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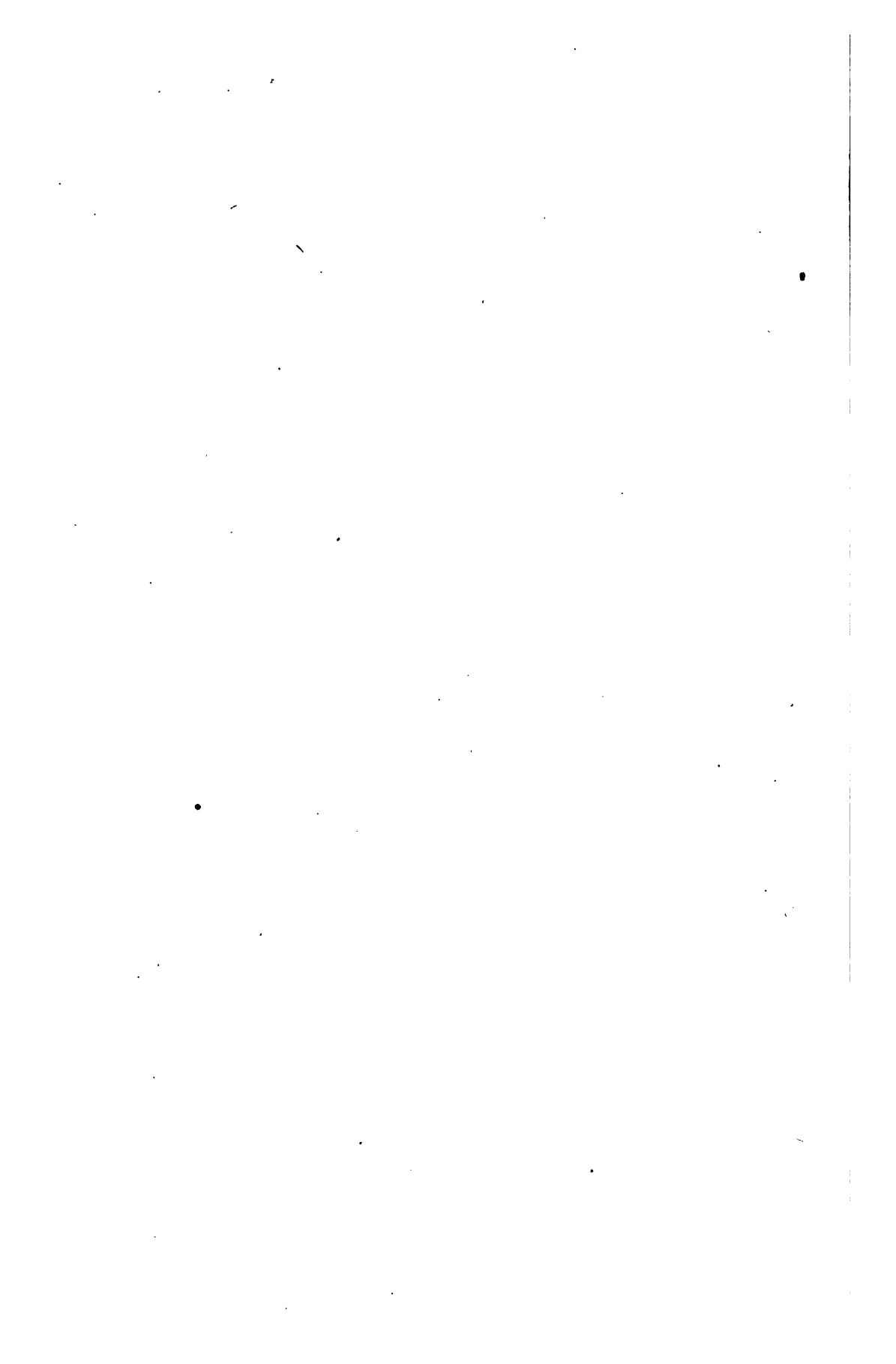
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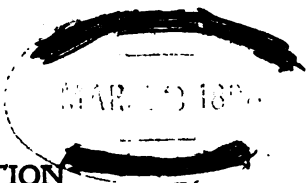


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NATIONAL EDUCATIONAL ASSOCIATION

Report of the Committee of Twelve on Rural Schools

Appointed at the Meeting of the National
Educational Association
July 9, 1895

WITH APPENDICES

CHICAGO
The University of Chicago Press
1897

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REPORT OF THE COMMITTEE OF TWELVE ON RURAL SCHOOLS

APPOINTED AT THE MEETING OF THE NATIONAL
EDUCATIONAL ASSOCIATION, JULY 9, 1895

WITH APPENDICES

PUBLISHED BY ORDER OF THE BOARD OF DIRECTORS OF THE ASSOCIATION

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1897



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REPORT OF THE
COMMITTEE OF TWELVE ON RURAL SCHOOLS.

To the National Council of Education:

The undersigned Committee of Twelve on Rural Schools, appointed at the meeting of the National Council of Education, Denver, Colo., July 9, 1895, has the honor to submit the following report discussing the rural school problem in its four several aspects, each of which has been the special care of a subcommittee of three persons, who have submitted their results from time to time to the criticism of the entire committee. These subcommittee reports are preceded by a general introduction, written by the Chairman of the Committee of Twelve, in which a history of the formation of the committee is given, together with a brief summary of the recommendations of the several subcommittees. In the appendix will be found a number of valuable contributions illustrative of different points made in the several reports.

HENRY SABIN,
D. L. KIEHLE,
A. B. POLAND,
C. C. ROUNDS,
J. H. PHILLIPS,
B. A. HINSDALE,
S. T. BLACK,
W. S. SUTTON,
L. E. WOLFE,
W. T. HARRIS,
L. B. EVANS,
C. R. SKINNER.

At the same time the committee was empowered to enlarge its number to twelve, and to fill any vacancies which might occur.

On the twelfth day of July the Directors adopted a series of resolutions, under which a sum not exceeding two thousand five hundred dollars was set aside and placed in the Emergency Fund for the use of the committee. The resolutions also provided that not more than one thousand five hundred dollars should be drawn during the year 1895-96; that no compensation should be allowed any member of the committee; and that the fund may be drawn upon, if necessary, to defray in whole or in part the publication of the report. It is proper to add here that at a meeting of the Directors at Buffalo, upon the request of the Council, an additional one thousand dollars was placed in this fund for the use of the committee under the same conditions as above.

The committee held its first meeting July 10, 1895, at which time, on motion of Dr. Hinsdale, the committee was increased from nine to twelve by adding the following persons: W. T. Harris, Washington, D. C.; L. B. Evans, Augusta, Ga.; C. R. Skinner, Albany, N. Y.

Messrs. Sabin, Kiehle, and Hinsdale were constituted a special committee to formulate a plan of work and furnish members with copies of the same; also, to divide the committee into sections and to assign appropriate work to each.

The committee as finally constituted consisted of the following gentlemen:

Henry Sabin, Des Moines, Ia., Chairman; B. A. Hinsdale, Ann Arbor, Mich.; D. L. Kiehle, Minneapolis, Minn.; W. T. Harris, Washington, D. C.; A. B. Poland, Trenton, N. J.; C. C. Rounds, Plymouth, N. H.; J. H. Phillips, Birmingham, Ala.; S. T. Black, Sacramento, Cal.; W. S. Sutton, Houston, Tex.; C. R. Skinner, Albany, N. Y.; L. B. Evans, Augusta, Ga.; L. E. Wolfe, Kansas City, Mo.

The special Committee of Three met in Chicago October 25 and 26, 1895, and, after consultation, divided the entire committee into four subcommittees, and assigned certain topics to each for investigation and report. These subcommittees were constituted and the work assigned to each in accordance with the following schedules:

I. School Maintenance. Subcommittee: B. A. Hinsdale, Chairman; W. S. Sutton, S. T. Black.

This branch of the subject was divided for convenience into three subheads:

1. Revenues. Permanent school funds; taxation, general and local, embracing state, county, township, and district taxes; miscellaneous sources of school income, such as fines, licenses, gifts, etc.

2. Expenditures. Machinery and methods of distribution, general and local. The main points to be considered are the channels through

which the funds reach the schools, and the rules and methods governing their distribution and application.

3. Organization of Business Administrative Machinery. The county, district, and township-unit systems; the consolidation of schools; the transportation of pupils; county, township, and district high schools; the relation of rural schools to city schools. Inquiry should be made into the main social, industrial, and economical factors that condition rural education, as density of population, wealth, means of communication, etc.

II. Supervision. Subcommittee: L. B. Evans, Chairman; C. R. Skinner, Henry Sabin.

1. The manner of electing the superintendent, state, county, district, or township.

2. Minimum qualifications required of each, and term of office.

3. The relation of the superintendent, state, county, district, or township, to the teachers and pupils as officer and adviser.

4. The relation of the superintendent, state, county, district, or township, to school officers, and their duties.

5. The relation of the state superintendent to the county and township superintendent.

6. The relation of the superintendent to the public at large, as creating and shaping public opinion in rural districts.

7. The relation of the superintendent to school buildings, architecture, sanitation, and hygienic conditions.

III. Supply of Teachers. Subcommittee: C. C. Rounds, Chairman; J. H. Phillips, D. L. Kiehle.

1. An inquiry into the assistance rendered rural schools by the following facilities for preparation:

(a) Normal schools.

(b) Training schools in high schools and academies.

(c) Summer training schools.

(d) Institutes.

2. An inquiry into the means provided for the improvement of teachers already in the service.

(a) Teachers' meetings and associations.

(b) Reading circles.

(c) Libraries and current literature.

3. An inquiry into the manner of electing, employing, and paying teachers.

(a) By what authority examined and certificated.

(b) By what authority employed.

(c) Terms of engagement, certificates, and salaries paid.

IV. Instruction and Discipline. Subcommittee: W. T. Harris, Chairman; A. B. Poland, L. E. Wolfe.

1. Methods of teaching and government peculiarly affecting rural schools.

2. Courses of study, text-books, and other appliances.

3. Working programmes.

4. Gradation and classification of pupils.

5. The relations of rural schools to their environments: as to farm life, mining life, etc.

It was also provided that the investigation of the several subdivisions of the general subject should follow two main lines:

1. The condition of rural schools now existing.

2. Changes to be recommended; what is, and what should be.

It was not thought necessary that the committee should go into history or development farther than to make the conditions that now exist, and the reforms that are recommended, intelligible. It was also recommended that changes to be made, or reforms to be proposed, should have respect to existing facts; that they should be practical in the rational sense of that word.

It was further left to the several subcommittees to determine the methods to be employed in carrying on their work, and to exercise the greatest freedom in enlisting aid from every possible source.

Each subcommittee was thus left free to formulate such questions as seemed best designed to elicit the desired information in the most definite form.

The committee met at Jacksonville, Fla., February 18 and 19, 1896, for consultation and comparison of results. An informal meeting was held during the sessions of the National Educational Association at Buffalo in July, 1896, at which time it was determined to hold a meeting of the full committee at Chicago November 18 to 21, 1896. The chairman of each subcommittee was also directed to have such preliminary matter ready at that time as would embrace all the essential points necessary to a fair understanding of the scope of the final report to be made to the Council in July. It was also voted to ask certain experts in rural school matters to meet with the committee, in order that it might have the benefit of their experience.

The committee met at the Auditorium in Chicago, as determined. The entire committee was present at each session, with the exception of D. L. Kiehle, who for satisfactory reasons was not present until Thursday morning. The following gentlemen were present upon invitation of the chairman:

John MacDonald, editor of the *Western School Journal*, Topeka, Kan.; W. W. Stetson, State Superintendent of Maine; J. L. Pickard, of Iowa

City, Ia.; O. T. Bright, County Superintendent of Cook county, Ill.; Albert G. Lane, City Superintendent of Chicago; D. E. McClure, County Superintendent of Oceana county, Mich.; W. H. Chandler, of Madison, Wis.; President F. W. Parker, of the Chicago Normal School; G. R. Shawhan, County Superintendent of Champaign county, Ill.; John Trainer, of Decatur, Ill.; T. C. Chamberlin, of The University of Chicago; J. J. Schobinger, of Morgan Park, Ill.; W. S. Jackman, of the Chicago Normal School; A. W. Edson, State Agent, Boston, Mass.

Wednesday and Thursday were devoted to general discussion, one half day being allotted to each of the four subcommittees in the following order: School Maintenance, Supervision, Supply of Teachers, and Instruction and Discipline. Friday and Saturday were devoted to the consideration of the preliminary reports submitted by the chairmen of the respective subcommittees. The sessions were held from 9 A.M. to 12 M. and from 3 to 6 P.M. In order to facilitate discussion printed or typewritten copies of the main propositions in each report were placed in the hands of those present. During Friday and Saturday the reports were read section by section, and, after alterations and amendments as suggested by various members of the committee, they were adopted.

It was further ordered that the reports of the different subcommittees should appear in the printed volume in the following order:

1. School Maintenance.
2. Supervision.
3. Supply of Teachers.
4. Instruction and Discipline.

On motion the entire matter of printing the report, when completed, was intrusted to the charge of the chairman of the committee, with the suggestion that he confer with the United States Commissioner of Education in regard to securing the co-operation of the national bureau for publication purposes.

T. C. Chamberlin, of The University of Chicago; W. S. Jackman, of the Chicago Normal School, and F. H. King, of Madison, Wis., were requested to prepare a discussion of the possibilities of a course of study especially adapted to agricultural environments. This discussion constitutes *Appendix G* of this report.

Appendix A, consisting of a paper read by B. A. Hinsdale before the Department of Superintendence at Jacksonville, is published by order of the committee. The course of study for rural schools and the paper by Dr. White, designated as *Appendix I*, and the paper by F. W. Parker, *Appendix H*, are inserted by the same authority. The other matter in the appendix has been placed there in accordance with a vote of the committee, leaving the selection to the choice of the chairman of each subcommittee and of the general committee.

The date for publication of the report was fixed at from four to six weeks before the meeting of the National Educational Council at Milwaukee. After determining that the chairman of each subcommittee should send a typewritten or printed copy of his report to each member of the committee before publication for suggestions or amendments, the committee adjourned.

In the foregoing historical statement no attempt has been made to follow the exact order of proceedings, but only to gather from the Secretary's records such main points as will give the Council exact information of the methods adopted by the committee.

As soon as possible after the adjournment of the committee the chairman of each subcommittee prepared his report, and printed or typewritten copies were sent to other members, and also in all cases to persons who were supposed to be able to point out omissions or to suggest alterations. As a result these reports represent the combined experience of many competent persons besides members of the committee. This method led to much correspondence on the part of the chairmen, but it has undoubtedly aided them very materially in making a broader and much more comprehensive report. The committee found itself confronted from the beginning with the fact that the environments of schools differ so much in various sections of the country that it is impossible to make other than very general suggestions. Conditions vary so much between Maine and California, or Minnesota and Texas, that what would be an excellent system in one would possibly fail in the other.

SCHOOL MAINTENANCE.

Those who read the following reports will find that several recommendations are made by more than one subcommittee. Thus in the matter of organization the necessity of adopting a larger unit than the district, as the township or the county, is very strenuously insisted upon by two or more subcommittees. It is a fact of such great importance that other essential points hinge upon this. The arguments are very fully stated in the report of the Subcommittee on School Maintenance, but the general committee is fully agreed upon the desirability of effecting this change wherever the district system at present prevails. It would conduce to effectiveness and simplicity of organization; to economy in the use and distribution of funds; to the equalization of the burdens of taxation, and to a system of supervision which would produce better results from the instruction given in the rural schools.

