of questions pertaining to our international relations. They were evidently reading the papers and thinking, and they needed no prodding.

EQUIPMENT.

The equipment in the high-school building includes the following:

Grade manual training shop, already mentioned, approximately 48 by 38 feet; occupied three entire mornings and one afternoon period weekly by grade classes, one afternoon period daily by high-school classes; contains 21 single work benches, grindstone, band-saw, demonstration theater.

Cabinet shop, approximately 40 by 25 feet; occupied one period daily by special ungraded class; contains 16 single benches.

Lathe and pattern shop, approximately 40 by 25 feet; occupied six periods daily by high-school classes, except last five weeks of year, when one class takes foundry practice two periods daily; contains 15 single benches, 11 wood-turning lathes, demonstration theater.

Foundry, approximately 40 by 25 feet; occupied two periods daily for five weeks by high-school class; contains small iron cupola and equipment for 16 students.

Forge shop, approximately 45 by 30 feet; occupied two periods daily in the morning and two periods daily in the afternoon; contains 16 down-draft forges, with anvils and tools.

Mechanical drawing-room, approximately 50 by 25 feet; occupied eight periods daily; contains 24 single drafting tables.

The cost of equipment, including the Gates School shop, is approximately as follows:

Gates School shop	$750
Grade manual training shop (high-school building)	1,000
Cabinet shop	550
Lathe and pattern shop	1,700
Foundry	900
Forge shop	1,200
Mill room	1,200
Mechanical drawing-room (including additional equipment in storage)	400
Total	$7,700

The number of wood-turning lathes appears to be somewhat in excess of the requirements of the present enrollment of students and course of study, and a rearrangement of the equipment, as suggested by the instructor in charge of the lathe and pattern shop, has been approved. Aside from this, the benches, machines, and tools have been well selected and arranged, and the equipment generally shows evidence of careful use.

The fact that a part of the equipment is not used to its full capacity appears to be due, partly at least, to the reduction of the teaching staff. The foundry and forge shop will not be used to capacity for some time to come, but if a more liberal and aggressive policy were inaugurated it is doubtful if the remainder of the equipment would prove more than adequate.

A room approximately 40 by 100 feet has been set aside for a machine shop, to be equipped at a later date, when fourth-year classes are ready, and when prices for equipment return to normal levels.

COURSES OF STUDY.

The arrangement of courses of study in the Elyria high school does not encourage boys generally to take the work in manual training. Since students in the classical and commercial courses are limited to the possibility of electing one credit only in manual training, it practically means that only those take this work who elect either the industrial course or the special vocational course. The industrial course is intended to prepare for the engineering college or for entrance into industry, and the special vocational course is planned for boys "who would otherwise drop out of school," and who presumably are contemplating employment in the industries. It may be assumed, therefore, that with few exceptions only those boys elect these courses who already have reason to expect to follow industrial careers. For such boys the work has a measure of vocational value, so far as it goes.

The policy appears to ignore (1) the potential value of manual training and mechanical drawing as a part of the general education of all normal boys, and (2) the prevocational value of these lines of work when properly presented to boys who desire to discover their own native talents and how to make the most of them.

The same courses and methods can not well be made to serve all three aims: Vocational, prevocational, and general education. If the dominant aim is to continue to be vocational, it is advisable to modify some of the work in order to bring it in closer accord with the requirements of the industries. The courses in forging, pattern-making, and architectural drafting, as now given, seem to meet these requirements better than the others. Observation of the work in machine design suggests the possibility that the student occasionally

may accept a principle and produce a drawing which he does not fully understand. The methods followed in the cabinetmaking course are better adapted to realize the general education aim than the vocational aim. In both of the courses just mentioned, and, perhaps, in certain others, there are indications that the pressure of anxiety to cover the ground of the course has caused the instructor to do some of the thinking and planning and preparation of material that should form a part of the student's experience.

The special, or vocational, course represents a progressive move, and with proper encouragement should render a valuable service. Its advantages should be made available to more pupils. Boys who enroll in this course spend two periods (90 minutes) daily in shopwork, and devote the remainder of the school time to reading, writing, arithmetic, and geography in the seventh year, and to reading, arithmetic, physiology, and English in the eighth. Beginning with the ninth year, one-half of each day (2.5 hours) is spent in drawing and shopwork, and one-half in academic subjects. As outlined in the prospectus, the drawing includes mechanical and architectural drawing; the shopwork includes wood turning, gas fitting, plumbing, forging, electricity, pattern making, molding, foundry, machine shop, cabinetmaking, machine woodworking, though not all of these courses are actually given. About one hour daily is devoted to arithmetic and industrial geography, and the remaining hour and one-half is assigned to reading, writing, spelling, history, civics, simple accounts, and elementary science.

The special course is an adaptation of the plan of the elementary industrial school or prevocational school, which is being tried in a number of cities. The Elyria authorities are to be commended for their progressive attitude. Further additions to the equipment available will be necessary before the plan can be carried out in its entirety.

THE MANUAL-TRAINING STAFF.

There are five instructors, of whom one teaches full time, mechanical, architectural, and machine drawing; one teaches full time, pattern making, cabinetmaking, and foundry; one teaches full time, seventh and eighth grade manual training, and one class in advanced cabinetmaking; one teaches half time, forging; one teaches one class daily—the special ungraded class.

TRAINING AND EXPERIENCE.

Of the five members of the staff, one reports no schooling above high-school grade; three have had some professional normal training; two have had brief courses in business college; three have taken

correspondence-school courses; and two have had some college or university work. Disregarding the correspondence course, and estimating a summer school course as one-fourth year, the average amount of schooling above high-school grade for the five members of the staff is 1.4 years.

The staff includes one instructor now teaching in his first year, one who has taught 5 years (prior to September 1, 1916), two who have taught 9 years each, and one who has taught 27 years, the average being 10 years.

EXPERIENCE IN OTHER OCCUPATIONS.

The possibility of developing at least a limited variety of vocational courses is suggested by the record of experience in occupations other than teaching. Two instructors have had 1 year, one has had 4 years, one has had 7 years, and one has had 43 years of experience in occupations other than teaching, averaging 11.2 years each. The list includes 12 different occupations, as follows: Blacksmithing, cabinetmaking and furniture factory, carpentry, clerking in store, farming, foundry, machine-shop work, millwrighting, paper mill work, pattern-making, selling subscriptions and advertising, stone quarry work.

TRAINING SINCE ENTERING THE SERVICE.

In response to the question, "What courses have you taken in normal school, college, university, correspondence school, etc., for the purpose of improving your work, since entering the service of the Elyria school?" three instructors report as follows: One has taken five summer-school courses in institutions offering special courses for the preparation of manual arts teachers, and four correspondence courses; one has taken a nine weeks' course in a normal school; one has taken three summer-school courses in a State university, one-half year in a business college, and two correspondence courses. This is a very creditable showing for the three instructors, and indicates a commendable disposition to study the special problems of the manual arts and to endeavor to keep abreast of progress in this rapidly developing field. One of the other two instructors is teaching this year for the first time, and the other has been in the Elyria school system only four years.

The board of education would be justified in taking the position that the rapid evolution of educational ideals and practices lays upon every teacher the obligation of following some plan of definite and systematic study of education. If such professional study be desirable for regular teachers, it is practically indispensable for teachers in the special field of the manual arts, where much experi-

mental work remains to be done, especially in relation to programs and methods of procedure.

PROFESSIONAL READING.

The members of the manual-training staff were asked to state the titles of a few of the most important books on education which they had read during the past two years. In response to this question, one instructor gave no report, while four reported a total of 13 books read, as follows: Standards in Education. All the Children of All the People. Forging. Foundry Practice. Social Psychology. The Modern School. Vocational Guidance. The Teacher and the Child. High School Problems. Schools and Administration. How to Study. Rural Problems. The Portland Survey.