Again, all the subcommittees are strongly in favor of the consolidation of schools which are too small to employ profitably the time of one teacher into larger schools, when practicable, in order that better instruction may be provided than is possible under the present system. This involves

also paying for the transportation of pupils to some central school at the public expense. The different subcommittees have reached this conclusion, each from its own standpoint. The inferences drawn from facts and figures are too obvious to need any argument. The conclusions arrived at in the discussion of the two points, organization and consolidation, are very broad, and would seem to be applicable to some section of nearly every state in the Union.

The manner of raising and distributing the revenues has been carefully investigated, and the subcommittee having that subject in charge seems to have reached very wise and just conclusions. The township, or special district, in which the parents of the pupils reside should contribute to the school funds, as should the county and the state. Every interest concerned in the education of children should bear a proportionate share of the burden of taxation. In the distribution of school funds, because of the community of interests involved in popular education, the strong and wealthy must contribute to the support of schools in weak and impoverished districts. It may not be possible to provide equal school facilities in every part of the state, but every district in which a school is established should be assured beyond all doubt of a sufficient sum of money to employ a competent teacher for the minimum number of months or days fixed by the law. The duty of providing for the pupils of the rural schools the means whereby they can have the benefit of high schools in their neighborhood has not been overlooked. It is not necessary to discuss fully these points. Attention is invited to them as set forth in the report of the Subcommittee on School Maintenance.

SUPERVISION.

The subject of school supervision is discussed under the general divisions of state, county, township, and district. The task assigned this subcommittee is difficult because, as far as rural schools are concerned, there are no well-defined lines of work upon which there is a general agreement. There is great need of supervision which is intelligent and which carries with it some degree of authority. As a general thing, the officer known as state superintendent has only advisory authority. He can make suggestions, but they carry with them no more force than there is in the character and influence of the officer who makes them. He is too far removed from the rural schools, and is too much engaged in other matters connected with his office, to come into close touch with them and their present interests.

No one questions that supervision should be compulsory. In fact, such is the case in most states today. The great question connected with it is how to make it effective. A supervisor who has charge of a hundred schools or more, scattered over an entire county, finds it impossible

to control and direct them in accordance with well-devised plans. Accordingly the subcommittee urges township or district supervision where it is practicable, or that each supervisor should have such deputies or assistants as will enable him to reach every part of his field. Again, if supervision is to be effective it must be the product of skill and intelligence. As well put an ordinary seaman, selected from the crew by lot, in charge of an ocean steamer, with its precious cargo of lives and wealth, as to place a raw, uncultivated man or woman, selected by the chances of a political convention, in charge of the schools in which our youth are being trained for citizenship. The subcommittee is of the opinion that certain qualifications, moral and mental, with some experience in teaching, should be exacted from everyone who aspires to the duties of a supervisory office. The duties which are incumbent upon a supervisor of schools have been so minutely discussed that it is not necessary to restate them here. It is sufficient to say that knowledge and skill, enthusiasm and patience, sympathy and forbearance, firmness and justice, are requisite in one who would discharge his duties conscientiously and with due regard to the highest good of all concerned.

The importance of bringing the school into touch with the farm and the home has been dwelt upon at some length (*Appendix O*). To this end the supervisor should make himself thoroughly acquainted with peculiar conditions of life in his supervisory district. It is not enough that he visit the school and consult with the teacher. He must meet school officers and parents, awaken their sympathy and arouse their interest, if he would do his whole duty. He must have a controlling influence in the selection of teachers, in the erection of school buildings, especially as concerns sanitation and hygiene, in teachers' meetings, and in general school work throughout his entire territory.

A wise supervisor cannot fail to observe carefully the environments of the school, which exert a powerful, though unconscious, influence upon the character of the pupils. The bearings of the æsthetical upon the ethical side of the child's nature, the relations of music and art as determining the development of the child along right lines, should be observed and guarded as well in the rural as in the city schools.

SUPPLY OF TEACHERS.

The question of the support afforded teachers is one great hindrance in the way of improving the rural school. The following table showing the average monthly salaries paid teachers in rural schools has been compiled from answers to circulars sent out to state superintendents. It is unfortunate that in most states the statistics make no distinction between city and rural school-teachers. Consequently many of the returns are

estimated. They are valuable, however, for purposes of comparison and general information.

	Males	Females		Males	Females
Alabama	\$25	\$20	Missouri	\$40	\$34
Arkansas	33	30	Montana	60	45
California ¹	67	56	Nebraska	35	30
Colorado ²	50	45	Nevada	85	60
Connecticut	30	30	New Hampshire	30	30
Delaware	35	33	New York ⁴	37	37
Illinois	30	25	Ohio	35	29
Indiana	40	35	Pennsylvania ⁵	42	33
Iowa	35	30	Rhode Island	40	36
Kansas	40	32	South Carolina	30	27
Kentucky	36	34	South Dakota	36	31
Louisiana	40	33	Utah	53	37
Maine	35	22	Vermont	39	27
Maryland	29	29	Virginia	28	25
Massachusetts ³	32	26	West Virginia	36	36
Michigan	29	25	Wisconsin	46	30
Minnesota	40	31	Wyoming	45	40

In connection with above table we must take into account that in only a few states is the average length of the school over eight months. This includes cities and towns, as well as rural districts, so that it is fair to conclude that in general the country teacher finds employment not to exceed seven months in a year, and often not more than five or six.

The subcommittee regrets that so few are able to apprehend the qualities essential to a good teacher. Professional fitness is ignored in nearly every case. The smaller the unit of organization the greater is the disposition to engage teachers for short periods of time. All engagements should be for one year at least, and frequent changes of teachers should be discouraged.

Perhaps the most important subject intrusted to this subcommittee has reference to the training and preparation of teachers. There is no doubt that the normal school in most states does not reach down and take hold of the common district school. There is room, as indicated in the report, for a series of normal training classes with a course of one year, or at most two years, not modeled after a state normal school, but suited in all respects to the needs of a class of young people from whom we draw nearly all our rural school-teachers. Instruction for one year in such a school could be made to so inspire students with a desire for knowledge,

¹ Includes schools of not more than two teachers.

² Includes the schools in the agricultural sections only.

³ Based on fifty-two male teachers and 143 female teachers in towns under \$500,000 valuation.

⁴ \$9.26 a week, counting thirty-three and one-third weeks in a year.

⁵ Not including the city of Philadelphia.

to so fill them with the teaching spirit, as to work a most beneficent change in the schools coming under their charge. The proposition to establish continuous sessions in normal schools, as set forth in the sub-committee's report, is full of promise for the improvement of rural school-teachers without withdrawing them from active service. The terms and courses could, under the plan, be so adjusted as to enable them to attend a normal school for work in regular courses of study during that large part of the year not occupied in teaching. A course for one year is indicated below. If extended to two years, the extension should consist not so much in the introduction of new branches as in doing something more than elementary work in the branches already in the curriculum.

COURSE OF STUDY FOR ONE YEAR OF FORTY WEEKS.

General Divisions	First Term	Second Term
Language.	Reading and Literature.	Grammar. Elements of Rhetoric.
Mathematics.	Arithmetic. Algebra.	Geometry.
Natural and Physical Science.	Geography. Elements of Chemistry.	Botany. Elementary Physics.
History.	U. S. History. Civil Government.	General History. Biography.
Professional Studies.	School Economy. Elementary Psychology Practice Teaching.	Physiology with special reference to hygienic conditions. Practice Teaching.

The number of lessons in each branch per week must be determined by the conditions and necessities of the class. Singing and drawing should have such a place as their importance demands. At least two lessons per week for each of them should be insisted upon.

The course of study to be completed in one year is arranged according to relation of subjects and not according to order of study. It embraces, so far as elements are concerned, those subjects which are necessary in order to enable a teacher to deal with organic and inorganic nature, with history and civil government, with literature and language, and with so much of music and art as the conditions of the school will admit. While provision is made for professional training, the success of such a course as this as a means for preparing teachers for their work will depend almost entirely upon the good judgment and skill of those who are intrusted with the management of the school. The tendency to overload

such a course, to crowd two years' work into one, will have to be very carefully guarded against. The entire course is intended to be only elementary, and is for the benefit of a large class of teachers who have but little preparation, and are not able from various reasons to devote more than one year's time to attendance upon a normal school. The advantages of a school of this nature would be greatly enlarged by the possession of a carefully selected library, and of sufficient apparatus for purposes of illustration and experiment. If the students could be taught to make this apparatus, with maps, charts, etc., for use in rural schools, it would add to their usefulness as teachers. Very great advantage would accrue to the pupils from coming in contact with disciplined minds in the persons of their instructors. But few rural teachers know how to study or how to get the most out of the books which fall into their hands.

Summer schools, reading circles, and institutes have received their share of attention. The whole ground has been well covered and will repay a careful perusal.

The scheme for the examination and certification of teachers has been thoroughly digested. There will be some who may not agree with the subcommittee in all particulars, but no one will dispute the fact that too many teachers in the rural schools are contented with the lowest grade of certificate which will answer the purpose of the law. There is a great necessity for some scheme such as is here recommended, whereby teachers can rise step by step in their calling, if they earnestly desire to improve. On the other hand, this scheme furnishes a reasonable excuse for not affording further professional recognition of any kind to those who show no disposition or no ability to do anything better in the line of preparation for their work.

INSTRUCTION AND DISCIPLINE.

The report under this head will be found to embrace several important recommendations. Some of these will provoke discussion, but most of them are of such a nature as to commend themselves to every thoughtful person. The report opens a broad field of inquiry, which must of necessity receive more attention as the wants and necessities of rural schools are better considered.

The evils of attempting to grade the rural school as the city school is graded are very clearly set forth, accompanied by the suggestion that those normal schools which as part of their work train teachers for rural schools should carefully impress upon such teachers the necessity of considering the size of the school in determining the uses and abuses of grading and classifying pupils. This suggestion is all the more pertinent in view of the movement in many states to require some previous professional training as a prerequisite for entering any public school as a teacher.

Considering that the course of study for the rural school need not differ in any material point from that provided for the city school, it is urged that the aim of such a course is to enable the pupil to recognize the conditions of inorganic and organic nature, and to pursue the studies of literature, language, and history, as they are necessary for his entrance upon civilization. The difference in courses of study for rural or city schools is found to be in those collateral branches which relate to the environment of the pupil or to the neighborhood in which he dwells. The report upon this point is very full and will repay a careful study of its details. The subcommittee calls especial attention to the relation of the course of study to the system of grading and classification. The suggestions made are of great practical value in any discussion which endeavors to determine the method of adapting a course of study to the wants and conditions of rural schools. It cannot but be very helpful to be told that the course of study is the measuring rod used only to determine at what point in his work the pupil has arrived, and not a Procrustean bed used to give the work the lifeless beauty of a dead uniformity.

The consolidation of those schools which have become so reduced in numbers as to render it unprofitable to maintain them separately, the transportation of pupils at public expense to other schools than their own, and the concentration of higher-grade pupils at a central point, are urged as means of lessening many of the evils from which rural schools are suffering. This provision, having been grafted into the law of several states, bids fair to prove of great benefit. Wherever it has been tried it has commended itself as economical, and as a means of affording better teachers and consequently better schools. The matter of improved roads enters incidentally into this discussion, as having great bearing upon the question of transporting children to central points for school purposes.

In connection with school exercises at the town or county center, once or twice a year, competitive examinations are not recommended unless they are very carefully guarded. The feature of social intercourse, the stimulus which comes from meeting with his mates, have advantages which ought not to be overlooked or neglected.

Home reading, with what is termed school extension, is dwelt upon at such length as its prominence demands (*Appendix O*). To carry good reading material, whether of science, literature, or fiction, prose or poetry, into the schools and homes of the rural districts must be a part of any educational scheme which has for its object making country life more endurable or more attractive. The various recommendations of this part of the report are worthy of careful consideration at the hands of those even who may not wholly agree with them.

CONCLUSION.

Your committee has called in the aid of a number of persons whose time and thought have been largely given to matters connected with the management and instruction best suited to the wants of rural schools. It was found impossible to embrace the entire matter placed at our disposal in the body of the report. We have, therefore, printed much of it in the form of an appendix, believing that it will add largely to the value of this report. It is not to be supposed that every point has been covered, or that the entire subject has been exhausted. The committee has endeavored diligently and to the best of its ability to throw some light upon what may possibly be regarded as a collection of subjects embracing a very large field. While there are many points worthy of especial attention, I have gathered up the following as a brief summary of those which may be considered of most pressing importance :

SUMMARY.

1. For purposes of organization, maintenance, or supervision, nothing should be recognized as the unit smaller than the township or the county ; the school district is the most undesirable unit possible.

2. Every community should be required to raise a certain sum for the support of its schools as a prerequisite for receiving its share of public money. A certain definite sum should be appropriated to each school out of the state funds, and the remainder should be divided in accordance with some fixed and established rule, a discrimination being made in favor of townships most willing to tax themselves for school purposes.

3. One of the great hindrances to the improvement of the rural school lies in its isolation, and its inability to furnish to the pupil that stimulative influence which comes from contact with others of his own age and advancement. The committee, therefore, recommends collecting pupils from small schools into larger and paying from the public funds for their transportation, believing that in this way better teachers can be provided, more rational methods of instruction adopted, and at the same time the expense of the schools can be materially lessened.

4. There is a tendency to fill the rural schools with untrained, immature teachers. The establishment of normal training schools, under competent instructors, with short courses, each year of which shall be complete in itself, would do much to remedy this evil. The extension and adjustment of the courses and terms of the state normal schools so as to constitute a continuous session would enable them to contribute more directly than now to the improvement of the teachers of rural schools (*Appendix S*). The state would then be justified in demanding some degree of professional training from every teacher in the rural as well as in the city schools.

5. The establishment of libraries, the prosecution of the work of school extension by lectures and other means, the introduction of such studies as will have a tendency to connect the school and the home, especially those having a direct bearing upon the everyday life of the community, and the necessity of applying the laws of sanitation to the construction of rural schoolhouses, demand immediate attention.

6. The rural schools are suffering from the want of official and intelligent supervision. In every state some standard of qualifications, moral and intellectual, with some amount of actual experience, should be demanded by law from those who aspire to fill the office of superintendent or supervisor of schools.

7. Good morals and good manners constitute an essential part of an educational equipment. The inculcation of patriotism, of respect for law and order, of whatever tends to make a good citizen, is of as much importance in a small as in a larger school. Regularity, punctuality, obedience, industry, self-control, are as necessary in the country as in the city school. Country school-teachers should call to their aid the beautiful things in nature, that with reverential spirit they may lead the children to reverence Him who hath made all things good in their season.

HENRY SABIN,
Chairman.

REPORT OF THE SUBCOMMITTEE ON SCHOOL MAINTENANCE.

The maintenance of an efficient state system of public instruction involves numerous sociological factors of an important character. This is particularly true in a democratic state, where public opinion gives the final sanction to all public activities. Moreover, there is good reason to think that it is even more important to consider such factors carefully when providing rural schools than when providing urban schools. The bearing of the wealth of the state, both in the aggregate and in relation to population; the density of population and the ratio of rural to urban population; the ratio of the adult or wealth-producing population to the population of legal school age; the facilities for travel and the character of the people in respect to race elements—the value of such factors as these in the problem is almost too plain for argument (*Appendix A*).

The organization and administration of the powers of government must also be considered. The government of the United States stands to all the members of the Union in the same relation; that is, within the states it has no proper educational function whatever. The state government, however, is a constant factor: it exercises the central state authority. But

when we take the next step we are at once confronted by contradiction and confusion. First, we find in New England the town system of local government. Here nearly all the local governmental functions are performed by the town; the county exists, but it is more a judicial than a political unit, and in Rhode Island it is wholly judicial. The town is much, the county little. Secondly, the county system, which exists throughout the South and in several of the western states, more than reverses these conditions. The county is the organ of local government, and the township does not commonly exist. The county is divided into districts for the purpose of defining the jurisdiction of justices of the peace, into election precincts, and sometimes into school townships. Here the county is everything, the town nothing. Thirdly, the old middle states and most of the western states have what is called the mixed or compromise system. In these states the township is less than in New England and the county more, the county less than in the South and the township more; in other words, both township and county are employed in something like equal measure. Again, two types of the mixed system are found in different states. In New York and the states that have imitated her the county legislative and executive board is composed of supervisors elected by the several townships, while in Pennsylvania and the states that have followed her example this board is composed of commissioners elected by the county at large. The county is, therefore, a governmental organ in all the states, while the township is found only in two groups of states. Moreover, in those states where the town or township is found it varies considerably in powers in comparison with the county. These elementary governmental facts it is necessary to remember, because they directly affect the matter in hand. Manifestly, the people will not be apt to create local organs of government for any one single purpose unless they deem it absolutely necessary; on the other hand, they will manifestly use for any such purpose, as far as consistent, the same organs that they use for other local purposes. This is just as true of schools and education as of other public interests. Except that Vermont has a county examiner of teachers, no mention is made of the county in any New England school law;¹ no mention is made of the town or township in any southern state; while the states that have the compromise system use both the county and the township as organs for carrying on their schools. It will be seen that no account is here taken of the city or municipality, because this is common to all the states and does not relate to rural schools.

¹Vermont, Maine, and New Hampshire once enacted laws creating the county superintendency, but these laws did not remain long on the statute books. No state is likely to use the county for an administrative school purpose unless it uses it for other administrative purposes.

An ambiguity in the use of the term *town* is also to be mentioned. The *township* of the middle and western states corresponds in general to the New England *town*; while in these states the *town* is a village, hamlet, or even city. All the recommendations made in this report will recognize distinctly the facts now stated.

Still another preliminary explanation is called for. The term *district*, as used in school legislation and in educational discussions, is very misleading. The two leading senses of the word must be sharply discriminated. This can be done by describing the two principal forms of local school organization.

1. *The Town- or Township-unit System.*—This is something wholly different or separate from the town system of local government described above. The two systems may exist together, but not of necessity so; the town- or township-unit system, called also the *town-district* system, is found in connection with both the town and the compromise systems of local government; it could not exist with the county system, as a matter of course. The town system of local government relates to local affairs generally; the town- or township-district system to schools only. The name *township-unit system* means only that the town or township is the ultimate unit of school organization and administration. This unit, with such assistance as it receives from the state or county, provides and carries on its own schools independent of any other unit. It raises funds by taxation and expends them, subject only to the law of the state. It is the organized town or township, a body corporate and politic, under its educational aspect. The local authority is sometimes a school committee, as in Massachusetts; sometimes a board of education, as in Ohio, and, again a township trustee, as in Indiana. Again, the township-unit system does not necessarily involve the consolidation of rural schools. The school children within the unit may all be brought together in one central school at some advantageous point, or they may attend a plurality of schools scattered through the township. In the second case, the limits or boundaries of the several schools must be marked off for the regulation of school attendance, unless indeed pupils are permitted to attend such schools as they please, and these areas are commonly called *districts* or *school districts*. In Ohio they are known as *subdistricts*, and they serve also as units of representation in the township board.¹ Here then are

¹ The explanation of the Ohio law on this point is historical. Previous to 1892 the township was the school district proper, but this was divided into subdistricts. The township board of education raised all the local funds by a tax levied on the taxable property of the township, and apportioned them among the subdistricts; the subdistrict boards of directors employed the teachers and carried on the schools. The voters of the subdistrict, in annual school meeting, elected the three directors, one every year, for three years, and these again elected one of their number clerk, who represented his subdistrict in the township board. Under the Workman Law of 1892 all the old powers of the directors

two clear uses of the term *district*: one is the town or township, and the other a part of the town or township defined primarily for the regulation of school attendance, but also sometimes serving as a unit of representation.

2. *The District System*.—Here *district* is used in quite another sense. Geographically, the school district is now commonly a subdivision of a town, as in Connecticut, or of a township, as in Michigan, or of a county, as in the county-system states. Ordinarily it is a body politic and corporate, and is the ultimate unit of school organization and administration. It has its own school committee or board elected by the voters of the district, in school meeting, and, with such help as it receives from the state or county, it builds its own schoolhouse and provides and carries on its own school or schools. It is, therefore, a taxing as well as an administrative unit. Under this system the district is the controlling factor of school organization. Not only is it the most democratic form of school organization, but it has been called "probably the most communistic as well as democratic feature of our political institutions, and is certainly the smallest minor civil division of our system."¹

Still other districts are mentioned in the laws and reports, as special districts, city districts, borough districts, joint districts, and the like; but these names do not present any new features of an essential character.

These explanations premised, the subcommittee will divide this report into three grand divisions, *viz.*, Revenue, Distribution, and Organization. The last topic, however, will be considered only so far as relates to school maintenance. By school maintenance is meant the provision and support of public schools.

REVENUE.

The subcommittee submits that the first essential to the material improvement of the rural schools of the country is the provision of revenue sufficient for their adequate support. Accordingly, this is the first subject to be considered.

The educational items in the budgets of all progressive countries have assumed great proportions, and are all the time growing. The Commissioner of Education reports the expenditure for common schools in the states of our Union for the year 1894-95, not including payments on bonds, at \$178,215,556. Seven states expended more than \$5,000,000 and less than \$10,000,000 each, and five more than \$10,000,000 and less

were transferred to the township board, but the subdistrict was left for the regulation of school attendance and to serve as a unit of representation in the township board.

¹ Mr. Wellford Addis, Specialist in the Bureau of Education. See chap. xxxiv. of the Report for 1894-95, "The Social Unit in the Public School System of the United States."

than \$20,000,000 each. New York alone stood above \$20,000,000. In 1888-89 the total for the country was \$132,129,000, and in 1883-84 only \$103,909,528. But, unfortunately, we have no statistics showing the division of these vast sums between the rural districts and the towns and cities. A *city*, in the dictionary of the National Census Office, is a concentration of population containing 8,000 people or more of all ages, and in 1894-95 there were 574 cities in the country. The Commissioner of Education reports for the year 1894-95 that 3,302,841 children were enrolled in the schools of these cities, to 10,894,911 enrolled in other schools. He reports further that the maintenance of these city schools cost \$74,721,332, of the others \$102,876,359. But this is no proper division of rural and urban schools, since the educational conditions existing in many centers of population containing less than 8,000 people are the same as those existing in the 574 cities. At present it costs much more to school 1,000, 10,000, or 100,000 children in the cities than in the country, but this is mainly due to the fact that the education furnished is so much greater in quantity and so much better in quality. It is not improbable that, if rural schools were brought as near as possible to the level of urban schools, they would be quite as costly. At least, it is evident that the first condition of good rural schools is a sufficiency of funds with which to provide and maintain them. How shall these funds be provided?

I. A century ago the American people began to take an interest in the creation of permanent school funds or endowments. This interest was originally stimulated, if not created, by the policy that Congress foreshadowed in 1785, and subsequently firmly established, to endow the common schools in the public-land states with liberal grants of public lands. In every state in which Congress has exploited the wild lands either one-thirty-sixth or one-eighteenth part of such lands has been dedicated to the public schools. Beginning with Connecticut in 1795, nearly all the non-public-land states have also created such endowments out of their own resources. Several of them devoted the United States deposit fund of 1837 to this purpose. At the beginning of the century no one dreamed to what proportions public education would grow in one hundred years; and men thought, not unnaturally, that permanent endowments would greatly ease the burden of taxation for school purposes, and would keep the educational machinery of the state constantly running and well regulated. It will not be denied that, relatively, these funds have come far short of meeting the expectations of those who laid their foundations. There can be little doubt that, in many of the states, and particularly when such states were new and poor, they have hastened educational development; but it is quite certain that they have often done great harm, causing the people to rely upon the feeble income

derived from them, and to turn their faces away from the only adequate source of school maintenance, that is, public taxation. Texas has been gazetted as having the most magnificent possibilities of any state in the way of a permanent school fund, but some citizens of that state are now questioning whether these possibilities may not prove other than an unmixed blessing (*Appendix B*). The fact is, public schools in the United States have far outgrown all present or prospective endowments. In 1888-89 the income from such funds was \$9,825,000 in a total of \$132,125,111; in 1894-95 the corresponding figures were \$8,336,612 and \$177,597,691; that is, the per cent. fell from 7.4 to 4.7 in six years. New York and Ohio derive less than \$300,000 each of their great school revenues from permanent funds, and Pennsylvania derives nothing from such a source. In fact, it would require a permanent fund of \$400,000,000 to carry on, at the present scale of expenditure, the common schools of either New York or Pennsylvania. The subcommittee submits, therefore, that all permanent school funds, either state or local, should be carefully husbanded and wisely administered; that they should be preserved intact, and the income be scrupulously applied to the support of schools; that, under special conditions, it may be wise to augment old funds or create new ones, as when certain miscellaneous revenues can be devoted to that purpose; but that such funds must necessarily play a constantly diminishing part in popular education. Massachusetts is committed to the policy of adding to her fund \$100,000 a year, raised by taxation, until a total of \$5,000,000 shall be reached, and New Jersey to the policy of similarly dedicating the proceeds of certain riparian rights that belong to the state; and to this there is no objection; but for these states, or any others, to lean heavily upon such funds for school maintenance would be a most fatuous policy. Public education is, or at least should be, a recognized function or service of the state; the public schools of the country are civil schools, created and carried on by the civic authority, and they must rest ultimately upon the same general means of support as the other functions or services of government. As well, therefore, endow any other branch or function of the state government, such as the asylums and hospitals, the judiciary, the civil service, or the militia, as the state schools!

II. Gifts to popular education should be sedulously encouraged. Education has long been a favorite object with public benefactors, as the annals of every progressive country show, and none more convincingly than our own. No doubt when the public mind is aroused to the advantages of popular education, and school taxes are abundant, such persons who choose an educational object for their beneficence will rather be inclined to seek some other form or kind of education. Still, the constitution or laws of nearly every state, if not indeed every one, provide

for the acceptance and use of private gifts for school purposes, and there are generous persons who are peculiarly interested in the common schools. Scattered over the country are many local public school endowments that had a private origin, and such gifts have not come to an end. The subcommittee is not aware that there are any statistics showing how far private benevolence contributes to public education, but it is apprised that the contribution is by no means contemptible, and it believes that it might be made considerably larger than it is. The favorite forms of such contributions, under existing conditions, are most likely to be land for building sites, and apparatus and libraries for schools; and the subcommittee is of the firm opinion that much more could be done than at present in all these directions, and particularly in the way of procuring apparatus and books for the schools in communities where the public funds that are available for these purposes are meager or insufficient.

III. The great resource of the public school *is*, and *must continue to be*, some form or forms of public taxation. The ratio of the total school revenues derived from taxes to those derived from permanent funds is all the time growing, and it will continue to grow. At two periods separated by six years the sources of the common-school revenues expressed in per cents. were as follows:

Year	Taxes	Permanent funds	Other sources
1888-89.....	85.9	7.4	6.7
1894-95.....	85.7	4.7	9.6

Manifestly such areas or units of taxation should be created, or continued if already in existence, as will fully develop the sound American principle, that *the whole wealth of the state shall be made available for educating all the youth of the state*. This is both right and necessary, for it must be remembered that, in the United States, education is a civil, or state, function, to be supported like other similar functions. What shall these units of taxation be? The subcommittee names those following as coming under the principle just stated:

1. *The State*.—A liberal provision of funds from the state treasury, to be distributed according to some rational method, is indispensable, as a rule, to the maintenance of a good system of state schools. Formerly the burden was mainly or wholly thrown upon the local units. The old Massachusetts plan was to throw upon the towns the whole burden of maintaining their own schools. But the greatly increased cost of schools, growing out of enhanced salaries, longer terms, and improved material equipment, long ago demonstrated that this plan must be materially

modified. Many local taxing units are too poor to carry such a load, and they must either abandon all hope of good schools or they must receive assistance from the state or social whole. This fact began to gain recognition as early as the middle of the century. When the constitution of Ohio, adopted in 1851, provided that the legislature should make such provisions, by taxation or otherwise, as, with the interest arising from the permanent school fund, would secure a thorough and efficient system of common schools throughout the state, the law-making power hastened to levy upon all the property of the state, as rated by the assessors, a state school tax of two mills on the dollar, to be distributed on the basis of the school enumeration. Taking the country together, the cost of public education is divided between two or more taxing units. Still the fact remains that the part which falls to the local unit is often disproportionate. In 1888-89 the per cent. of the total amount of school revenues raised by local taxation was 66.8 to 19.1 per cent. raised by state taxation. In 1894-95 the corresponding per cents. were 67 and 18.7. The ratio of the two elements is variable in different divisions of the Union and in different states of the same division. The per cents. raised by state tax, as reported, range all the way from zero to a maximum of 83.2, found in North Carolina. We should naturally expect the southern states, since local government is there less fully developed than at the North, to rely relatively much less on local taxation and much more on state taxation, and such is the fact. But political habit is not the only factor that enters into the problem; economical conditions also assert themselves. In a state where wealth abounds, and is somewhat evenly distributed throughout its limits, as where manufacturing and commercial towns are frequent, there is not the same necessity for the state, as a unit, to assume a large proportion of the whole burden that there is in a state where wealth is meager, and where such wealth as exists is largely found in a few concentrations of population, leaving large areas thinly populated and poor. These remarks will throw light on the per cents. of school moneys raised by state taxation and local taxation in the five divisions of states that the Census Office recognizes. The date is 1894-95. (See also *Appendix B.*) No account is here taken of income from other sources than taxation.

Divisions	State taxes	Local taxes
North Atlantic States.....	19.4	68.2
South Atlantic States.....	38.1	51.3
South Central States.....	48.4	31.7
North Central States.....	9.9	75.4
Western Division.....	23.0	61.3

In some of the states, as will be shown hereafter, local taxation must be more fully developed than in the past or present; in others, and these principal states too, the same may be said of state taxation.

2. In all states where, for other local purposes, the county is the sole unit of taxation, a liberal county tax should be levied for the schools. This proposition applies especially to those states where the county system of local government prevails. In states where, for such purposes, the county is a large unit of taxation, it may be wise to levy a county school tax; that circumstances must determine. This remark applies to the states having the mixed system of local government. Under the town system county taxation for schools would be out of harmony with the social and political traditions of the people, and could be accomplished only through a change of habit; perhaps this end is attainable. For the year 1894-95 the Commissioner of Education shows that 67 per cent. of the total school revenues of the country came from local taxes. The scale ran from 1.7 per cent. in North Carolina to 98.2 in Massachusetts. Unfortunately we have no statistics showing from what sources the local taxes come; how much from districts, towns, and counties respectively. The point must, however, be strongly pressed that local supply for public education should be forthcoming as well as state supply. It is a great mistake to teach the people to look altogether, or mainly, to the state treasury for school maintenance. They should rather be taught to depend in due measure upon themselves. It is the confident opinion of the subcommittee that some states are now committing this mistake. Many states having the county system of local government have in the counties a resource for school maintenance upon which they have never adequately drawn.