Of the four instructors, one reported one book read, one reported two books, one reported three, and one reported seven. No two instructors reported the same book.

In response to the question, "What educational periodicals do you read regularly?" the five instructors reported an average of three magazines each. One instructor reported one magazine, one reported two magazines, one reported three, one reported four, and one reported five. The list, which includes eight different magazines, is as follows, together with the number of teachers by whom each is read: Architectural Record, 1; Industrial Arts Magazine, 3; Manual Training Magazine, 4; Ohio Educational Monthly, 3; Ohio Teacher, 1; Pathfinder, 1; School and Society, 1; School Century, 1.

The facts presented in connection with the two foregoing lists may be accepted as evidence of a desire for improvement on the part of the manual-training teachers. This disposition should be encouraged by those in authority. A supervisor could accomplish much by organizing the staff into a study class for the purpose of systematic reading and discussion. The number of books read should be many times greater.

Additional evidence of a wholesome professional attitude is found in the memberships in educational organizations reported. Of the five instructors, one is a member of one professional association, one is a member of three associations, two are members of four associations each, and one maintains membership in five associations. Six different organizations are represented. The list, together with the number of teachers reporting membership in each, is as follows: Cleveland Manual Training Club, 3; Lorain County Manual Training Club, 2; Lorain County Schoolmasters' Club, 5; Northeastern Ohio Teachers' Association, 4; Ohio Industrial Arts Association, 1; Ohio State Teachers' Association, 2.

RECOMMENDATIONS OFFERED BY THE STAFF.

Four members of the staff, in response to a request, offered suggestion as to ways in which the work of the department might be improved. Their suggestions may be summarized as follows:

Relating to organization and administration: 1. A supervisor needed. 2. More instructors needed. 3. Too many pupils, and too many classes, per teacher, in some cases. 4. More and better coordination of work needed. 5. Insufficient time to do required work thoroughly. 6. Too many retarded and incorrigible boys in special classes. 7. More conferences of shop teachers needed.

Relating to course of study and methods: 1. More judicious selection of materials. 2. More reference material needed. 3. More efficient use of reference material available. 4. Textbooks for supplementary work in shop.

Relating to physical conditions: 1. More money needed for equipment and maintenance. 2. More judicious selection of equipment. 3. Better arrangement of equipment. 4. Stereopticon or reflectoscope, or both, needed. 5. Athletic field and gymnasium needed.

These suggestions afford material with which the staff itself could proceed at once upon an aggressive program of improvement and development of the department, if given the right kind of leadership. In the attempt to establish a new line of work in the schools, like the manual arts, it is a mistaken policy to "save money" by eliminating efficient and authoritative supervision. The members of the manual-training staff are agreed in the opinion that their work is seriously handicapped without a supervisor.

SUMMARY.

The impressions of the manual-training staff may be summarized as follows:

(1) There is a considerable range of individual qualifications in respect to professional preparation and experience.

(2) In respect to professional ability, personality, and potential strength, the staff is probably equal, if not superior, to that found in other cities of Elyria's class.

(3) The inspiration that might be contributed by the leadership of a competent supervisor is conspicuous by its absence. Not only is the work of the several members of the staff imperfectly coordinated but there is lack of definiteness and direction in the individual efforts toward building up the department as well as toward professional self-development.

(4) The professional reading and study reported by the members of the staff suggests a lack of definiteness of method and purpose, as well as lack of acquaintance with some of the best of the recent literature in this special field.

RECOMMENDATIONS.

1. *Supervisor.*—The next step to be taken in connection with manual training in the Elyria schools is the appointment of a capable supervisor, who, under the direction of the superintendent, should be responsible for the administration of all the manual training and vocational classes from the first grade through the high school. He should personally direct the details of the work in grades 7 to 12, inclusive. An assistant supervisor, preferably a woman, should be appointed, to whom should be assigned the task of introducing and directing the handwork in grades 1 to 6, under the general direction of the supervisor.

The duties of the supervisor should be to organize the department, to supervise and direct the work of the instruction in mechanical, architectural, and machine drawing, and shopwork, to secure better coordination of the work of the various courses, to arrange regular conferences of the special teachers for discussion of the problems of the department, to organize the staff into a group for professional reading and study, and to make necessary arrangements for equipment and supplies. He should be a man worthy of a salary of at least $1,500, and should not give more than half time to teaching.

The duties of the assistant supervisor should be to confer with the regular teachers in grades 1 to 6, assisting them to introduce such types of handwork as they are now prepared to handle, and to meet the teachers in small groups for the purpose of instructing them in the technic of such additional lines of work as it may be decided to introduce. She should also prepare outlines of courses, detailed directions for procedure, and arrange for necessary equipment and supplies. She should give not more than half time to teaching, and the salary for this position should be at least $1,200.[1]

2. *Elementary handwork.*—Steps should be taken to bring the Elyria schools in line with educational progress through the introduction of a well-organized scheme of handwork for grades 1 to 6. This work should have in view the aims suggested in the foregoing discussion. In the beginning the lines of work should be selected to meet the capacities of the various teachers to handle them, but notice should be given that after a reasonable time (say September 1, 1921) grade teachers would be expected to teach the handwork outlined in the course of study. A departmentalized system in grades 4, 5, and 6 may be encouraged, by which one teacher in a building would be responsible for the handwork for the boys, another the handwork for the girls, another the music, and so on.

[1] This recommendation becomes inoperative if the recommendation made in Chapter III, Administration and Supervision, be adopted, namely, that a primary supervisor be appointed who is qualified to direct the handwork in grades 1 to 6.

3. *Time allotment.*—During the introductory period from 30 to 60 minutes per week should be allowed for handwork, but the school program and course of study should be readjusted gradually to a more liberal allowance. At first it may be objected that it is impossible to add handwork as a new subject to a curriculum already crowded. That this is not a fair statement of what is proposed, however, will become evident after the teachers have had opportunity to experiment with the work under favorable conditions. Ultimately it would be found practicable to set aside not less than one-tenth to one-eighth of the present school time in grades 1 to 6 for handwork; that is, from two to three hours per week, divided up into from three to five periods, according to program conditions.

In grades 7 and 8 (and 9 if the junior high-school plan be adopted) the manual arts should receive not less than one-fifth to one-fourth of the present school time, or five to seven hours weekly. The program should be flexible enough to provide an even larger proportion of time for this purpose, up to one-third or one-half, for groups of selected pupils under special conditions on an elective basis.

4. *Reorganization.*—As already suggested, a place for elementary handwork should be found by a reorganization of the course of study and modified methods of instruction and not by the mere mechanical process of displacing something old in order to add something new. It is sufficient to indicate those features of reorganization and method which would affect the handwork:

(*a*) To the extent that handwork is used to illustrate and reinforce the instruction in other subjects (as language, arithmetic, geography, history), it becomes a method of teaching these subjects and does not require a special allotment of time of its own. By thus making the instruction in these subjects more vital and concrete, and hence more efficient, the same ground can be covered in less time.

(*b*) Courses of study in the public schools are to a certain extent an inheritance from a period in which the determining factor in the organization of the curriculum was the analysis of the subject matter that it was deemed important for the individual to learn. Current scientific studies of education are animated by the disposition to examine the processes of development going on in the child, the essential factors of adjustment to environment, and the necessary preparation for complete functioning as an adult individual, a human being, a citizen in a democracy, capable of maintaining himself and those dependent on him. The course of study is being examined with the view to determining its fitness to contribute to these ends rather than the completeness with which it covers the various fundamental fields of knowledge. This analysis has already proceeded far enough to identify certain nonessential material in

several school subjects. The elimination of nonessential material makes for more effective instruction and for economy of time.