3. In those states where the town or township is a large taxing unit for other local purposes, it should also be made to contribute liberally to public education. This recommendation it would be idle to urge in most of the southern and in some of the western states, because the civil town or township does not exist, and it would be vain to urge its creation for school purposes exclusively. But in those states where the town and mixed systems of local government exist, a township school tax would be congruous with the general social and political habits of the people. The desirability of local taxation for school purposes was urged under the last head. Such taxation develops self-reliance and local character, and tends to awaken and keep alive the interest of the people in the schools. The town was the sole school-taxing unit in old New England, and it is still a prominent, sometimes almost an exclusive, one throughout the northern states. The local school taxes of New England are town and district taxes, and, taken together, they range from the minimum of 69.2 per cent. of the whole in Maine to 98.2 in Massachusetts. It can hardly be

doubted that the New England states, as well as some others, now throw the burden too heavily upon the towns and districts, and that they will find it advantageous considerably to raise the ratio which state taxation bears to local taxation. The other New England states will probably follow, sooner or later, the example of Maine, which raises nearly one-third of her school money by state taxation. In some states, no doubt, the townships should carry a heavier weight than at present, at least as compared with districts; at all events, the township should bear a reasonable part of the cost of its own education.

4. Special districts, as incorporated villages, towns, and cities, the subcommittee considers not only proper but necessary units of school taxation. Such districts are the concentrations, large or small, of population and wealth; they are the industrial and social centers of the country. We have already seen that, in 1893-94, \$69,886,413 was expended for school purposes in the 443 cities of the Union. In Massachusetts \$7,088,000 was expended in cities; in New York, \$12,723,000; in Pennsylvania, \$7,745,000; in Ohio, \$5,097,000; in Illinois, \$8,110,000. If we had the figures for the smaller cities and the incorporated towns, the aggregate would be much increased. Now, not only do the cities, taken together, raise by taxation nearly all of the school money that is expended in them, but, as will be shown in another place, many of them contribute largely to the support of rural schools. Again, they must in the future, collectively as before, contribute still more largely to this end. Special districts, then, are essential as taxing units, care being taken to secure approximately a fair distribution of the public burdens. As a rule, dwellers in cities are much better able to pay heavy taxes than dwellers in the country, but there is great reason to fear that they do not always do so.

The school district, in the commonly accepted sense of that term, is not a desirable taxing unit, but the contrary. It is now such a unit in a majority of states, and the subcommittee is decidedly of the opinion that it should either be made much less prominent than it is or be abolished altogether. As a rule, the second course is to be preferred (except in special districts already mentioned). The town or township is the smallest area that should be employed for this purpose. Even this may be over-weighted, as can easily be shown. The unanswerable objections to district taxation are the inequality in burdens that results, and the inability of many districts to carry the load that good schools would necessarily impose upon them. A few statistics will make both propositions perfectly clear.

In 1871 Superintendent Fallows, of Wisconsin, published a table showing the amount of property assessed per scholar, in the school districts of a certain township, which he believed to be a type of the state of things generally existing throughout that state. The maximum was \$2,860; the

minimum, \$784; the average, \$1,378. In 1878 Superintendent Graham, of the same state, published a table for the whole state, showing that the valuation of property per district varied from \$2,300 to \$1,979,708. Districts with less than \$3,000 and districts with \$40,000 were found in the same township. But the poor districts were required by law to maintain a school six months in the year, just as the rich ones were. The ratio of district taxation ranged from half a mill to fifty-five mills on the dollar. Superintendent Wells, of Wisconsin, published similar facts in 1893 for a number of states. He showed that in Rhode Island some districts were taxed fourteen times as heavily as others, and in Connecticut a similar disproportion existed. In New York the ratio of tax raised in two counties varied from .0012 per cent. in one district to .0431 in another. One township presented the extremes .0009 and .0070, and still another one .0048 and .0371. Two districts in one township paid respectively \$5.66 and \$58.11 per capita; two in another one, \$5.43 and \$60.37; two in a third, \$11.25 and \$181.85. "That is to say," says Mr. Wells, "the rate of taxation is seven times as great in one district as in another in the same town, and the per-capita cost of educating a child is eleven times as great." But the first of these New York comparisons presents a ratio of almost forty to one.

Statistics such as these could be collected almost without limit. The most instructive way to study the subject is, so to speak, on the ground. If a man unfamiliar with it, who lives under the independent district system, will only take the trouble to collect the facts relating to his own county he may easily be astonished at the result. And yet, as a rule, the law lays upon the districts, rich and poor alike, the same burdens in respect to school maintenance. It is hard to see how or why the people have so long borne such inequalities—inequalities so contrary to the cherished American principle that the property of the state should educate the youth of the state; or, rather, it would be hard to see why they have borne them, if we did not know the extent of the public ignorance on the subject, and the strength of conservative habit, and did not see also how the district as a taxing unit is bound up in men's minds with the district as a unit of administration. But the two are not inseparable. The legislature of Ohio abolished the district as a taxing unit twenty-five years or more before it abolished the district as an administrative unit. In Connecticut, too, town taxes and district management are both met with in the same towns.

Before dismissing units of school taxation, a single point calls for closer attention. This is raised by the question, What is the advantage of looking to large units for supply rather than small ones?

The answer to this question rests upon the fundamental assumption

"Township System of School Government." Madison, Wis., 1894.

that public education is a state function, and that the whole state is responsible for the education of all the youth of the state. Now, if the cost of public education bore the same ratio to the ability of the people to bear this cost in all the communities of the state, or, what is nearly the same thing, if the wealth per capita of all the communities were equal, then, as a matter of course, it would make no difference whether the school tax were levied upon large areas or small ones. But this is far from being the case. The cities are indeed concentrations of both absolute population and school population, as well as of wealth; but their wealth tends to increase much more rapidly than either the absolute or the school population. The fortunes of the country are either made in the cities or else tend to flow into the cities. The last report of the Census Office shows the per-capita wealth of the Union, of the states severally, and of the five groups of states, but it does not show the per-capita wealth of the cities and of the rural districts separately. The nearest approach to it is the tables showing the per-capita value of real estate with improvements, by states and counties. These averages throw important light upon the subject, and some examples will be given.

Illinois: state average, \$860.88; highest county average, \$1,311.90; lowest county average, \$164.64.

Massachusetts: state average, \$848.01; highest county average, \$1,564.10; lowest county average, \$466.65.

New York: state average, \$969.66; highest county average, \$1,733.35; lowest county average, \$305.80.

Ohio: state average, \$689.01; highest county average, \$1,562.56; lowest county average, \$265.99.

Pennsylvania: state average, \$719.13; highest county average, \$1,049.88; lowest county average, \$187.26.

If personal property were included, the extremes per capita would be still more widely separated than they are at present. Formal argument is not needed to show that the rich counties are much more able to contribute to the expense of government, education included, than the poor ones, and the proposition that a due proportion of such expense should be thrown upon these units rests upon this fact. The tendency would be to remove inequalities in bearing the common burden. Levying the local school tax upon the township instead of the districts that compose it, or upon the county instead of the townships, would work in this direction. It is very true that townships are unequal in per-capita wealth as well as districts, and counties as well as townships; still the fact remains that large units are less unequal than small ones. Every step towards the highest taxing unit tends to distribute the burden more equally. In fact, the argument for removing a portion of the burden from the small taxing units to the large ones is the same that justifies us

in calling upon society to educate individuals or families that are too poor to provide for their own education. Why do we impose a public tax for educational purposes at all? Simply because education is a common interest, while some individuals or families are unable to educate themselves.

It may be said that the line of reasoning which has been followed would lead to placing the whole burden of state education at the door of the state treasury. Why should not the state defray the cost of the common schools, just as it defrays the cost of the reform schools for boys and girls, and of the asylums and hospitals? It must be confessed that this would be strict logic. However, we are to remember that governments are never carried on according to strict logic, and cannot be from the very nature of the case. What is more, there are the best of reasons, as shown above, for making education, to a reasonable degree, a local charge — reasons that do not apply to some other public services. The people are more likely to be vitally interested in the schools if a portion of their cost is derived from local taxes. In no country of the world, so far as the subcommittee is aware, is elementary education made an exclusive general charge. It is not desirable that it should be. The present contention is for a reasonable distribution among the several taxing units. At the same time, it may be worth observing that in some countries there is a strong tendency, as in England and France, to rely more than formerly upon general rather than local supply.

The appropriations for schools that states make from the common treasury differ greatly in form as well as in amount. Massachusetts levies no state school tax, but the legislature nevertheless votes various specific appropriations, as for the salaries and expenses of state agents, aid to pupils of normal schools, compensation of local superintendents, the payment of high-school tuition for pupils living in towns whose valuation of property does not exceed \$500,000 and that do not maintain a high school. Connecticut raises annually a state school tax equal in amount to \$1.50 multiplied by the number of persons in the state between the ages of four and sixteen, as enumerated annually. Rhode Island, while not levying a state school tax, so-called, votes enough money out of the state treasury, each year, to make, with the income of the permanent fund, a total of \$120,000. New York raises annually, by taxation based on the real and personal property of the state, such sum for the support of schools as the legislature shall determine. New Jersey assesses and collects a total state tax amounting to \$5 for each person in the state between the ages of five and eighteen years. It is this tax that places New Jersey at the head of the column of northern states in respect to the per cent. of school revenue derived from a state tax. The constitution of Pennsylvania provides that the state legislature shall appropriate every

year \$1,000,000 from the state treasury for the use of schools, but the present appropriation is \$5,500,000. Ohio levies a tax of one mill on the dollar of the grand tax duplicate of the state. Indiana raises eleven cents, and Kentucky twenty-two cents, on each \$100 of taxable property. The Michigan law directs the supervisor of every township to levy a school tax of one mill on the dollar for schools within the township, but as the proceeds are kept within the districts where they are raised, this is only a compulsory local tax; still it stimulates further local taxation for the grand object. The legislature of Michigan also levies a specific tax on certain corporations, as railroads, etc., which is first applied to the payment of the interest on the various educational funds that the state has borrowed, as the university, agricultural college, and common-school funds, and then to the support of the common schools. Nebraska makes an annual levy and assessment not exceeding one and a half mills on each dollar's valuation on the grand list of taxable property. The California system of school finance will be mentioned under distribution and in an appendix. These are a few of the states; still others will be dealt with in connection with distribution.

The basis of school taxation, or the ultimate sources of school supply, is an important subject. Whether more money can be had for the schools often depends upon the manner in which it is proposed to levy the tax. In general, taxation for schools will conform more or less closely to the character of the state taxing system as a whole. While admitting the great importance of the subject, the subcommittee does not feel called upon to discuss it beyond offering brief remarks on two or three points.

Pennsylvania meets her annual state school appropriation, in whole or part, by laying a tax of four mills on the dollar on all moneys loaned by citizens of the state. Some states levy poll taxes, and some "occupation" taxes, for their schools. Quite miscellaneous sources of school revenue are met with in the state constitutions and laws. We find specific taxes on dogs, and on banks, railroads, and other corporations. Escheats and forfeitures are often, or commonly, devoted to the schools. The constitution of Nebraska prescribes that all fines, penalties, and licenses arising under the general laws of the state shall belong, and be paid over, to the counties where such fines, etc., may be levied or imposed; also that all fines, penalties, and licenses arising under the rules, by-laws, or ordinances of cities, villages, towns, precincts, or other municipal divisions less than a county, shall be paid over to the same respectively; and further, that all these moneys shall be appropriated exclusively to the use and support of common schools in the respective divisions where the same may accrue. Nor is Nebraska peculiar in so dedicating such funds. It has been suggested to the subcommittee that an inheritance

tax would prove a popular, as well as an abundant, source of school supply.

DISTRIBUTION.

The subject of distribution is only less important than that of income. It is easy so to distribute school funds as, first, either to defeat, in whole or part, the very end sought in taxing the larger units for the benefit of the small ones; or, secondly, materially to weaken local enterprise and liberality, or wholly to destroy it. The subject will be considered under both these aspects.

1. The assistance that the large political and social units render to the small ones, as the state to counties, townships, and districts; or the county to townships and districts; or the township to districts, should be made contingent, in part at least, upon what the small units do for themselves. No community, it is believed, is so poor that it cannot do something towards educating its youth. Again, a state educational system should be so organized and administered as to stimulate, and not repress, local spirit and effort. It is a great mistake to remove the burdens of public education so far from the people that they forget, or tend to forget, their existence. The principle here involved is a vital one. History shows conclusively that popular education has flourished most in those states of our Union where government is most democratic.

It is difficult, or rather impossible, to lay down a general rule that shall govern the division of taxation between the state and the local communities. Two things are to be considered. One is the political institutions that exist in the state. If government is largely centralized at state capitals and county seats—*that* is one thing; if it is largely decentralized, as where the principle of local self-government is fully developed—*that* is quite another. For example, it would be idle to expect that the same results would obtain in the southern states that are found in New England, or even in that great group of states where the mixed system of local government prevails. The governmental machinery and the traditions of the people *will* assert themselves in such matters. The other factors to be considered are social, and particularly economical conditions. As remarked early in this report, where wealth is abundant and its distribution general and somewhat equal in different communities, school burdens may be thrown, and should be thrown, much more heavily upon localities than where the opposite conditions prevail. Density of population, relation of urban to rural population, average wealth per capita, ratio of wealth-producing population to the population of legal school age, the expenditure for education per pupil and per capita, and the per cent. of school revenue derived from state taxes and local taxes in the different states—are peculiarly interesting when studied together

(*Appendix A*). North Carolina shows the largest per cent. of state school tax (that is, of the whole tax) of any state in the Union, while the average population per square mile and the average wealth per capita are also small. Maine surpasses all the other New England states in these particulars. The proportionally high ratio of state taxation in the South is due to the two facts stated—political institutions and economical conditions. But there can be no manner of doubt that, as the cities of the South grow, towns multiply, and concentrations of population increase in number and in the value of property, local school taxation will materially increase. Legislatures could hardly prevent it if they should try, and it would be most unwise for them to try to do so.

2. Funds raised by the large taxing units should be distributed in such a manner as to bring the support of the rich and strong to the poor and weak. The only reason for taxing these units at all for general purposes is to secure this end. On no other principle can a state school tax, or even a county or township tax, be defended, unless indeed the county or township is a single school district. The practical question is, How shall such funds be distributed so as not to defeat the end in view? A historical account of the leading methods actually pursued will help on the inquiry.

The public-land states may be divided into two classes. From the admission of Ohio to that of Arkansas (1803–36) Congress gave to the congressional townships of such states, severally, 640 acres of land each for the perpetual use of schools, and vested the title in the state legislatures. Accordingly, in these states every township has its own independent permanent school fund,¹ which is sometimes managed by local authorities and is sometimes in the keeping of the state. Generally speaking, the sum of the township funds makes the so-called state school fund, so far as it is derived from public lands. If the township-unit system prevails, the ultimate distribution of income has been made in advance; if the district system, then the township distributes to the districts. From the admission of Michigan to that of Utah (1837–95) Congress gave the common-school lands to the states as units rather than to townships, which resulted in the establishment of consolidated state school funds. The annual income from these funds, so far as the subcommittee is informed, is uniformly distributed to the local school organizations on the basis of the youth of legal school age as enumerated every year. The ages vary, but the principle does not change. It should be added that since the admission of California, 1850, 1,280 acres of common-school lands have been given to every congressional township.

The rule of apportionment just explained is followed far more generally than any other. Thus, Maine distributes her state funds, from whatever

¹ Ohio and possibly other states offer some minor exceptions.

source derived, to the towns according to the number of children between the ages of four and twenty-one. Connecticut distributes the annual income of her permanent fund, and the proceeds of the tax of \$1.50 for every child between the ages of four and sixteen, according to the number of children between those ages. Pennsylvania apportions her state tax of \$5,500,000 annually, Ohio the proceeds of her one-mill tax, Michigan so much of her specific tax as goes to schools, and Indiana and Kentucky the proceeds of their state school taxes, according to the same general rule.

But other rules are followed. Vermont apportions her state tax to the towns, cities, and unorganized districts according to the number of legal schools maintained during the preceding school year. New Hampshire distributes her state funds to the towns according to the number of pupils returned as attending school not less than two weeks in the year. So much of the Massachusetts permanent fund as goes directly to the schools is apportioned to the towns of the state that have a property valuation of less than \$3,000,000, towns ranking above that line receiving nothing. Furthermore, the scale is so adjusted that the poorer the town the larger the amount that it receives. Towns whose valuation does not exceed \$500,000 receive \$275 each; those exceeding \$500,000 and not exceeding \$1,000,000 receive \$200; those exceeding \$1,000,000 and not exceeding \$2,000,000, \$100, and those above the last amount and not above \$3,000,000, \$50. Again, a portion of the state fund is divided among the towns that are eligible on the basis of the ratio that the town's school tax bears to the whole town tax; the larger the ratio the more help it receives. Rhode Island distributes her annual state contribution of \$120,000 as follows: first, \$100 is assigned to every school, not exceeding fifteen in number, in a township; then the remainder is distributed to the towns proportionally to the number of children from five to fifteen years of age inclusive.

The state school moneys of New York are apportioned in a complicated manner. The state superintendent first sets aside the annual salaries of the school commissioners (district superintendents). Next he sets apart to every city, incorporated village having a population of 5,000 and upwards, and every union free-school district having a like population, which employ a competent superintendent of schools, \$800; and to cities having more than one member of assembly in the state legislature, \$500 for each additional member, to be expended according to law for the support of the public schools. He then sets apart any money that may have been appropriated by the legislature for library purposes, and \$6,000 for a contingent fund. Next he sets aside to the Indians on reservations, for their schools, a sum equal to their proportion of the state school money, on the basis of distribution established by law. These sums set aside, the remainder of the state moneys is divided into two equal parts. The super

intendent now apportions to every district in the state \$100 (called a "distributive portion" or "district quota"), provided it has maintained a school, taught by a single qualified teacher or succession of such teachers for the legal term of the preceding school year; and the same sum for every additional qualified teacher or succession of such teachers, not counting monitors. The school year is 160 days, not including holidays that occur during the time, or Saturdays. This apportionment made, the superintendent divides the remainder of the school moneys among the counties according to their respective population as determined by the last preceding United States census, excluding Indians on reservations. But cities that have special school laws receive their due share separate and apart from the remainder of the counties in which they are situated.

The New Jersey state school tax, equal to \$5 for each child in the state between the ages of five and eighteen, is raised by the several counties according to their amounts of taxable property respectively, as shown by the tax rolls of the townships and wards of the counties. Ten per cent. of this tax, when it is paid into the treasury, is known as a *reserve fund*, and is apportioned among the counties by the state board of education "equitably and justly, according to their own discretion." The 90 per cent. remaining is then divided among the counties in the proportion that they have contributed to the tax. When the state school moneys reach the counties they, together with all other school funds in the custody of the county, are distributed to the townships and cities on the following basis: (1) \$200 for each teacher employed in the public schools for the full term for which the schools are maintained during the year next preceding (nine months); (2) the remainder according to the last published school census (children from five to eighteen years of age), *provided*: that no district shall receive less than \$275, and that districts with fifty-five children or more shall not receive less than \$375. If these funds are not sufficient to maintain a free school nine months in the year, then the inhabitants may raise by a district tax such additional amount as is needed for that purpose.

The local one-mill tax levied by Minnesota is expended within the districts where it is raised. It is, therefore, only a compulsory district tax, the same as in Michigan. The current school fund of the same state, which includes the income of the permanent fund, is distributed on the basis of the number of pupils who have attended school forty days or more in districts that have had school for five months or more during the year. In addition to the above apportionment, graded schools having not less than three departments, which come up to certain requirements, receive aid from the state to the amount of \$200 each. Besides, there are eighty-five high schools that receive state aid to the amount of \$400 each. The grants to these graded schools and high schools are paid from

permanent appropriations that are met by general taxation, and are apportioned by the state high-school board, on evidence that the schools are complying with the requirements. Minnesota also gives the sum of \$500 annually to state high schools providing elementary normal instruction of a kind that satisfies the high-school board. Wisconsin also has an approved high-school list, one-half the cost of maintaining these schools being paid from the state treasury. Moreover, Wisconsin pays \$250 each to certain approved high schools in which manual training is taught.

The California system of school finance is a unique system. The state superintendent apportions to the counties the state school fund according to their respective numbers of school-census children (from five to seventeen, certain classes being excluded). Each county superintendent first ascertains the number of teachers every district in the county is entitled to on the basis of one teacher for every seventy school-census children, or fraction thereof not less than twenty, as shown by the next preceding school census, and then the number to which the county is entitled by adding these district numbers together. He then calculates the amount of money to be raised at the legal rate of \$500 a teacher. From this amount he deducts the quota of the state fund assigned to the county, and the remainder is the minimum amount of the county school fund to be raised by taxation for the ensuing year, *provided*: that the minimum of such fund shall not be less than \$6 for every census child. The county fund thus made up is then distributed to the districts in accordance with this rule, *viz.*, \$500 for every teacher, except (1) that to districts having less than twenty census children only \$400 is assigned, and (2) that to districts having more than seventy census children \$20 additional for every such child less than twenty in number shall be allowed. All school moneys remaining in the treasury after this apportionment has been made are then divided among the districts of the county in proportion to the average daily attendance upon each district during the preceding school year. District taxes may also be raised, subject to certain legal conditions (*Appendix C*).

The subcommittee does not feel called upon to deal with all the states, or even with all the peculiar modes of distributing school moneys. It believes that the enumeration of particulars now made is ample for the present purpose. Some remarks upon the leading rules or methods of distribution are, however, called for.

1. Distribution according to the school census or enumeration is open to a serious objection, *viz.*, it does not carry the money where it is most needed. For example, two districts lie side by side, one having twenty and the other forty youths of school age; the second district draws twice as much money as the other, but the cost of keeping up the two schools is practically the same. The same would be true of two township units,

unless the schools were consolidated. The result is that the district or township that needs the most help receives the least. The rule is simple and easily worked, but it tends partially to defeat the end of state or county aid.

2. The same objection holds against rules based on the school enrollment or on attendance, only with somewhat diminished force. Again, if the enrollment is followed, or attendance for a brief time, there is danger that some children will go to school long enough to be counted, and then drop out. Besides, such rules of distribution work in favor of the graded schools and against the rural schools, on account of their larger enrollment and more regular attendance.

3. Taking everything into account, the subcommittee is inclined to think that a fixed sum or sums, based on an arbitrary unit or units, is most equitable. Examples of such rules are furnished by the states of Massachusetts, Rhode Island, New York, New Jersey, and California. The most serious objection to such rules is that they are necessarily complicated; some of those given above are quite complicated. Then, if the fixed sum is so much a teacher, as in New York, or so much a district, as in Rhode Island and New Jersey, there is a temptation to the undue multiplication of schools or teachers. But this point can be safeguarded by fixing statutory limitations, as in California. No rule can be devised that will not be open to objection. The subcommittee does not believe it possible to invent any rule of distribution that will well accomplish the purpose of taxing large units for the benefit of small ones, unless it rests on the school or the teacher as a unit, with the necessary qualifications. The Massachusetts rule is open to the objection that the school needs of towns cannot always be measured by low valuations of property assessed for taxation, as the number of pupils to be educated is also a factor. If the method of distribution now recommended is objected to as an exclusive one, then it may be supplemented by basing a part of the appropriation on the school census, enrollment, or attendance. The resort to the United States census is most objectionable, as great changes of population occur in the course of ten years.

The difference in the working of the school-census method and the fixed-sum method of distribution is well shown by comparing the statistics of two states. For the fiscal year ending November 15, 1895, the mill tax of Ohio produced \$1,720,922. Of the eighty-eight counties forty paid more into the fund than they received from it, while forty-eight paid less than they received. Some of the major counties of the state received more from the fund than they paid into it, while minor counties paid more than they received. For the year 1896 the city of Cleveland actually received \$2,616.67 more from the state than it paid to the state. Assuredly, a rule that makes the agricultural counties of Ohio, or many of

them, contribute to the education of Cleveland, the most populous city in the state, is a travesty of common sense. But the same year Cincinnati paid in round numbers \$70,000 more than it received. This is hardly better than repealing the mill tax outright, and letting the burden of education fall directly upon the cities and townships. On the other hand, the state of New York, in 1896, paid a total general school tax of \$4,062,903, of which \$3,500,000 was immediately distributed to the counties again. Fifty-four of the sixty counties received more from this tax than they contributed to it; only six counties paid more than they received. Erie county paid \$241,597 and received \$185,460; while the corresponding figures for Kings and New York counties were \$503,603 and \$387,879, and \$1,884,584 and \$636,133, respectively. The New York rule *does* bring the strong to the help of the weak.

A question arises in respect to separate funds for buildings, the payment of teachers, and incidental expenses. In the opinion of the subcommittee such division is desirable. The need of providing new buildings is often made an excuse by boards of education for keeping down the salaries of teachers. The triple fund would not indeed prevent such injustice, which makes teachers as such contribute to buildings, but it would *tend* in that direction. It is often stipulated in school laws that state funds apportioned to communities shall be wholly applied to the payment of teachers. This is a wholesome regulation. The cost of grounds, buildings, and incidental expenses should be met by local taxes or other local funds. Touching the division of the cost of public education, State Superintendent Stetson of Maine, in a private communication, thus defines the prospective policy of that state: "Local communities shall provide school lots and school buildings, and keep the same in repair. Two-thirds of the money raised for maintaining schools shall come from the state, and one-third from the local communities. The apportionment of the money to the several municipalities shall be upon the basis of average attendance. We shall also try to get a law prohibiting towns from receiving state aid, if they maintain schools having less than a certain average attendance." Such a law as this would serve to prevent the undue multiplication of districts, and would even work a certain measure of consolidation.

The distribution of taxes levied on railroads, telegraphs, long-distance telephone lines, express companies, and the like, is an important question. In some states, as New York, Texas, and Ohio, school taxes levied on railroads inure to the exclusive benefit of the districts or townships through which the tracks run, excluding any state tax that may be levied on such property. This rule the subcommittee regards as unjust. The location of railroads is determined largely by physical conditions, and the mere fact that a line happens to run through its territory, where

probably not a dollar of the stock or bonds is owned, is no reason why a district or township should profit thereby to the exclusion of other and less fortunate districts or townships. In Pennsylvania the taxes on railroads are paid into the state treasury and are distributed by the legislature along with other revenues, the public schools, normal schools, and colleges being included among the objects of the appropriation. California has a similar provision. The mode of distributing the Michigan specific tax has already been described. It is believed that such revenues as the foregoing should inure to the common benefit of the state; but what is here said, let it be remarked, in no way relates to pending controversies about the taxation of railroads or other similar property.

The Nebraska law contains one excellent feature that is worthy of mention. All public high schools in the state that, as determined by the State Department of Education, have a proper equipment of teachers, appliances, and course of study, are open to attendance by any person of school age residing outside the district who is a resident of the state and whose education cannot be profitably carried on in the public school of the district of his residence. Such pupil must have a certificate signed by the county superintendent that he has completed the common-school course prescribed by the state department for work below the high school. He must attend at the high school nearest to his residence or at a high school of approved grade in the county of his residence. Any school board that furnishes high-school instruction to such pupil is authorized to charge fifty cents a week for the time that he has been in attendance, and it is made the duty of the county board to pay all such bills out of the county school fund. Massachusetts and Ohio, and perhaps other states also, provide for educating qualified pupils in high schools in other places than those where they reside, provided there are no home schools for them to attend, and this without cost to themselves. As Massachusetts is the only state that makes the provision of high schools compulsory under any circumstances, it may be well to mention the principal features of the state law in regard to that subject. Every town having a population of 4,000 persons or 500 families is obliged to maintain a high school, the grade of the school depending somewhat upon the fact whether it has the larger or the smaller population. Pupils living in towns that are not required to maintain a high school can attend any neighboring high school that will receive them. In such cases the state pays the tuition of the pupil, provided the valuation of the town in which he resides does not exceed \$500,000; if the valuation does exceed that amount the town pays the tuition. High-school tuition is, therefore, wholly free to every qualified pupil in the state.

ORGANIZATION.

The subcommittee is not here interested in the subject of school organization further than it relates to school maintenance. Its relations to teaching, supervision, and studies are topics belonging to other divisions of the general report. The statement and enforcement of two propositions will answer the present purpose.

I. The first proposition is that the township-unit system is far superior to the district system, and should be substituted, if practicable, for that system wherever it exists. The superiority of the town or township as an administrative unit is as great as its superiority as a taxing unit. The principal advantages are the following :

1. If the schools of a township are under a single board elected from the township at large, schoolhouses will far more likely be built where they are needed than under the other system.

2. Equality of school provision will be much more fully secured in respect to schoolhouses and grounds, length of school terms, and the ability and character of teachers.

3. The tendency will not be to multiply schools unduly, but to restrict their number, bringing together more scholars, and thus making better classification, grading, and teaching possible, and increasing the interest and enthusiasm of the pupils.

4. Better supervision can be secured. The county superintendent can deal more effectively and easily with one board in a township than with six, ten, or twelve ; while township and township-union supervision will be greatly promoted.

5. Simplicity and economy of administration will be facilitated, and the sense of official responsibility be enhanced.

6. The tendency will be to employ teachers for longer terms, and thereby to restrict, in a considerable degree, the evils that flow from frequent changes. On this point the statistics of Mr. Gass, presented in this report, may be mentioned.

7. The strifes and contentions between districts that are now not infrequent will be prevented.

8. Transfers of pupils from school to school will be made more easy.

9. The reason last to be mentioned is perhaps the strongest of all. The relations of the township-unit system to school consolidation have already been suggested. The township system does not necessitate such consolidation, although it is likely to work that way ; but consolidation is almost wholly dependent upon that system : schools *will not* be consolidated in great numbers if a plurality of district school boards have to do the work.

The subcommittee has stated that the adoption of the township-unit system *will be* followed by the reforms that have been mentioned. It is not,

indeed, meant that such will be the unvarying result; there will be exceptions—perhaps many exceptions—when the whole country is considered, but the tendency *will be* strong in the directions named, or such *will be* the general character of the result. Not only is this the suggestion of common sense, but it is the teaching of experience as well (*Appendix E*).