(*c*) More time for handwork may be had by a redistribution of subjects in the various years of the elementary school. For example, arithmetic: Handwork involves all the fundamental operations in arithmetic, and affords a most natural and concrete method of instruction in these operations; this fact, together with the serious questioning, on other grounds of the necessity of having formal instruction in arithmetic spread over so many years of the elementary school, suggests the possibility of accomplishing the desired results in arithmetic with much less expenditure of time for formal instruction.

(*d*) The introduction of handwork and other features of the modern school, such as physical exercises, games, dramatizations, serves to make school work more interesting and more enjoyable, so that, even if the aggregate time actually devoted to instruction is not materially increased, more can be accomplished with less fatigue and with greater satisfaction to both teachers and pupils.

(*e*) There is an observable tendency in the direction of a longer school year and a longer school day. By a proper distribution of work periods and recreational features it should be possible to accomplish the following ends: Afford more time for proposed new activities; eliminate largely, if not entirely, the necessity for home work for both teachers and pupils; make school work less burdensome than under the existing program.

(*f*) There is also an observable tendency to segregate in special classes (1) pupils who are making more rapid progress through the grades than the normal rate of one grade per year; (2) those who are slower and retarded; and (3) those who are below normal, physically or mentally. Pupils of these types constitute special problems and should have special treatment. The segregation of these pupils, therefore, makes for more effective and more economical use of the time of all concerned.

5. *Scope of work.*—The object in view should be a well-organized and articulated scheme of handwork running through the entire system, incorporating the best features applicable to local conditions that have been developed by progressive cities, with lines of work of sufficient variety and scope to meet the approval of modern educational thought, and adapted to the capacities and needs of children at successive stages of growth.

The work should connect intimately and efficiently with the activities of the kindergarten and the training of the home on the one side and with the practical demands and actual conditions of the life careers into which young people go when they leave school on the other.

The work in the first four years should be adapted as closely as possible to the requirements of the reorganized course of study, and should involve the manipulation of materials and processes in paper and cardboard, textiles, basketry, weaving, and drawing. Beginning with the fifth year the lines of work may well diverge with the varying interests of boys and girls, and for the boys should include opportunities for work in thin wood, and elementary processes in bookbinding, printing, clay, cement, plaster, and such other groups as further study of conditions may indicate.

In the seventh and eighth years the boys should carry still further the problems in printing and bookbinding, and to these should be added suitable work in copper, brass, iron, leather, cement and concrete, electricity, benchwork in wood, and mechanical drawing. The woodwork might well include some simple framing and carpentry. All the shopwork should be made as practical as possible. The corresponding work for girls is discussed elsewhere in this report.

More systematic and determined effort should be made to study and provide for the needs of special groups of children, such as those who are for any reason retarded in physical or intellectual development or in their progress through the grades.

With the increase in time available, it will be possible to devote sufficient attention to mechanical drawing in the elementary schools to enable all boys to make and read simple working drawings, and to provide for a few an introduction to the elements of architectural or machine drafting. All the mechanical drawing should be practical in character and in accordance with approved standards of draftsmanship. This work should be under the direction of the supervisor of manual training, and taught by shop teachers, or by teachers who are familiar with shop conditions and keep in close contact with the school shopwork.

6. *Aims and purposes.*—It should be expected that the entire school system will assume a new point of view, and that manual training will be introduced, not so much as a new subject with its claims and demands, but with the distinct purpose of contributing to the efficiency of the whole system.

The service rendered to children by the manual arts should not be limited to its contribution to general education, even in the elementary school, though this may properly be the primary motive. So long as children are permitted to abandon permanently their birthright of school privileges at the immature age of 14 or even 16 years, there can be no adequate defense of an educational policy that neglects to offer in the school some rational preparation for the life struggle which these children are allowed to enter.

Unquestionably, therefore, beginning at the latest with the seventh year of school, the prevocational aim for most children, and the voca-

tional aim for some children, should have definite recognition in the public schools. While the influence of these aims should not be limited to the work in the manual arts, it is here that the most favorable conditions will be found for its expression and development.

By "prevocational aim" is understood the attempt to assist boys and girls to study their own capacities and the possibilities of their environment, to "find themselves," and to make an intelligent choice at the right time of a future career based upon some adequate understanding of these considerations instead of drifting helplessly into whatever chance and ignorance may offer.

The "vocational aim" will be served by any course of activity which may be carried on in the school or encouraged elsewhere under the supervision of the school that assists boys and girls to make some progress in preparation for an occupation that is definitely anticipated.

7. *Equipment.*—The equipment and arrangement of the shops for grades seven and eight (and nine, if the junior high-school plan be adopted) should be somewhat different from those now in use. The type of shop that has existed in the past developed under the influence of traditional school ideals of class units and rigid programs, and although there has been much more freedom and flexibility in the shop than in the usual classroom, there is need of still further flexibility.

The new type of shop is conceived as a laboratory in which real problems may be considered and solved by the pupils. Such problems may frequently involve other processes than those found in woodworking, and it is desirable to provide equipment in sufficient variety to prevent the work from being confined to too narrow lines. The transformation in shops and equipment should be brought about gradually to enable teachers to prepare themselves for the new conditions. Nothing is gained by adding tools or materials which teachers are not qualified to use advantageously and efficiently.

It is not necessary that all of the desired lines of work be carried on in any one shop, though a considerable variety of work may be thus provided. The object in view is to provide pupils with as wide a range as practicable of useful experiences, and this may be accomplished in various ways.

8. *Course of study.*—The suggestions made herein contemplate emphasis upon problems which require constructive thought on the part of the pupil, stimulate the development of ingenuity and initiative in dealing with new situations, insure the formation of correct habits of technic and craftsmanship, and occasionally demand cooperative effort in which the students work together in groups on a single project. Too often school training has tended to repress independence and resourcefulness in the child, and to discourage the

cooperative spirit, through the teacher's preliminary analysis of processes, and through refinement in details of directions for procedure. These faults in method have often resulted from overburdening the teacher with too many pupils, and from the utter insufficiency of the time allowed.

To provide problems to be solved by the pupils instead of by the teacher is much more difficult than to outline courses of models or exercises. Nevertheless, it is an ideal toward which public school work in the manual arts is tending, and as an ideal it has the advantage of representing a type of work that produces the maximum of interest and profit for both teacher and pupil.

At the same time, supervisor and instructor must not be permitted to lose sight of the value to both teacher and pupil of careful analysis of every individual problem, and of definite and orderly progression in the year's work. Too much enthusiasm for the freedom and fascination of the practical-problem method of work, unrestrained by insistence upon thoughtful analysis and systematic procedure, can not be expected to produce results of educational value commensurate with the amount of energy displayed. The best teachers will be found to depend much on the analysis of each problem into its successive steps, and a study of the history of manual training will show that the content value, or educational value, comes only after such analysis has been made, or in the process of making it. For this reason, successful teachers endeavor to have the work of analyzing the problem done by the pupil, so far as possible, though they recognize that in the earlier stages it must necessarily be done by the teacher.

The industrial course in the high school should be continued, and modified to permit students who do not expect to enter college to elect a larger proportion of shopwork. The shopwork courses offered, and methods of instruction, should be based on the opportunities open to boys and young men in local industrial plants.

The special vocational course should be continued, and facilities provided as rapidly as possible for offering an increased variety in shopwork. The student in this, as in other shop courses, should produce many articles of equipment and furnishings required by the schools.

The regular college preparatory curriculum of the high school should be modified by the introduction of more electives, thus taking advantage of the tendency on the part of colleges and universities toward a more liberal interpretation of entrance requirements. Among these electives should be included as wide a variety as possible of courses in shopwork and drawing, in as many grades of the curriculum as practicable, in view of the prior demands of the technical curricula.

9. *Library.*—Steps should be taken as early as practicable to provide, for the use of both teachers and pupils, a carefully selected library of the best current literature in the fields of the manual arts, vocational guidance, and vocational education. Some of the important items should be duplicated and supplied to all shops or classrooms where their use is appropriate. In addition, there should be a small collection in each school building and a more complete and comprehensive reference library at the high school. An initial appropriation of $300 and an annual appropriation of $50 for this purpose is suggested.