The town-unit school system was the ancient system of New England. The classic school law enacted by the General Court of Massachusetts in 1648 ordered that the towns should found schools on their reaching a certain number of householders, the teachers to be paid either by the parents of such children as resorted to them for instruction or by the inhabitants in general by way of supply, as those who ordered the prudentials of the town should appoint. The word "township" is also used in the law. Connecticut followed the example of Massachusetts. The original New England town, which was a small concentration of population, was well adapted to this system. But "as the population of each little nucleus of settlement spread itself out from the center of the original 'plantation,' it early became convenient, in Massachusetts and Connecticut at least, to allow neighboring families at a distance from the local concentration, or nucleus, to form themselves into a school district." The original church parishes were divided in the same way. If these districts had been founded merely for the purpose of school supply, or to regulate attendance, there would have been, under the conditions existing, no objection to their formation, but the contrary. Unfortunately, however, these new districts also became units of school maintenance, bodies corporate and politic. These districts appear at first to have existed by sufferance merely, but the celebrated school law of 1789 legalized them, thus paving the way for the general introduction of the new system. Horace Mann declared in his Tenth Annual Report: "I consider the law of 1789 . . . authorizing towns to divide themselves into districts the most unfortunate law on the subject of common schools ever enacted in the state." Still this "act was not repealed until manufacturing had restored those concentrations of population which in the early colonies had invited township control of school affairs." This was finally done. Mr. Mann in the same report (p. 37) bore this testimony to the superiority of the town system:

"As a general fact, the schools of undistricted towns are greatly superior to those in districted towns—and for obvious reasons. The first class of towns—the undistricted—provide all the schoolhouses, and, through the agency of the school committee, employ all the teachers. If one good schoolhouse is provided for any section of the town, all the other sections, having contributed their respective portions of the expense to erect the good house, will demand one equally good for themselves; and the equity of such a demand is so obvious that it cannot be resisted. If, on the other hand, each section were a separate district, and bound for

the whole expense of a new house if it should erect one, it would be tempted to continue an old house long after it had ceased to be comfortable, and, indeed, as experience has too often sadly proved, long after it has ceased to be tenantable. So, too, in undistricted towns we never see the painful, anti-republican contrast of one school, in one section, kept all the year round by a teacher who receives \$100 a month, while, in another section of the same town, the school is kept on the minimum principle, both as to time and price, and, of course, yielding only a minimum amount of benefit—to say nothing of probable and irremediable evils that it may inflict. In regard to supervision, also, if the school committee is responsible for the condition of all the schools, it is constrained to visit all alike, to care for all alike, and, as far as possible, to aim in all at the production of equal results; because any partiality or favoritism will be rebuked at the ballot box. In undistricted towns, therefore, three grand conditions of a prosperous school, *viz.*, a good house, a good teacher, and vigilant superintendence, are secured by motives which do not operate, or operate to a very limited extent, in districted towns. Under the non-districting system it is obvious that each section of a town will demand at least an equal degree of accommodation in the house, of talent in the teacher, and of attention in the committee; and should any selfish feelings be indulged it is some consolation to reflect that they, too, will be harnessed to the car of improvement."

The district system was at one time universal, and it exists in some form in a great majority of the states today. In Maine, New Hampshire, Massachusetts, and New Jersey it has been wholly swept away. In Connecticut and Rhode Island the town system is permissive, and exists side by side with the district system. The township system exists in Pennsylvania, Ohio, and Indiana. It is permissive in the upper peninsula of Michigan, in Wisconsin, and in Minnesota, and doubtless in other states. It varies somewhat in the organization of the local authority. The Massachusetts school committee consists of three members or a multiple of three, elected from the town at large. In New Jersey the board consists of three, five, or nine members, as the town may elect. The Ohio board consists of delegates or representatives elected by the sub-districts, one each. A single trustee elected by the people manages the schools of a township in Indiana, except that he is assisted by a director in each attendance district who looks after incidental local matters.

Considering the great superiority of the township system over the district system, it is not a little strange that its introduction in the room of its competitor should have been so steadily resisted as it has been. This opposition is due in part to the power of conservative habit, in part to the belief that the district system is more democratic, and in part to the

popular fondness for office holding, all conjoined with much misconception and ignorance in respect to the merits of the two systems. It has also been urged in favor of the district, by politicians, that it is the best unit for canvassing the states for political purposes. Certainly it cannot be objected to the township system, in its pure form, that it is not sufficiently democratic. In 1875 there were 15,087 teachers employed in teaching the common schools of Ohio, and there were in the state at the same time more than 35,000 school directors and members of boards of education charged with the administration of the schools. This, assuredly, is an excess of democracy.

The "community" system is much worse than the district system, and fortunately it is confined to a single state. The Texas law permits parents, guardians, or other persons having control of children of scholastic age, residing in any one of the so-called "community" counties (thirty-five in number out of a total of 250), to unite and organize themselves into a free-school community entitled to the benefits of the available school fund belonging to the county, upon complying with certain prescribed conditions. The persons so uniting and organizing first address a petition to the county judge, who is *ex-officio* county superintendent of schools, duly signed by the petitioners, setting forth that the community is white or black, as the case may be, giving an alphabetical list of the names of children of scholastic age within the limits proposed, describing the capacity of the schoolhouse and the character of the other conveniences that the petitioners have to offer, naming persons to act as trustees, etc. The matter then passes into the hands of the judge, who has no discretionary power in the premises. He may not even throw aside such a petition either because it is signed by few persons or because the alphabetical list carries few names. The law does not fix any minimum number in either case. If the people of a neighborhood desire a school, no matter how few they may be, a school the judge must grant them. The "community" is a voluntary district in the strict sense of the term, having legal existence for one year only, and having no authority to levy a local school tax, and the evils that attend it are far greater than those that call so loudly for the abolition of the district system wherever that is practicable. The people of Texas can, however, congratulate themselves that the "community" school, which plainly originated in pioneer society, has lost ground in later years.

In the South, and in those western states that have the county system of local government, the only practical alternative to the district system of school organization is a county system. It must be remembered that in these states the town or township does not exist. Fortunately, such a system is not altogether unknown. In a few counties of Georgia it has been in successful operation for a number of years. These are the prin-

cial features of the system as it exists in Richmond county, in which the city of Augusta is situated :

The county is the unit area of organization, and the rural parts and the urban parts of the county district, as far as practicable, are treated just alike. A board of education, composed of representatives elected by the people of the county for the term of three years, one-third retiring each year, manages all the schools. The school tax is levied at a uniform rate upon all the property of the county, without revision by any other authority and without any limit as to rate or amount. The county and state funds are distributed to the schools according to the number of children to be educated. There is no district tax. The same qualifications are required for country and for city teachers. The teachers are treated as nearly alike as the conditions admit, and they are paid about the same salaries. The schools are in session the same length of time in a year, nine calendar months. The country schoolhouses, on the average, are situated four miles apart, and no child is out of walking distance of a school open nine months in the year, and taught by a good teacher. One superintendent has charge of all the schools. Augusta has nine-tenths of the taxable property of the county, but only three-fourths of the school population. In other words, the rural parts of the county pay one-tenth of the school tax and receive the benefit of one-fourth of it. For the most part, these are excellent provisions. The county would seem to be the natural area unit for popular schools under the county system of local government. The subcommittee confidently believes that this mode of school organization has a great future before it in the United States (*Appendix D*).

II. In those parts of the country where existing physical and social conditions render it practicable there should be such a consolidation of rural schools as will diminish the existing number of schools, schoolhouses, and teachers, and bring together, at advantageous points, the pupils who are now divided and scattered among the isolated schools of the township or other similar district. This step should be taken in the interest of good education as well as of public economy. To make this reform possible the children, as far as may be necessary or practicable, must be conveyed to and from the schoolhouses at public expense.

How absolutely fatal to good schools the existing conditions are in many parts of the country statistics show most conclusively. State Superintendent Wells of Wisconsin reported in 1894 that his state had 183 districts whose average attendance the previous year was not more than five each ; that 858 others were not above ten each ; while 2,481 more did not exceed twenty each. "In other words," he said, "3,522 country districts, about three-fifths of the total number, have an average attendance not exceeding twenty, and about two-fifths above that average, with the great

majority near the lower margin."¹ Mr. H. R. Gass, of Michigan, citing the state report for his authority, states in a published paper that in 1886 the country schools of Calhoun county in that state required 158 teachers, and that they employed 342 different ones in the course of the year. The average length of the school in the district was 8.4 months, while the average term for which the teachers were employed was but 3.8 months. He cites a second county that presents like statistics, and then observes: "The ratio of the number [of teachers] required to the number employed is about the same as this throughout the state, the tenure being longer in the newer than in the older counties." This state of things Mr. Gass attributes to the prevalence of the district system. He refers to Massachusetts and Indiana, where changes of teachers are much less frequent and teachers' tenures much longer than in Michigan. While two teachers on an average were employed in Michigan for a school every year, but few schools in the other states employed more than one. In the same state, at the present time, there are over 1,000 districts that enumerate less than twenty-five children of school age each, while seventy counties contain 468 districts that enumerate less than fifteen each. The statistics at hand do not show the actual size of the schools. Nor are the small schools found in the newer and poorer parts of the state only; the oldest and richest counties have their fair share of them. In fact, the newer parts of a state often have the largest and best schools. Not only so, the oldest and most densely populated states frequently make a very poor showing. In 1894-95 there were 7,529 school districts in New York, in each of which the average attendance upon school during the year varied from one to twenty pupils, while the average daily attendance in each of 2,983 districts was less than ten pupils (*Appendix I*). In 1893 Vermont had 153 schools of six pupils or less each. In 1892 State Superintendent Luce of Maine reported that the average enrollment in the schools of that state for the previous year was less than twenty-five pupils to a school, and that the number of districts having less than twenty-five was larger than the number having more. He declared that there were probably between 1,000 and 1,200 existing schools in the state whose enrollment was twelve or less, and that 600 or 800 schools then existing could be abolished without detriment.² Twenty-five years ago a large number of schools on the Western Reserve, Ohio, long famed for schools, had dwindled to the most insignificant size. Still other statistics of similar import will be found in the report of the Subcommittee on Instruction and Discipline. Attention is drawn particularly to those relating to Rhode Island and Massachusetts.

¹"The Township System of School Government." Madison, 1894.

²Quoted by Mr. Gass. See "Transactions of the Michigan State Teachers' Association, 1887."

But it is needless to multiply statistics, or to insist at length that thousands of rural schools furnish their pupils with a miserable preparation for the duties of life. When we consider the various elements that enter into good education, and especially training for social activities, it is not too much to say that a very small school is almost necessarily a very poor school. The facts are notorious. Hitherto it has been supposed that, although the cities and towns surpassed the rural districts in higher education, the rural districts contained a smaller proportion of illiterate persons. This has been the prevailing view in the northern states, and probably it was once in accord with the facts. The cities have been considered the great hives of illiteracy. But there is now grave reason to question whether the fact is not often the other way. Certainly it is so in the only state where, so far as the subcommittee is informed, the subject has been statistically investigated.* But however this may be, a remedy for the unsatisfactory state of the rural schools is one of the pressing needs of the day. What can be done? One thing that can be done is to consolidate many of the small schools by carrying back and forth such pupils as need to be carried, and thus, by one stroke, create several of the conditions of good schools. The interest that this subject is beginning to awaken is one of the hopeful signs of the times.

It was Massachusetts that led the way in developing the district system, and it is Massachusetts that is leading the way in consolidation. An act that dates from 1869 authorizes any town in the commonwealth to raise money by taxation to enable the school committee, in its discretion, to provide for the conveyance of pupils to and from the public schools at public cost. The towns were already empowered to build schoolhouses wherever they were really needed. Availing themselves of these powers,

* The state referred to is Michigan. According to the state census of 1894 the ratios of the foreign-born persons in the cities of the state, ten years of age or more, unable to read and write, and in the state at large, were practically the same, eighty-four in 1,000. But the ratios of the native-born in the cities, in the state at large, and therefore in the country districts, were quite different. In the cities it was fourteen in 1,000; in the state at large, twenty-one in 1,000; in the country, twenty-four in 1,000. For every fourteen persons ten years of age or upwards in the cities unable to read and write there were twenty-four in the country; that is, the ratio in the country is 70 per cent. greater than that in the cities. If the country rate of illiteracy could be reduced to the city rate, the number of illiterates of the native-born population ten years of age and upwards unable to read and write would be reduced about 8,000. Several facts, no doubt, enter into the explanation of the greater illiteracy of the country districts, but the most important of them is the inferiority of the country schools. It does not explain matters to say that Michigan is comparatively a new state, that much of it is thinly settled, that it contains large lumbering and mining districts, etc. The fact is that in the oldest and wealthiest parts of Michigan the cities, as a rule, surpass the counties in which they are situated in respect to popular intelligence. The city of Detroit ranks distinctly higher than Wayne county, and the same may be said of the cities of Grand Rapids and Ann Arbor as compared with Kent and Washtenaw counties. The counties named contain the cities mentioned.

many towns have entered upon the work of consolidating their schools. How the work goes on is shown by the following table exhibiting the sums of money paid for public-school transportation for a series of years.

Year	Amount	Year	Amount
1888, 1889.....	\$22,118.38	1892, 1893	\$50,590.41
1889, 1890.....	24,145.12	1893, 1894	63,617.68
1890, 1891.....	30,648.68	1894, 1895	76,608.29
1891, 1892.....	38,726.07	1895, 1896	91,136.11

The movement has extended beyond Massachusetts and reached every one of the New England states. In these states many hundreds of schools have been consolidated, and with the most gratifying results. Occasionally an unsuccessful experiment is reported, but the great stream of testimony runs strongly the other way. Longer school terms, better teachers, better grading, better instruction, more interest in the pupils, greater physical comfort on the part of the children, better supervision—these are the claims that are made for the new departure (*Appendices E and F*). Other things being equal, the new way is never more expensive than the old one, and often it is less expensive.

The movement has spread beyond New England. In 1894 a law was enacted in New Jersey providing for the transportation of pupils at public expense in order that rural schools might be consolidated with city ones. A most interesting experiment in consolidation is being tried in northeastern Ohio, where some schools had already died out, and many more were lingering on the verge of death. Permissive legislation has been obtained in several counties, and already many townships are working the plan successfully, while many others are looking on expectantly and are apparently on the point of making the new departure. The newspapers are quick to note the innovation, and it is already attracting attention beyond the borders of the state (*Appendix F*).

The distinct pedagogical advantages of consolidation are much more fully set forth in the reports on supply of teachers and instruction and discipline than here. In this report the topic is dealt with mainly as it is related to organization and administration. The fact is, however, the several aspects of consolidation are inseparably connected. As a rule, whatever promotes simplicity and ease of administration promotes good instruction, and *vice versa*. No one of the subcommittees that handle the subject for a moment supposes that there is any charm in the word "consolidation" to cast all the evil spirits out of the rural school, but they all believe, after giving the subject mature consideration, that great possibilities of improvement lie in that direction. It is perfectly true that the consolidation remedy cannot be universally applied, because physical and

social conditions often forbid. The fact is, that a large proportion of the children of the land will be schooled in little schools—rural schools, ungraded schools—or they will not be schooled at all. Suggestions looking to the improvement of these schools will be found in the reports of all the subcommittees; but insistence is here placed upon the fact that the consolidation remedy can be applied on a grand scale, with the largest promise of success. In most states some new legislation will be necessary to that end, but not in all. Wherever the township-unit system exists, the first step, and the long step, has already been taken. In such states it should not be difficult to secure the needed legislation in relation to transportation. State Superintendent Emery of Wisconsin has already notified the people of his state that the laws contain all the provisions that are necessary to enable them to move at once in the direction of school consolidation.

It is important that the consolidation reform shall not be misunderstood. It does not necessarily mean that there shall be only one school in a town or township. It does not mean either that parts of different townships or counties shall not be comprised in one school. These questions are merely matters of detail, and their adjustment will depend upon such factors as the size of townships, the distribution of villages or other local centers, the direction and condition of roads, streams, and bridges, the distribution of population, and the physical configuration of the township and the adjacent parts of the country.

It is noteworthy how the different phases of educational reform all tend to hold together. In the northern states the cause of school consolidation depends intimately upon the adoption of the township-unit system. A certain amount of consolidation can be effected by the abolition of small districts; it may be possible, also, for several independent districts to merge their schools into one, for the time at least, and still preserve their independence; but it is manifest that the first plan will not prove effectual, and that the second one will be infrequent and precarious. The subcommittee believes confidently, therefore, that the fortune of effectual consolidation is closely bound up with the fortune of the township-unit system.

It is also noteworthy, let it be remarked again, how different social elements tend to attract one another and so to coalesce. School consolidation, especially its practicability, turns largely upon means of cheap, safe, and easy communication throughout the school area. Here we touch a question intimately relating to social progress that has been receiving increasing attention the last few years. Reference is made to the improvement of roads. Those who have been promoting this movement have not probably regarded it as a measure of educational reform; but such it is. Perhaps there is no rural interest of a social nature that

would be more decidedly enhanced by good roads than the educational interest. The people of some of the towns of Ohio, where the new plan is being tried, claim this as a decided advantage, that the drivers of the omnibuses serve as carriers for the mails between the farmhouses and the post offices, thus promoting the diffusion of intelligence in still another way.

Only a single point remains to be pressed, but it must be pressed strongly. This is the necessity of lengthening materially the time that the country schools, on the average, are in session each year, and the securing of a more regular attendance of the pupils. The legal years now vary widely in different states, and the practical, or real, years still more widely. Some communities always surpass the legal minimum of time, others as regularly fall below it. In the thickly settled states of the East the rural schools are in session eight, nine, or ten months in the year; but often in the South, and sometimes in the West, one-half the shortest of these terms is not reached. The legal year is frequently absurdly short. Until two years ago the Michigan year was but three months, and now it is but five months. It is quite unnecessary to argue that short schools are, even relatively, poor schools. In order to have a good school, it is necessary not only to bring pupils together in considerable numbers, but also to hold them to the work a certain number of hours each day, and a certain number of days each year. There must be a concentration of effort as of pupils. It is as wasteful a method of education to send children to school seventy or eighty days in the year as it is to send them two or three hours in the day. Persons interested in popular education, and particularly in rural education, should not rest, therefore, in their efforts until they have made the legal school year in every state at least 160 or 180 days.

But it will not be enough for the state simply to fix a minimum school year: it must see to the enforcement of the law. The law should hold communities to a rigid accountability in respect to maintaining schools of legal grade for the full legal period, to employing none but certificated teachers, and making all the required reports to the state educational department. Most school laws contain such provisions as these, but it is feared that they are not always enforced. The only practicable mode of enforcement is absolutely to withhold from the local organizations all aid from the superior taxing units, as the state, until they first observe the law.

And again, it will not suffice for the state to see that the prescribed quality of instruction is actually furnished. It might, perhaps, be thought that if the state only provided local schools, and made them free, the people would be only too glad to avail themselves of them to the full; but sad experience shows that this is not always the case. The

indifference, ignorance, and selfishness of some parents come between their children and the schools. In communities where the school attendance is compulsory some parents are in an almost constant battle with the authorities, to keep their children out of the school as much as possible. It is possible that such extreme indifference or selfishness as this is more common in cities than in the country; and yet it is true, as a rule, that the country child's labor, especially the farm boy's labor, has a greater money value than the city child's labor, and that the farmer is, therefore, under a special temptation to keep his boys out of school. On the whole, there is quite as much need of an efficient compulsory attendance law in the country as in the city, and perhaps more.

The subcommittee has not taken space to discuss, in general, the common education that the American states are now furnishing the American people. That is a large subject, and for the most part lies outside the field of the present inquiry. It will suffice to say on this large question that the people had better pay what they do pay for what they get than to go without it, or even twice, thrice, or four times the sum; but, at the same time, they might receive, and should receive, a great deal more for their money than at present. This is particularly true of the rural schools. No doubt there are many excellent schools in the country; but, on the whole, it may well be doubted whether any money that is expended in the people's interest is expended more wastefully than what goes to the country schools. No doubt the country school has points of advantage over the city school, as the freer communion with nature, but on the whole it is inferior. The typical "little red school-house," so invested with sentiment, is a costly and unsatisfactory institution of education. Owing to social changes, in many parts of the country it is much less efficient and useful, at least relatively, than once it was, and a new organization is imperatively called for. Something should be done to stop the wasteful expenditure of the public money. State Superintendent Stetson, speaking for his state, puts the case thus in a communication to the subcommittee:

"I have devoted quite a number of pages in my report [1895] to showing the people of Maine that we are wasting an enormous sum of money in this state because of the unbusinesslike methods which are used in the expenditure of its school funds. This waste is made in every direction in which money is spent. We pay more than we need to for school lots, the erection of school buildings, the furnishing of school appliances, text-books, fuel, making repairs, etc., etc. The waste along these lines aggregates more than one-third of a million of dollars each year. I have shown in the report that the money which we spend for common schools is sufficient to maintain schools taught by professionally trained teachers, and superintended by competent superintendents; that,

in addition to doing these two important things, we would have money enough left to supply them with the appliances necessary for a successful school, and also furnish the needed apparatus, library books, and make all the needed repairs and additions. I feel that I have demonstrated this point so that there will be no further question about it in the state of Maine. The whole matter turns upon the simple point that we are alarmingly wasteful in our expenditure of school money.

"Personally I am in favor of local communities being responsible for providing school buildings. I think two-thirds of the funds required for the maintenance of the common schools should be furnished by the state, and that the other third should be raised by local taxation; that the state should examine all teachers and issue all licenses to teach; that towns thus receiving state aid must employ teachers who hold such certificates. The state should inspect the school accounts of the towns receiving state aid."

The subcommittee deems it advisable, now that the whole ground has been covered, to restate the fundamental propositions that have been urged in this report. These all start from the one central postulate that a provision of funds sufficient for their adequate support is essential to the existence and life of good schools. The three-fold division of the subject will be preserved in the summary.

I. REVENUE.

1. The great resource of the public schools is, *and must continue to be*, some form or forms of public taxation.

2. Such areas or units of taxation should be created, or continued if already in existence, as will fully develop the sound American principle that the whole wealth of the state shall be made available for educating all the youth of the state.

3. To accomplish this end, resort must be had to the larger units of taxation, especially where population is sparse and wealth meager. The following recommendations must be specifically urged: (1) a liberal provision of funds from the state treasury; (2) a county tax in at least all the county-system states; (3) a town or township tax in the states where this civil division exists; (4) taxes in special districts, that is, in cities and villages. The school district, in the commonly accepted sense of that term, is not a desirable taxing unit, but quite the contrary, and should be abolished as such unit.

II. DISTRIBUTION.

1. Funds raised by the large political or social units for general school purposes should be distributed in such a way as to bring the rich and the strong to the help of the poor and the weak.

2. Such rules of distribution should be adopted as will accomplish

this end. In order to do this, distribution must be based, to a certain extent at least, upon fixed or arbitrary units; that is, so much money must be given to the school or to the teacher.

3. The large taxing units should render assistance to the small ones only upon the condition that the small ones first do something for themselves.

III. ORGANIZATION.

1. In the states where the town or mixed system of local government exists, the town- or township-school system should, as far as practicable, be substituted for the district system; in the county-system states the county-school system is the natural alternative to the district system.

2. In those parts of the country where existing physical and social conditions render it practicable, there should be such a consolidation of rural schools as will diminish the existing number of schools, school-houses, and teachers, and bring together, at advantageous points, the pupils who are now divided and scattered among the isolated schools of the township or other similar districts.

3. There is urgent need of lengthening materially the time that the country schools, on the average, are in session each year. The ideal should be a minimum school year in every state of at least 160 or 180 days.

The subcommittee does not expect to see, and does not desire to see, the school systems of the country all brought to one uniform pattern. It is too well aware of the great diversity of conditions that exist to think such a thing is possible. Even more, a certain variety, and so conflict, of systems is conducive to life, activity, and improvement. Neither is the subcommittee under any illusions as to what is possible, or probable, in a field of education so vast as that offered by the United States, with the great number of authorities, state and local. At the same time there are certain general laws governing successful school systems and schools that cannot be ignored. Some of the principal of these laws have been set forth above; and it is believed that their general recognition will be followed by a marked improvement of the common schools, and so of the popular education, of the country.

Some persons may ask, "How shall the principles laid down in this report be made practical?" "How shall they be established in communities or states where they do not exist, or exist only in part?" To these questions only a general answer is needed. The state legislature, the law-making authority, is the only source of power in relation to education, as well as in relation to all other branches of the state government. Accordingly, if the school law is defective and weak, the legislature must be called upon to repair and strengthen it. No progress can be made with-

out an efficient law and efficient school authorities. But how shall the legislature be induced to act in the premises? In precisely the same way that it is induced to act in other matters. Facts, arguments, persuasion, must be addressed to the members of the legislature. Above all it is important that the public mind shall be informed as fully as possible upon all branches of the subject. If the people generally knew how much better schools they *might* have than those that they *do* now have, and for no more cost, it is impossible to believe that they would not bestir themselves to effect reforms. The subcommittee marks out what it believes to be broad lines of educational progress. It enforces its views, as far as possible, with appropriate arguments. But it must necessarily leave the application of these views and arguments to the exigencies existing in particular communities or states to such persons, belonging to these communities or states, as are interested in the subject and are familiar with all the local facts and conditions.

B. A. HINSDALE, *Chairman*,
W. S. SUTTON,
S. T. BLACK.

REPORT OF THE SUBCOMMITTEE ON SUPERVISION.

The Subcommittee on Supervision of Rural Schools has taken into careful consideration the various topics submitted for investigation. Its inquiries have extended into all the states and territories except Indian Territory and Alaska, and the facts are based on returns more or less full from all parts of the country.

Professional supervision is today regarded as an essential factor in our school system. It has been observed that the schools that are closely supervised by men who thoroughly know their business at once respond to the influence of this supervision. Expert supervision has resulted in systematic, orderly, and well-directed instruction. It is a matter of remark that the most competent superintendents have the best schools, and that cities noted for their excellence in school work have attained this pre-eminence through the medium of intelligent supervision. This is also true of those counties which have come under the same influence.

"There is no other agency in our school system that has done so much for the improvement of our schools in organization, and in methods of instruction and discipline, as the superintendency."

The attention of the profession, however, has been mainly directed toward expert supervision in city schools, and but little heed has been paid to the demand for such work in rural districts. It is quite time

that our inquiries should be directed toward the character of the supervision demanded by the country school. If supervision through a competent superintendent is a good thing for city schools, there is every reason why it would be a good thing for rural schools.

STATE SUPERINTENDENT.

Although the state superintendent stands at the head of the public-school system of the state, his work is more closely related to rural than to city schools. As this report has reference only to the conditions of rural schools, your subcommittee will consider the duties of this officer as bearing upon that part alone of the general school system. No officer connected with the administration of state affairs requires higher or more essential qualifications than that of superintendent of public instruction. He should be a man of high moral character, well acquainted with approved methods and with the history and condition of education in his state. He should be in close touch with the educational spirit of the times, and should be one whom the profession regards as authority in all that constitutes excellence in school matters. It is also agreed that he should be an experienced teacher, of broad and thorough scholarship, and a good public speaker. With these qualifications there should be combined a large share of good common sense, and sufficient executive ability to manage the details of his office.

The legal term of office in Massachusetts and Rhode Island is one year. In Connecticut it is at the pleasure of the state board. In twenty states the term of office is two years; in four states, three years; in seventeen states, four years; but in no state does it exceed four years. The average length of term of the state superintendent is two years and ten months. The lowest salary paid is \$1,000 and the highest \$5,000 per year. The average salary is \$2,475 per year. In answer to the question as to how much time the state superintendent devotes to supervision of schools, we had definite answers from thirty-seven states, in which we find that nineteen of these superintendents devote more than half of their time to visiting schools and traveling in the interest of education, and eighteen devote less than half their time. Quite a number of the state superintendents report that they divide their time equally between the office work and supervision. In only a few of the states does the state superintendent exercise no supervision, and in several the supervision is carried on through deputies or agents.

The state superintendent under present arrangements has but little time for personal inspection of school work. The superintendents in fourteen states visit each county once a year and in eight states once every two years. From the other states no definite information could be obtained. Many superintendents say, as often as practicable; in some

instances, not at all. Our information is to the effect that most of the state superintendents devote as much time to supervision as they can spare, but that it is generally considered secondary to work of a clerical nature. There are undoubtedly in some states sections which have never been visited by the state superintendent or his deputy.

By some means the influence of the state superintendent should be extended until it reaches every rural school in the state. In all possible ways the office should be made useful to the teachers and school officers. The rural schools need this stimulating, helpful influence more even than those of the city. While in most states the office has but little more than advisory powers, yet, through lectures at associations and through the inspection of institutes, the state superintendent ought to be able to convince the teachers of rural schools that he is in close sympathy with their work.

The work of the state superintendent ought to be made more effective by so increasing his clerical force as to enable him to spend more time in direct contact with the schools and school officials of the state. The careful compilation of statistics is very important, but it can be intrusted to a skillful statistician, while much of the routine work of the office can be well done by clerks. The higher and by far the more important work of directing educational movements, of instructing the people, and of creating public opinion and arousing public interest devolves upon the state superintendent. There is a general demand for more assistance in his office, longer tenure of service, and more liberal financial support. His work should be so related to that of the superintendents in the various subdivisions of the state for school purposes that the whole may be properly articulated, and the county or town superintendents be under his direction and control. He should come in frequent contact with them by conventions held for the purpose of instructing them in their particular duties, and should send them such circulars and letters as may be necessary to aid and direct them in their work.

The state superintendent should have the power to withhold the state appropriation from all counties or school districts not complying with the law in every particular, because he would then hold the key to the situation and could enforce his orders.

The main duties of the state superintendent are not only to organize and direct educational influence and laws already existing, but also to go among the people in the spirit of Horace Mann, and, by public addresses, by the liberal use of the press, and by securing the assistance of the leading men of the state, to arouse and keep alive an interest in the cause of popular education. In connection with the rural schools especially the state superintendent not only has great possibilities for a wise supervisory influence, but also great opportunities to arouse and instruct the people.

In a majority of the states the most needful legislation is that which bears upon the organization and maintenance of rural schools, and a supply of competent teachers for the same. The state superintendent, therefore, should be a man able to secure the co-operation of the legislature for the enactment of proper statutes. This can be done only by one who sees clearly the great needs of the school system, and who is able to go before the people and the legislature and unite all influences to obtain the necessary legislation. While putting into this high office any person solely through his political affiliations is to be deprecated, the state superintendent should be a man who knows how to approach the leaders of all parties and convince them of the justice and soundness of his plans, viewed from the high vantage ground of the general good.

COUNTY, TOWNSHIP, OR DISTRICT, SUPERINTENDENT.

A still more important question opened for discussion is the character and degree of supervision below that of the state superintendent.* Thirty-eight states, mainly in the South and West, have county superintendents, whose duty it is to visit the schools and exercise the duties usually belonging to their office. The New England states generally have what is known as township or district supervision, which arises in large part from their political organization. In New England the town is the dominant political unit, while in the South and West it is the county. The simplicity and effectiveness of supervision is promoted when the units of political organization and of school administration are identical. This condition has its limitations, however, in the amount of territory to be covered and in the density of population, which is a varying quantity. The main point is to bring every rural school of the country as far as possible under the watchful care of a competent supervising officer. Responsibility is a strong stimulant. It is one of the weak points in our present system that too often the rural school-teacher is responsible to no one.