Chapter XIV.

VOCATIONAL EDUCATION.

For many years it has been evident that the public school offers more definite and more effective service to the boy or girl who can use this schooling as a stepping-stone to further training in college or university than it does to the one who must make the best of it as preparation for a life career without the higher education. The records show that many boys and girls of high-school age have dropped out of school. While the significance of the reasons for these withdrawals is still more or less in dispute, there is reason to believe that emphasis upon the aim of preparation for college has operated as a selective force, attracting and retaining pupils who can be held to this aim and tending to eliminate others.

With the development of the ideal of democracy in education, in the sense of equality of educational opportunity, there have come numerous attempts to adapt the school to the needs of all children. There has been a tendency at times to confuse the issue by assuming that the proposal to make education vocational—that is, to make it prepare definitely for some useful occupation—is without precedent and therefore dangerous. Theoretically, however, the primary aim of education is to prepare for life; our higher education has always had specific vocational value. This value is not discounted in any way by the fact that higher education has also cultural and general values.

One of the great educational problems of the day is to add vocational values to education of secondary grade, in order to bring them within the reach of the great mass of boys and girls instead of only the few who now go to college, without sacrificing the essential elements of cultural and general education.

The experience of a number of communities has suggested the possibility that one notable result of an adequate solution of this problem will be to hold in school many boys and girls who now drop out under one pretext or another, and thus to provide the schools with a new clientele. One method of approach to this problem, therefore, is a study of the boys and girls for whom it is proposed to make provision.

A STUDY OF PUPILS 13 TO 15 YEARS OF AGE.

A number of school surveys have called attention to the significance of a study of those pupils in a school system who are 13, 14, or 15 years of age. (1) Boys and girls both begin to drop out of school in large numbers soon after the age of 14 or 15 years is reached; so that at or before this period is the latest opportunity to study a cross-section of the school population before it is affected seriously by selective elimination. (2) The distribution of the pupils of these ages through the grades gives some indication of the success of the school system in classifying the pupils. (3) The study also indicates the extent of the schooling which many of these boys and girls are likely to receive before dropping out of the system. (4) Information concerning the nativity of the pupils, their parents, and older brothers and sisters has a bearing on the probable stability of the population. (5) Information concerning the occupations of fathers, brothers, and sisters, and the occupations which the pupils themselves expect to enter is significant in any study of a program for vocational education.

An inquiry along somewhat similar lines was conducted in the Elyria High School and is reported in the chapter on that school, consequently this study was confined to the elementary schools. It may be noted here that pupils of these ages were found in the high school as follows: Thirteen years of age, 7; 14 years of age, 59; 15 years of age, [illegible]; total, 181.

Complete tables summarizing the facts found in this inquiry have been prepared and submitted in manuscript to the Elyria Board of Education. To save space, some of these tables are omitted from the following pages.

TABLE 1.—*Grade distribution of pupils, 13 to 15 years of age.*

Grade.	13 years.		14 years.		15 years.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Fifth	5	3	4	1	0	1	9	5
Sixth	14	12	10	6	1	1	25	19
Seventh	36	32	11	11	16	3	63	46
Eighth	20	35	32	28	22	18	74	81
Total	75	82	57	46	39	23	171	151

Assuming that a child enters school at 6 years of age, and progresses through one grade each year, the normal age at entrance into the eighth grade is 13 years. Of 171 boys 13 to 15 years of age, 97, or 56.8 per cent, have not yet reached the eighth grade; of 151 girls, 70, or 46.4 per cent, have not yet reached the eighth grade.

The birthplaces of these pupils and of their fathers are shown in Table 2. Only 6.5 per cent of the children are foreign-born, and only

21.2 per cent of the fathers; 82.3 per cent of the children were born in Ohio, and 43.4 per cent were born in Elyria. In view of the small proportion of foreign-born children, it is evident that foreign birth is not an important cause of retardation among the 322 children studied. Its relation to elimination can be determined only by a corresponding study of children of these ages who have left school.

TABLE 2.—*Birthplaces of pupils and their fathers.*

Places of birth.	Number of persons born in places specified.			
	Boys.	Fathers of boys.	Girls.	Fathers of girls.
Elyria, Ohio	84	18	56	17
Elsewhere in Ohio	64	71	61	64
Elsewhere in United States	17	26	19	20
Total in United States	165	115	136	100
Austria-Hungary	1	5	2	3
Belgium		1		1
Canada		1	2	4
England	1	6	4	9
Europe (country not given)				2
Germany		15		8
Ireland		1		
Italy	1	1		
Channel Islands		1		
Russia	3	2	6	9
Scotland			1	2
Sweden		1		2
Wales				
Total foreign	6	38	15	40
Birthplace not reported		18		5
Grand total	171	171	151	151

Pupils were asked for a statement of intentions regarding further schooling. Of the boys, 91.8 per cent definitely intend to complete the eighth grade before leaving school; 74.2 per cent intend to go to high school; while only 50.9 per cent have any plans for schooling beyond the high school. Of the girls, all but one intend to complete the eighth grade; 79.4 per cent intend to go to high school; while only 55.0 per cent have any plans for schooling beyond the high school.

Many boys and girls report intention to complete the eighth grade and to attend high school, which in all probability will not be realized. Many boys and girls have formulated no definite plans for the future, either as to school or occupation, chiefly because they have received no intelligent and timely assistance in this direction.

These facts suggest something of the complexity of the task of the school in designing courses of instruction that will be practically helpful to boys and girls who leave school at any specified point. They also emphasize the importance of stimulating young persons

to consider more intelligently the uses that may be made of education, and to plan ahead.

TABLE 3.—*Employment of boys and girls, 13 to 15 years of age, outside of school hours.*

Employments.	Boys.	Girls.
Chores, odd jobs	10	
Clerks in stores, etc.	13	6
Delivery, messenger service	9	
Helpers	15	
Housework		7
Miscellaneous	19	43
Selling and delivering papers	35	
Total number reporting employment	81	16
Reporting no employment	90	130
Not reporting	4	5
Total	171	151

[1] Includes helper to baggageman, 1; baker, 1; barber, 1; janitor, 2.
[2] Includes caddy, 1; farm worker, 1; laundryman, 1; player in band, 1; stable boy, 1; telephone operator, 1; muskrat trapper, 2; usher, 1.
[3] Includes candy maker, 1, caring for child, 2.

In reply to the question about plans for earning a living, nearly one-third of the boys (32.1 per cent) are undecided or fail to report a choice of occupation, while fewer than one-fourth of the girls (23.8 per cent) fall in this class.

Of the 116 boys who express a choice, 90, or 77.5 per cent, are almost equally divided between the manufacturing and mechanical industries (44) and professional pursuits (46). Of the 115 girls who express a choice, 93, or 80.8 per cent, prefer professional pursuits (55) or clerical occupations (38). The largest single group among the boys comprises 36 mechanics; among the girls, 19 teachers (or, including 16 music teachers, 35 in all).

Comparison of the occupations chosen by the boys and girls and the opportunities open in the community shows entire lack of relation between them. Of the 116 boys who express a choice, 37.9 per cent prefer the manufacturing and mechanical industries and 39.6 per cent the professions, whereas the proportions of these groups among males employed in Elyria are 64.2 per cent and 3.3 per cent, respectively. Similarly, of the 115 girls who express a choice, 47.8 per cent prefer professional pursuits and 2.6 per cent domestic and personal service, whereas the proportions of these groups among females employed in Elyria are 18.7 per cent and 18.9 per cent, respectively.

It is not to be assumed that all persons will necessarily find employment in the communities in which they grow up and receive their education; nevertheless many of them will inevitably be disappointed if their education does not include some study of the vocational opportunities within reasonable distance.

Of the 114 reasons for choice of occupation assigned by the boys, 78 per cent are included in four groups: A liking for the work, advice of relatives, earning a living, and the money in it; 84.5 per cent of the 110 reasons assigned by the girls fall in the same groups.

A study of the occupations chosen by these boys and girls and the reasons assigned for the choices leads to the conclusion that they were, for the most part, without adequate data upon which to base such choice. Only within very recent years has the public school begun to appreciate its responsibility in vocational guidance, and it is not yet common to find groups of boys and girls who are properly prepared to face the momentous problem of choosing a life work. If the school is really expected to offer an education that prepares for life, it is difficult to explain, much less to justify, a program that omits all study and discussion of the practical methods by which men and women earn their living.

A STUDY OF THE OLDER BROTHERS AND SISTERS.

Pupils who were 13 to 15 years of age were asked to give the names and addresses of older brothers and sisters who were "under 21 years of age and at work." To these older brothers and sisters a questionnaire was sent.

Information was obtained from 24 brothers and 19 sisters who filled and returned the blanks. The facts may be briefly summarized as follows:

Of the 43 brothers and sisters, 2 are 16 years old; 6 are 17; 13 are 18; 15 are 19; and 7 are 20.

Only 17 have had any schooling beyond the eighth grade, and only 5 have graduated from high school.

Only 5 brothers and 5 sisters report that they draw books from the public library.

Forty were born in the United States, and of these 18 were born in Ohio and 14 in Elyria.

Thirteen different occupations are represented; 8 are working in factories and 8 are clerks; no other occupation has more than 3 individuals.

Of the 43 individuals, 31 report an aggregate of 78 positions held since leaving school; 13 have held 3 or more positions each.

Of the 43 young persons, only 6 (1 male and 5 females) report that they have taken courses in evening school since leaving the public schools, and only 7 (4 males and 3 females) report enrollment in correspondence courses. Of the 13 courses reported (evening and correspondence), 8 were business courses.

The number of older brothers and sisters involved (43) is too small to form the basis of valid conclusions. The facts presented are of interest, however, as confirming, so far as they go, the find-

ings of studies made elsewhere and indicate the gravity of the problems of vocational adjustment confronting boys and girls who leave the public schools without completing the high school and without definite preparation for some useful and congenial occupation.

Many boys and girls who leave school under these conditions have not established studious habits, nor have they the ability or the disposition to analyze the various factors of the situations into which they may be thrown and to think out the solution. They are frequently the ones who most need sympathetic and helpful direction in a study of themselves, their native capacities and interests, and the relation of these to vocational opportunity and demand.

STUDY OF OCCUPATIONS IN ELYRIA.

An analysis was made of the distribution of wage earners by occupation in Elyria and 10 other cities of the same population class as reported in the Elyria city directory and the United States census reports. The results may be summarized briefly, as follows:

More than half of the occupations reported in Elyria, 58 per cent, fall in the manufacturing and mechanical industries group. This is more than three times the proportion found in the next largest group, trade (commercial) pursuits, 16.7 per cent. This preponderance in manufactures and the industries is due to the males rather than the females, the largest group of the latter being found in clerical occupations—24.2 per cent.

Aside from laborers, mechanics and factory operatives, the largest groups of occupations among the males are: Proprietors and managers of stores and other establishments, 442; presidents, superintendents, and other company and corporation officials, 232. Of the 38 remaining classifications only 5 have more than 90 individuals reported in each.

Among the females the largest groups are: Accountants, bookkeepers, cashiers, clerks, stenographers, 268; domestic and personal service, unclassified, 197; teachers, 114; retail store employees, 114. Of the remaining 18 classifications only 3 have more than 36 individuals reported in each.

Compared with other cities of somewhat larger total population, Elyria offers boys and men much greater opportunity, proportionately, in the manufacturing and mechanical industries, somewhat greater opportunity in trade (commercial) pursuits, but rather meager opportunities in the other principal groups of occupations.

Elyria offers girls and women substantially equal vocational opportunities in five different groups of occupations: Clerical, manufacturing and industrial, domestic and personal, professional, trade (commercial).

The number of employed females is proportionately much less than the number of employed males in Elyria as compared with other cities. The number of females is 34.8 per cent of the number of males in the 44 cities; 29 per cent in the 10 cities; but only 16.9 per cent in Elyria. Vocational opportunities for girls and women in Elyria are not so numerous as those open to boys and men, though they are much more diversified.

The particular occupation in which the largest numbers of opportunities have been found are as follows: Males—Factory operatives, laborers, mechanics, steam and electric railway employees, officers and proprietors of corporations and businesses, retail store employees. Females—Retail store employees, teachers, domestic and personal service (cooks, domestics, housekeepers, maids, seamstresses, laundresses, cateresses), clerical occupations (accountants, bookkeepers, cashiers, clerks, stenographers).

MANUFACTURES IN ELYRIA.

The Bureau of the Census reports that the amount of capital invested in manufacturing establishments in Elyria was $7,324,000 in 1909 and $9,486,000 in 1914, an increase of 29.5 per cent during five years. During the same period the amount paid for salaries increased 36.2 per cent; primary horsepower utilized, 19.4 per cent; amount paid for wages, 11.8 per cent; cost of materials consumed, 11.6 per cent; value of products, 9 per cent; value added by manufacture (value of products less cost of materials), 5.8 per cent.

Elyria is not a single-industry center, since no one industry is so prominent as to dominate the field. On the contrary, for a community of its size the variety of factories and of manufactured products is unusual. Some of the more important of these products may be enumerated, as follows: Automatic machinery; automobile engines, parts, and accessories; belting; bicycle and motorcycle saddles; canned fruits and vegetables; concrete blocks; drugs and chemicals; dyes; enameled ware; flour and feed; furnaces and stoves; golf balls; ice; iron and steel (castings, forgings, plates, tubing, tools, etc.); lace machine parts; stockings; talking machines.

Many factories and other places of employment were visited and employers and workers consulted as to the most immediate educational needs. As the result of these conferences the following suggestions were formulated:

1. Very few workers under 18 years of age were found. The employers consulted were almost unanimous in their preference for beginners at least 18 years old, except for definitely juvenile occupations.

2. While there are many occupations for which the public schools as now conducted offer practically nothing in the way of definite

preparation, employers were of the opinion that it is desirable to have boys and girls remain in school at least until graduation from high school.

3. The opinion was frequently expressed, however, that the schools can do much more than they are now doing to insure the future vocational success of young people.

4. It was suggested that there should be more thorough grounding in the so-called fundamentals of education on the part of young people as they come from the public schools. Especially is it felt that these subjects might be taught in such a way as to function more effectively in business and industrial life.

5. A knowledge of chemistry and mathematics would be of definite value to many employees in chemical works, laundries, dry-cleaning establishments, and others.

6. By the use of such devices as stock tickets, time and cost records, and job routes the work in school shops can be made more practical, and boys can thus be sent into the factories with better understanding of industrial shop methods and requirements.

7. It is believed that real need exists for practical evening courses for skilled workers in a number of trades, including carpenters, machinists, plumbers, pipe fitters, electricians, as well as for employees of gas and electric light plants, electric railway companies, retail stores, and others.

8. A part-time arrangement of classes for younger employees in retail stores seems practicable. During the several busy periods that occur annually, groups of extra workers may be employed for two or three weeks at a time, the remainder of the year being spent in school.

9. In Elyria factories, as elsewhere, many occupations do not furnish material for definite courses of instruction, and make no requirements upon the workers for which specific instruction can be given outside of the factory. In many establishments the skilled workers do not exceed 10 per cent of the total.

10. There appears to be great variety of experience in respect to labor turnover. Some employers report a very stable working force, and others just the reverse. In one factory more than 50 per cent of the workers had been employed two months or less.

PRESENT PROVISION FOR VOCATIONAL EDUCATION.

Aside from certain courses offered by the Young Men's Christian Association which have some vocational value, the opportunities for vocational education at present open to young people in Elyria may be briefly summarized as follows:

1. The special vocational course in the public schools, six years in length, beginning with the seventh grade.

2. The technical courses in the public high school, which have vocational value for certain pupils.

3. The commercial course in the public high school. In this course, which is four years in length, the student spends from one-half to three-fourths of the time on commercial subjects. The course is administered by two teachers, one of whom teaches stenography, typewriting, bookkeeping, commercial law, and business forms, and the other teaches commercial geography and commercial arithmetic.

The course does not include banking nor instruction or practice in the use of such office appliances as the mimeograph, multigraph, and computing machines. For several years past the graduates of the commercial course have averaged about 15 annually, one-fourth of the total number graduating. It is said that the work of the instructors is so heavy that no attempt can be made to follow up closely the work of graduates or to keep in touch with specific demands of the positions in which graduates are likely to go.

4. The normal training course in the public high school.

5. The Elyria Business College, a private institution which was established in 1896 and incorporated in 1899. This is a coeducational school of secondary grade (for white pupils only), offering two principal courses—bookkeeping and stenography. Two years of high-school work are required for entrance, and pupils must be not less than 16 years of age. The courses are planned to occupy 6 months, and most students actually complete them in from 6 to 6½ months. The school is open 12 months in the year for day classes and 10 months for evening classes.

The classes offered include the following subjects: Bookkeeping, special penmanship, special class for teachers of commercial branches, stenography, stenotypy, commercial law, commercial arithmetic, business correspondence, adding machine, multigraph, filing devices, bank work. In addition, a number of special courses in the common branches are offered to meet the demand of pupils from the public schools who wish to "make up" work. Four teachers are employed for the work of instruction.

The quality of work observed in the Elyria Business College was very good. There was more evidence here than in the public high school of an effort to connect the instruction definitely with the ascertained demands of business positions to be filled, and to follow up graduates in order to judge of the efficiency of the instruction.

PROGRAM FOR VOCATIONAL EDUCATION.

The steps to be followed in the further development of a program for vocational education may be analyzed as follows: (*a*) Vocational guidance, (*b*) prevocational education, (*c*) vocational schools or classes.

VOCATIONAL GUIDANCE.

One of the significant phases of recent progress in education is in the development of a type of school or department designed to assist boys and girls approximately from 12 to 16 years old to a better understanding of (1) their own abilities, (2) of the opportunities afforded to do the world's work, and (3) of the best possible use to be made of such abilities and such opportunities. When work with this object in view has been undertaken in a more or less formal way as a classroom study and through individual conferences between teacher and pupil, with or without visits to industrial and commercial establishments and individual studies and researches, it has been referred to as "vocational guidance."

The importance of this work, when conducted by properly prepared teachers and directors, and the practical value of the results achieved, have been demonstrated in numerous localities.

It is recommended that work having these objects in view be begun in the Elyria schools on a small scale, and that it be encouraged and extended as rapidly as suitable persons can be found or prepared to direct it. The responsibility for the work in vocational guidance should lodge primarily with the school officer who has charge of the work in manual arts and vocational subjects, to the end that there may be unity of aim and coordination of effort in these closely related fields.

PREVOCATIONAL EDUCATION.

When the studies in vocations are developed to the extent that special equipment is provided, so that the student may participate in practical shop and laboratory activities on real projects selected from a number of typical or fundamental vocations, with sufficient time assigned to the practical work, it is believed that the pupil may be able to form for himself an intelligent relative estimate of his fitness for the various types of vocation in which he thus engages, as the basis for the choice of a life career. To such special school or class has been given the title of "prevocational school" or "prevocational class." In the Elyria schools the earlier years of the six-year special vocational course, noted above, are intended to meet this need.

The prefix "pre-" implies a special kind of training that precedes vocational training, and hence is not itself vocational. It is designed for the young person who has not yet made a choice of vocation, or a choice among several opportunities for vocational education that are offered, and who is presumed to receive therefrom definite assistance in the making of such choices.

The latter part of the term, "-vocational," implies a considerable variety of activities and a broad outlook into possible future careers. In order to be entitled properly to the use of the term, a program for prevocational education should embrace a variety of activities sufficient to include some representation of each of the important groups of possible vocations, from among which it is assumed that a choice is to be made. There should be included something corresponding to the introductory phases of each of the main subdivisions of vocational education, (professional, agricultural, commercial, industrial, and home making), the opportunity to enter upon a definite vocational course in some one of which presumably will be open as soon as a choice can be made.

The importance of practical work in this field is realized by reflecting upon the increase in the efficiency of the vocational school that would follow from limiting its efforts to those who come to it after having made rational and fairly definite choices of future careers, based upon such trying out as might be afforded in a broadly conceived prevocational school. It is the common experience of the vocational school—whether the trade school, the business college, the normal school, or the divinity school—to find that many candidates apply for admission whose determination to prepare for and to pursue a given vocation is based upon chance considerations, rather than upon an ascertained or demonstrated fitness for success in the chosen calling.

In the aggregate, a vast amount of time and energy, and vast sums of money, have been expended in attempts to prepare persons for occupations in which they can not be successful or contented. A considerable portion of this expenditure might be saved to the individual, to the school, and to society by a well-organized plan for assisting young persons to "find themselves."

The studies reported in the preceding pages suggest that the following lines of prevocational work should be introduced: For boys—shopwork in metal, wood, and leather; electricity; salesmanship; and business organization and methods; for girls—commercial subjects, salesmanship, and business methods; cooking, sewing, and home making. It is recommended that experiments be undertaken, especially in grades 7 and 8, to determine what additional types of prevocational classes will be most helpful to Elyria boys and girls.

Plan for prevocational classes.—The special vocational course beginning with the seventh school year, now in operation in the Elyria schools, affords an excellent basis on which to build a prevocational school organization. If a course of training is to be formulated, however, which will help boys and girls to find themselves and enable them to make an intelligent choice of their work for the future, it must be a varied one. What is needed is carefully organized

training in practical activities, which will include experiences from all of the fields of employment mentioned above, and from such other fields as further study may determine. The plan should include a series of jobs, projects, or enterprises, which, in their accomplishment, will give to the pupils an appreciative understanding of the fundamental processes and requirements in these typical groups of occupations.

Essential features.—Experience in other school systems has shown that certain conditions are essential to success in this undertaking:

1. At least one-half of the time in school should be devoted to the various lines of practical activity. Sufficient time must be allowed to accomplish definite results in each occupational field. A six-hour school day, with two sessions of three hours each, has found favor in a number of places.

2. One-half the time should be given to related work in language, mathematics, elementary science, industrial geography, industrial history, and, in general, to preparation for intelligent understanding of and active participation in civic and social responsibilities.

3. The work should be offered, in the beginning, at least, on an elective basis, but all boys and girls who are likely to profit by the instruction should be encouraged to take it. This department should be maintained on the same basis of dignified and serious endeavor as any other, and should not be considered as a special provision for incorrigibles or for pupils physically or mentally backward.

4. As already indicated, there must be variety in the practical activities undertaken, in order to give insight into a number of typical vocational fields.

5. Teachers should be chosen who have had sufficient experience in the occupations represented in the course of study to relate the instruction to actual conditions in the industrial and commercial world. The closest relationship should be maintained also between the shopwork and the related work. The success of prevocational work is dependent in large degree upon the teacher's power to hold and interest the pupils and upon his qualities of adaptability, originality, initiative, and keen interest in the successful handling of the problem.

6. There should be not less than one year, and preferably two years (the seventh and eighth), during which the pupil engages in several typical lines of shopwork or laboratory work, successively, followed by a period of one year or more in which he may specialize in a chosen line.

7. The pupils should be grouped in sections of not to exceed 15 to 18 each, in order to permit a degree of individual instruction.

Course of study.—The outline of the course of study suggested for the seventh and eighth years is as follows:

SEVENTH YEAR.

Boys: Woodworking, half year, three hours per day. Metal work, half year, three hours per day.

Girls: Home economics, entire year, three hours per day.

Boys and girls: Related subjects, entire year, three hours per day.

EIGHTH YEAR.

Boys: Leather work, one-fourth year, three hours per day. Electrical construction, one-fourth year, three hours per day. Commercial subjects, half year, three hours per day.

Girls: Commercial subjects, half year, three hours per day. Home economics, half year, three hours per day.

Boys and girls: Related subjects, entire year, three hours per day.

PRACTICAL WORK.

Woodworking.—To include (1) bench work and cabinetmaking, construction and repair of furniture and equipment for the schools; (2) carpentry, problems in laying out and erecting small frame structures, such as garage, poultry house, and repair work; (3) study of tools, machines, materials, methods of production.

Metal work.—To include (1) bench work in cold metals; (2) forging, simple toolmaking; (3) foundry practice; (4) pipe cutting, threading, and fitting; applied so far as possible to practical problems in construction and repairs which may develop in connection with the equipment of the shops.

Leather work—To include (1) study of the processes of producing commercial leather from the hide—cleaning, curing, tanning, splitting, dyeing, finishing, etc.; (2) construction and repair of articles made of leather in a few typical lines such as belts and purses, harness, etc.

Electrical construction.—To include elementary work in battery construction, magnetism, induction, wiring, electrical measurements, and testing; experiments with batteries, induction coils, and the wiring of bell, telegraph, and telephone circuits.

Commercial subjects.—To include a variety of units sufficient to give a broad insight into the important subdivisions of commercial employment, without attempting to develop specialized technic in any line to the point of encouraging premature entrance upon occupation. The units should include typewriting, stenography, bookkeeping, accounting, filing systems, office devices and practice, commercial forms, elementary commercial law, salesmanship, business methods, and organization.

Drawing.—Elementary in character, practical, and related directly to the projects undertaken by the pupils in the various shop and laboratory courses.

Home economics.—To include elementary work in a variety of units designed to give a broad insight into the problems of homemaking—foods and cookery, textiles and clothing, household furnishings, marketing, household accounts, house planning and decoration, household sanitation, laundering, home nursing, care of children, and general housewifery.

RELATED SUBJECTS.

English.—Language work based on reading, much of the reading to bear upon occupations, industry, and business. Composition, dealing with the practical activities carried on in the school, business correspondence, business forms, spelling, penmanship.

Mathematics.—To be of a very practical nature, including fundamental processes, short methods used in business, business and industrial mathematics, with emphasis on immediate application to the practical activities of the school.

History and geography.—Closely interrelated, and dealing primarily with the industrial and commercial development of the city, State, and country.

Civic and social duties.—Relation of the individual to the country, State, and community; relation of the worker to his work, to his employer, and to his fellow workmen; duties and responsibilities, civic and social, with special reference to sanitation, personal hygiene, etc.

Science.—To include elementary units of work dealing with the more important chemical, physical, and biological problems arising in connection with the practical activities of the school and everyday life. Each unit of project should have for its aim the study and mastery of some scientific principle having a practical application.

Suggested third year.—For pupils who can not be induced to follow some one of the four-year high-school curricula it is suggested that a third year of work be provided based on the two years of prevocational instruction outlined above. This class may take one or all of the following forms:

(1) *A day vocational class*, in which the pupil definitely specializes in some one line, chosen by himself in consultation with his advisors, in the light of his experiences during the first two years. From one-half to two-thirds of the time should be taken up with intensive work in the shop and drafting room, and the remainder with such related studies as will best aid him to prepare for the vocation in which he has chosen to specialize.

(2) *A cooperative class.* In this plan the pupils are paired, one pupil being in school while his mate is in the store or factory. Each individual thus attends school on alternate days, weeks, or fortnights, as the case may be, and works in store or factory the remainder of the time. The successful administration of this plan requires the careful and sympathetic cooperation of the school, employers, pupils, and parents. It has many other advantages besides that of prolonging the period of education for boys and girls who would otherwise drop out of school.

(3) *A part-time class*, to which boys and girls would come from their places of employment for one or two half-days' instruction per week. In this plan the school time may be devoted entirely to bookwork or divided between bookwork and shopwork, or otherwise adapted to the special needs of the group.

Relation to the regular school work.—The prevocational school is planned primarily for boys and girls of normal capacity and attainments who look forward to leaving school at a relatively early age in order to go to work and who desire the help of the school in reaching a decision as to what line of work they may enter with the greatest prospect of success. Instruction of the type contemplated will undoubtedly be of service even to boys and girls who subsequently

go to college and university, but it should make its greatest appeal to those who will probably go no further than the high school.

The ground to be covered corresponds to the last two years of the regular elementary school course and requires the same amount of time for its completion. In general, completion of the regular sixth year's work should be required for entrance, but liberal exceptions should be made in favor of pupils 13 or 14 years of age who are manifestly able to profit by the advantages offered.

Provision should be made for admitting graduates of the two years' prevocational course to the technical and commercial courses of the high school upon the recommendation of the principal of the prevocational school and the superintendent of schools. If at any time in the future the public school system of Elyria should be reorganized so as to provide for an intermediate or junior high school, covering the seventh, eighth, and ninth years, the plan here proposed for a prevocational school is well adapted to fit in with such reorganization.

VOCATIONAL CLASSES.

A sufficient number of employers and workers were interviewed to demonstrate the existence of a demand for more education, both general and specific, although no employer was found who was providing for or encouraging the education of his employees in any effective way. Both employers and workers welcomed the suggestion that the public school can and will adapt itself to the needs of adult workers.

The public-school system has organized a few evening classes for employed workers, and the same is true of the Elyria Business College and the Young Men's Christian Association. More determined effort, better correlation of plans, and more adequate facilities are necessary in order to meet the needs of the situation.

It is recommended that the technical courses in the high school and the special vocational course beginning with the seventh year be strengthened and extended. The former should not make preparation for the engineering college their chief aim, but should adjust themselves more definitely to the demands of industry and business and address themselves to the twofold task of assisting young people to determine the directions in which they are most likely to succeed, and of preparing them for high-grade positions in industrial and commercial life. The latter should aim to retain its pupils as long as possible, but should recognize the fact that many boys and girls will not remain to complete a six years' course, and should consider the desirability of making numerous definite connections with the vocations. Suggestions concerning modification of the work of the first two years of this course are offered in the discussion of the prevocational school in a preceding section.

While aiming at practical utility and helpfulness to young people, all vocational courses should give due attention to the requirements of preparation for intelligent citizenship and discharge of individual and social obligations.

It is recommended that the commercial course in the high school be modified somewhat so as to connect more directly with available places of employment. The following modifications are suggested especially: (1) Establishment of closer relations with employers, involving records of graduates of the commercial course, definite knowledge of the conditions under which they are working, and the progress they are making; (2) introduction of instruction in the use of mimeograph, multigraph, computing machine, filing devices, and other modern office appliances.

The possibility of having the routine business of the board of education and of the offices of the superintendent of schools and the principal of the high school transacted by the pupils of the commercial department, under proper direction, should be considered as a means of providing practical experience for pupils in the advanced classes.

EVENING CLASSES.

The largest service that can be rendered at present in vocational education is through the organization of evening classes. Without doubt all the available equipment of the high school, including shops, drafting rooms, physical and chemical laboratories, would be used to capacity if an aggressive effort were made to supply in evening courses the unmet needs of mature wage earners in Elyria.

It is recommended that the initial steps be taken in the development of practical courses from among those named below. Experience with these courses will be the best guide in determining what other courses to add later. (1) Chemistry and mathematics for employees of chemical works, laundries, dry-cleaning establishments, rubber factory, and others. (2) Blue-print reading, drafting, and mathematics for carpenters, machinists, plumbers, pipe fitters, electricians. (3) Practical shop or laboratory classes for the foregoing and for employees of garages, gas and electric light plants, and electric railways. (4) Salesmanship and business methods for employees in retail stores. (5) Cooking, sewing, and home-making courses, some of which may be given during the day, for those who are actually engaged in home making.

By conferences with individuals and by bringing together groups of prospective students the actual needs should be ascertained as definitely as possible before details of courses of instruction are determined upon.

Instructors should be sought among the public-school teaching staff wherever individuals have had the necessary commercial or industrial experience, and among employers and skilled employees in the occupations concerned.

It is recommended that, in addition to longer courses, a number of courses be organized, 10 or 12 weeks in length, two evenings per week. Experience seems to show that short intensive courses, aiming at a definite goal not too far in the distance, frequently make an appeal and meet a need better than longer courses.

It is recommended that small advisory committees representative of employers and employees in the various occupations be organized to assist in the development of plans and courses of study, in securing competent instructors, and in guiding the progress of the work.

PART-TIME CLASSES.

In many lines of business extra help is required for short periods at certain seasons of the year. It should be possible to adjust the courses of study in the commercial and industrial departments so that students could be free to accept employment for these periods without loss of school work, and thus to supplement the instruction by practical experience in the occupations.

The experience of many communities in the development of day continuation schools and classes, operating under systems of State aid and also without such stimulus, should be drawn upon for further suggestions. Elyria is not ready for an all-day trade school, and probably will not be for some years to come.

SUMMARY OF RECOMMENDATIONS.

1. Instruction in the fundamentals of education should be related more definitely to the development of ability to meet real life situations.

2. Instructors in the manual-training shops should keep in mind the desirability of giving boys more adequate understanding of industrial shop methods and requirements.

3. Systematic work in vocational guidance should be inaugurated, and developed as rapidly as circumstances permit.

4. Responsibility for the work in vocational guidance should lodge primarily with the same school officer who has charge of the work in manual arts and vocational subjects.

5. The special vocational course beginning with the seventh year should be strengthened and extended in scope. The first two years of this course should be organized as a prevocational school, as outlined in this chapter. This course should make numerous definite connections with the vocations.

6. The technical courses in the high school should also be strengthened and extended. The chief purpose of these courses should be the twofold aim of assisting young people to determine the directions in which they are most likely to succeed and of preparing them for high-grade positions in industry and commerce.

7. All vocational courses should give due attention to the requirements of preparation for intelligent citizenship and discharge of individual and social obligations.

8. The commercial course in the high school should be modified so as to connect more directly with available places of employment.

9. The routine business of the board of education and of the offices of the superintendent of schools and the principal of the high school should be transacted by the pupils of the commercial department.

10. The initial steps should be taken in developing evening classes for employees, in which the subjects of instruction shall be the following: (1) Chemistry and mathematics; (2) blue-print reading and drafting; (3) practical shop or laboratory courses; (4) salesmanship and business methods; (5) cooking, sewing, and home making. By conferences with individuals the actual needs should first be ascertained as definitely as possible.

11. Instructors should be sought among the public-school teaching staff and among employers and skilled employees in the occupations concerned.

12. A number of courses 10 or 12 weeks in length, two evenings per week, should be organized.

13. Advisory committees representative of employers and employees should be organized.

14. Part-time day classes should be organized for younger employees in retail stores and in other employment.

15. The experience of other communities in the development of day continuation schools and classes should be drawn upon for suggestions.

INDEX.

Administration and supervision, 12, 19–56, 106–123.
Art, education, 247–252; recommendations, 17.
Arithmetic, intermediate and grammar grades, 161–167; primary grades, 140–143.
Attendance, 42–44.
Backward children. *See* Exceptional children.
Blackboards, 68.
Case School of Applied Science, entrance requirements, 88–89.
Census, school, 41.
Civic education, 173–209; recommendation, 15–16.
College entrance requirements, Ohio, 87–88.
Courses of study, elementary schools, 127–147, 263–267; high school, 76–77, 91–106, 183–189, 267–273; intermediate and grammar grades, 148–167. *See also under individual studies.*
Drawing and art education, 247–252.
Drinking water, sanitary fountains, 71–72.
Elementary pupils, age-grade distribution, 46.
Elementary schools, 14–15, 127–147, 263–267.
Elimination, high school, 89–90.
Elyria High School, elimination, 89.
English, teaching, high school, 95–97.
Enrollment statistics, 41–45.
Evening schools, vocational, 296.
Exceptional children, 55–56.
Foreigners, education, 206–207.
Games, primary grades, 144–145.
Gardening, school and home, 16, 210–227.
Geography, intermediate and grammar grades, 159–160.
German, teaching, high school, 94.
Health supervision, 40–41.
Heating of school buildings, 69–70.
High school, 76–126; courses of study, 91–106; home economics, 253–258; money earned by pupils, 123–125; recommendations, 13–14; social studies, 183–189.
Home economics, recommendations, 17; teaching, 253–262.
Indianapolis, Ind., civic education, 180–182.
Instruction, cost in high school, 112–114; primary grades, 127–147; suggestions for improvement, intermediate and grammar grades, 167–172; supervision, 37–40.
Intermediate and grammar grades, 148–172.
Janitors, salaries, 35; service, 74–75.
Kindergarten, need of, 146–147.
Language study, primary grades, 136–137.
Latin, teaching, high school, 94–95.
Library, high school, 106–107; public, 204–205.

Lighting, school buildings, 66–67.
Location of Elyria, 9.
Manual training, instruction, 263–280; recommendations, 18.
Manufactures, 287–288.
Marking system, high school, 108–111.
Mathematics, teaching, high school, 97–98.
Medical inspection of schools, 40–41.
Music, recommendations, 16–17; teaching, 228–246.
Occupations, parents and children, 78–79; pupils, 80–86; study, 286–287.
Out-of-school activities, primary school children, 138–139.
Parents, birthplace, 283; occupations, 78–79.
Part-time classes, 297.
Penmanship, intermediate and grammar grades, 157–159; primary grades, 143–144.
Personnel of Survey Commission, 8.
Phonics, primary grades, 129–136.
Population, 9.
Population, school, progress through the grades, 41–45.
Prevocational education, 290–292.
Primary grades, instruction, 127–147.
Pupils, birthplace, 283.
Reading, intermediate and grammar grades, 148–154; primary grades, 127–129.
Recess, primary grades, 145–146.
Records and reports, 53–55.
Retardation, 47–52.
Salaries, city officials, 34; schoolhouse janitors, 35. *See also* Teachers' salaries.
School and home gardening. *See* Gardening.
School board, powers and duties, 27–30.
School grounds, 60–62.
Schoolhouses, 10, 13, 57–75.
School nurses, 40–41.
Science, teaching, high school, 93–94.
Seating, school buildings, 67–68.
Secret societies, 201.
Spelling, intermediate and grammar grades, 154–156; primary grades, 144.
Stone test, arithmetic, 165–166.
Supervised study, high school, 107.
Supervision. *See* Administration and supervision.
Survey Commission, 8.
Taxation, school purposes, 19–27.
Teachers, experience, 30–33, 118; professional study, 118; promotion, 35–36.
Teachers' salaries, 34, 116–117. *See also* Salaries.
Teachers' training class, 36.
Teaching, methods, high school, 98–106.
Tests, arithmetic, 163–166.
Toilets, school buildings, 72–73.
Vacuum cleaning, school buildings, 73–74.
Ventilation, school buildings, 70–71.
Vocational education, 18, 281–298. *See also* Prevocational education.
Vocational guidance, 290.
Washington School, 57–59.
Woody tests, arithmetic, 163–164.