In regard to the operation of the two principal methods of supervision there is no reason why any section should abandon the practice which has been found best adapted to its peculiar conditions. It must be conceded, however, that a single township, containing on an average ten or twelve schools, is too small a territory to engage profitably the entire attention of one person. In such a case one of two things must necessarily happen: either the schools are supervised to the point of interference, or the supervision becomes uncertain, feeble, and unsatisfactory. In a general way, the rural township is too small a supervisory unit. Wherever it has been tried the supervisor has generally had some other busi-

* In this report the term supervisor is used to include also county superintendent, commissioner, or any other term by which the supervising officer of a county or supervisory district is usually designated.

ness to attend to, and thus his work has been found wanting in those results which are most desirable. In order that the work of overseeing and directing may be effective, it must engage the entire time and the best thought of the supervisory officer.

A proper remedy for this is the combination of towns for supervisory purposes. Three, four, or five towns could be united in one supervisory district, until a sufficient number of schools have been secured to engage the entire attention of one good man. The burden of his salary could be borne by these towns in the proportion of the number of schools they contribute to his work. This plan is in operation in Massachusetts, and has been satisfactory. A complete exposition of the Massachusetts plan of supervision of township schools is found in A. W. Edson's monograph, "Supervision of Schools in Massachusetts" (Boston, 1895).

In that state 253 of the towns are supervised by 155 supervisors. While some of the large towns can alone support a supervisor, several of the smaller ones must unite to secure the services of an efficient officer. In addition to what the towns do for themselves the state grants to those of low valuation, when they combine into a supervisory district, the sum of \$750 to pay for a supervisor. These towns, however, are required to raise an additional sum equal to that furnished by the state, thus insuring a sufficient sum for the employment of an expert school man. By these means 93 per cent. of the children of Massachusetts have been brought under close supervision. The salary paid to a supervisor is at least \$1,500 a year, and he is enabled to devote all his time to the work and to inspect each school once a month. It is true that there are still about 100 towns in Massachusetts without supervision, yet the feasibility of co-operative supervision with aid from the state is proven beyond all doubt.

"The state aid to a district amounts at present to \$1,250—\$750 towards the superintendent's salary and \$500 towards the salaries of the teachers. The remainder of the superintendent's salary, \$750, must be raised by the towns of the district. They are at liberty, of course, to raise more than \$750 for the purpose, if they desire to do so" (Massachusetts State Report, 1895).

What has been said regarding the combination of towns for supervisory purposes can be repeated with equal emphasis as to other small divisions of territory termed "school districts." The same principle applies here as elsewhere, that the interests of the schools included in a given territory should be sufficient to warrant the employment of a thoroughly competent person, at such a salary as would justify devoting his entire time to his work. After all has been done, there will still be vast sections of country, especially in the West and Southwest, without any means of efficient supervision. No present remedy can be devised to aid them. It can be safely left for the several states, as population increases,

to look after the interests of the schools in the light of the experience of older communities about them.

The worth of the county superintendency is acknowledged, but in many cases the county is too large an area and contains too many teachers for one man to properly supervise. The county is as much too large a unit for supervisory purposes as the township is too small. This remark, however, does not apply to every county nor to any one state. In counties where the number of teachers is too large for one man to supervise, the county superintendent should have one or more assistants or deputies to aid him in his work. They should be directly responsible to him for the kind and character of their work, and should be charged solely with supervisory duties. The importance of having one superintendent for the county or district to whom other supervisors are responsible must be emphasized, as it would be an error and a fruitful source of strife if in any territory there should be two or more supervisors having concurrent jurisdiction.

THE COUNTY UNIT.

Since this report is a symposium of suggestions for supervising rural schools, it may not be amiss to discuss a plan of supervisory organization that has found favor in some few counties that contain large cities as well as a rural population. We mention it here because it has valuable features for supervising the rural schools. There is but one school board for the entire county. One set of men legislates for the whole area, and it is their duty to relate the urban and suburban and rural schools into a sympathetic system. This is based upon the idea that every city is bound to respect the people that immediately environ it. It is to the interest of a large city to have good roads leading to it, good crops in the fields around it, and good schools to which the farmers may send their children.

With this as a foundation principle there is but one school fund for the entire county, raised by taxation upon all property in the county, whether it be in or out of the city. This makes the general school fund, which is distributed upon the basis of school population and according to the needs of the city wards and the rural communities. The same qualification for teachers is required whether they teach in a city graded school or in a country ungraded school, and the same salary is paid to them and in the same way, and for just as long a term. In this system one superintendent is in charge of the whole area. He looks after a city graded school one day and the next day may be twenty miles away inspecting a country school. Expert supervision by a superintendent and his assistants is thus extended into the rural districts, and both city and country school receive the benefit of what there may be in each that is of real value.

Upon this plan, as a matter of course, a large portion of the school fund raised by taxation on city property is annually distributed to the country schools. The city is really made to assist in supporting the rural schools around it. And who shall say it is not a good thing for the city to do, especially in agricultural sections, in which the education, liberal and special, of the farmer's child is the probable salvation of the farming interests of the country. We should not lose sight of the truth that the farmer's child is to be made a useful citizen, not only content to stay in the home in which he was born and reared, if that is best, but fitted to fill honorably any station in life to which he may be called. To do this he must have all the opportunities of education and culture that the city affords. This can be brought about in no other way than at the city's expense, for wealth is massed in our populous centers. The expert supervision, the well-trained teacher, the long term, the modern textbook, the good schoolhouse, can be placed at the farmer's door by the agencies of the neighboring city, that owes him this and much more (*Appendix D*).

TRAINED TEACHERS NEEDED IN COUNTRY SCHOOLS.

Supervision is one of the vital needs of the rural schools, since most of their teachers are inexperienced. The number of normal-school graduates in rural schools is lamentably small. The reason is that the normal-school graduate can obtain a better salary by teaching in a larger field. The demand for this class of teachers makes their salaries so high that the country schools cannot afford to employ them. As soon as teachers become proficient by reason of experience acquired in rural schools, the probabilities are that they will be induced to seek better positions in cities where their experience and abilities will command higher salaries.

Add to this the other fact that many young men begin to teach as a stepping stone to some other profession, and while they are teaching a country school are studying law or medicine, and their hearts are with that rather than with teaching; and also add that many young girls teach until they marry, or as long as they are compelled to teach, and no longer, that they have no real love for their work and no wish to stay in it, and we see how the problems multiply.

Rural schools suffer from lack of trained teachers. In them, as a general thing, are young graduates from the village high school, or some favorite among neighborhood families, or a type of ancient teacher whose placid life is not disturbed by the vexing problems of his profession. This raw material must be developed, made shapely, orderly, and systematic, if time is to be saved to the children, and schools properly supported. A bright and live supervisor will bring order out of confusion, harmony

out of discord, and will give life and beauty to that which before was inert and ungainly.

Teaching is a great art, based on a profound science. The supervisor is the expert who has given this art and science his careful attention, and whose business it is both to know how to teach, and to show others the way of teaching. He can in some measure compensate for the lack of skilled work in the school by closely supervising and guiding inexperienced teachers and showing them what to do. An expert is one who possesses skill gained by practice. A supervisor who claims to be an expert should have experimental knowledge of "the how to teach." He is supposed to have given careful attention to those things which characterize a good school. Not only must he know how to teach, but he must know how to instruct others in the art and science of teaching. He must be a skilled teacher of teachers. Without this directing spirit, schools must necessarily suffer until teachers happen upon some better way. It is a great misfortune for schools to wait for wisdom in teaching until the many mistakes of teachers have pointed out better methods. The presence of skilled supervision has been the salvation of many schools.

It is one province of supervision in the country school to bring teachers into contact with each other, to illustrate better ways of teaching, to break up the isolation and monotony of rural school life, and to take to the doors and homes of people and teachers alike the life and freshness which have been the result of research and study on the part of the best minds in the profession. The province of supervision in rural schools falls far short of its legitimate purposes when it begins and ends in the schoolroom.

This point is not sufficiently well appreciated by those who have the oversight and care of schools scattered over a large tract of territory. Country schools have an environment of their own which should neither be forgotten nor ignored. The best supervisory work is that which brings into the rural school everything in farm and rural life which is strong and pure and wholesome. It is possible for the supervising officer so to exert his influence as to give grace and dignity to each individual school, and make it the rallying point for every good influence, a blessing to the entire community in which it is situated.

Attention is here called to the fact that in general but little care is taken in the selection of officers chosen to look after the interests of the rural schools. In the majority of states the county superintendents are elected by the people of the county without any regard to the preparation or qualifications they may have for the work. Very few states require the superintendents to have any special qualifications, and in many instances supervisors are put in charge of teachers who know more about teaching than they do, and are required to hold examina-

tions that they themselves could not pass. Add to this the fact that the superintendents are generally paid very small salaries (average \$828 for the whole country) or a meager *per diem*, and that many engage in other business and regard supervision of schools as an incidental matter, and it becomes apparent that professional supervision is too often the exception rather than the rule.

WORK OF SUPERVISORS.

We need everywhere trained superintendents of schools. "Supervision of schools should rank next in importance to the instruction in schools; indeed, so necessary to successful instruction is competent supervision that the two should receive together the watchful oversight of the state" (New Jersey State Report, 1894). Supervisors should know as much of teaching as the teachers under them, and should be able instinctively to distinguish good teachers by their manners, dress, speech, disposition, and character. The best work of a supervisor is his skill in selecting teachers. Not by the results of examination alone, for some learned people make poor instructors; not by yielding to the pressure of family or political influence, for this will ruin any system of schools; not by selecting his own friends or favorites, for this is unworthy of his office; but by following the knowledge that comes to him through study, by long experience, by careful observation, and by conscientious conviction, which enables him to know a teacher when he meets one, though he may not be able to tell why.

Teaching is a matter of both disposition and knowledge. The former cannot be examined, but it ought to be recognized; careful supervision will aid in developing it. Skill in doing this is an essential characteristic of a good supervising officer, especially in connection with rural schools. If the cry is raised (and it is) that there is not enough money to pay for professional supervision, the reply is that it would be wiser to have fewer teachers in order that those employed might be better qualified. A supervisor who is an expert can so arrange and organize the system that a less number of teachers can do the work and do it better, because each one is thoroughly competent. "A good superintendent earns many times his salary; a poor superintendent is too dear at any price. The work of supervision may be unsatisfactory either because the number of schools is too large for the oversight of one person, or because the supervising officer lacks the talent for moulding, inspiring, and directing the work of others" (Pennsylvania State Report, 1895). Underpaid supervision is often unskilled and inefficient, and against this we raise our decided protest. Such supervision is of no value whatever to the schools—a penny-wise policy that economizes in the wrong place. A supervisor should have no other business than to care for the schools. He should not be a mer-

chant, nor a lawyer, nor a farmer, nor an active teacher. His business should be to supervise the schools of his county, or township, or district, or whatever his area be called.

With a given sum of money for school purposes, to devote a part of it to skilled supervision will bring more children under enrollment, better teachers in the community, better instruction in the schools, and more satisfaction to the people, than if all the money were spent in paying the salaries of teachers.

In twenty-eight states the supervisors are required by law to visit each school twice a year, in the other states they are allowed to visit the schools as often as practicable. In one or two states the supervisors visit the schools very seldom. The length of time the supervisor spends in each school varies from fifteen minutes to one-half day. The time seems to depend very largely upon circumstances, the number of pupils, the character of the teacher, the efficiency and the pay of the supervisor. A skilled supervisor inspecting an intelligent teacher can do more service in fifteen minutes than an unskilled supervisor visiting a poor teacher can do in a whole day. The average time spent in the ordinary rural school by the school supervisor is about one hour every year.

In twelve states the supervisors devote all their time to the work. In these states the average salary is \$1,002 a year. In fourteen states the supervisors devote only a part of their time to supervision, with an average annual salary of \$408. Sixteen states report that in some counties the supervisors devote all their time to supervision, while in other counties the supervisors devote but a small part of their time to that work. In these states the salaries paid supervisors vary from \$100 to \$2,000 or \$3,000 a year. Where good salaries are paid they devote all their time to supervision. Where small salaries are paid they devote but little time to this special work. All states have some supervision, though it varies greatly in amount and in efficiency.

In many sections of the country a supervisor not capable of suggesting to teachers better methods of teaching and not able to detect false methods pays only a perfunctory visit to the schools. He merely sees whether the building is clean, whether the children look bright and interesting, whether the enrollment is good, such facts as would be noticed by any person of ordinary common sense. Too often the contact of the average supervisor and the teacher of the rural schools is nothing more than a mechanical business performance, with such elements of aid and encouragement as any intelligent visitor may give the school. Although this is not without advantage, it falls far below the standard of professional supervision.

How many teachers a supervisor can direct cannot be discussed except in a general way. Schools are more widely separated in some localities

than in others, roads are better, teachers are better, and supervisors vary greatly in the rapidity with which they work. As a general rule, however, every rural school ought to be visited at least once in two months. Supervision cannot be called close that does any less than that, and it would be better if the schools could be visited once every month.

No accurate information can be gained concerning the conditions of the school, nor can the proper influence be exerted over teacher and pupils, unless the supervisor has time at his disposal to make a reasonably thorough examination of the school and its surroundings. Sometimes, with an inexperienced teacher, he may find it necessary to spend the entire day in the school, while in other cases he may be able to visit two or more schools in one day. The point is that he must not feel compelled to shorten his visit, or to leave his work half done, in order to meet other engagements. To make his visits effective in the highest degree requires time and patience. The length of his visit must depend upon the necessities of the school, and of these he must be his own judge. An ideal system of supervision would give one supervisor from fifty to seventy-five teachers to supervise. Where the number of teachers is greater some will be neglected, for a supervisor generally has many interruptions in his work, such as rainy days, holidays, and the demand upon his time for office work, board meetings, committee meetings, public addresses, etc., so that it is impossible to put in every day in supervision. Allowance must be made for other important duties.

Attention is also called to the power which the supervisor can exert through rightly conducted teachers' meetings, institutes, associations, and round tables. Here he may meet the teachers under his direction, and make use of the information which he has gathered in visiting their schools. From free and open discussions by the teachers he will get an insight into their habits of thought and their methods of expression. Such meetings help break up the unsocial character of rural teachers by bringing them into contact, so that each learns something from the experience of all the others. In this way teachers and supervisors become better acquainted, gather fresh courage and new inspiration, and go home feeling that they have much in common, and that, if they will, they can in many ways be mutually helpful. The most deadening influence about the country school is its isolation. Nothing is more potent in overcoming this than frequent gatherings in which teachers, school officers, and parents freely discuss matters of common interest. To encourage such meetings is one of the duties incumbent upon the supervisor. Without being too prominent, he may still be the inspiring spirit, guiding, directing, and stimulating the tone and energies of all who participate in the proceedings (*Appendix P*).

LEGAL REQUIREMENTS AND QUALIFICATIONS.

The necessity of establishing some qualifications to be required of those who are to occupy the position of supervising officer is emphatically insisted upon.

"If it is desirable to insist upon a certain degree of qualification for a school-teacher in the humblest district of the state (this proposition has passed beyond the realm of discussion), it would seem that there is no question that the superior officer clothed by statute with such extended powers as a school commissioner ought to be a person possessing some fixed qualification for the performance of the duties of his office. The schools of the state will never reach that degree of efficiency which the state has a right to demand, and which is expected from the generous provision made for their support by the people, until this evil is corrected. Some standard of qualification should be insisted upon, and the power of removal in case of the election of a person not possessing these qualifications should be vested in the state superintendent" (New York State Report, 1895).

In only seventeen states are there any qualifications, beyond that of being a resident and a voter. In some states a first-grade license is required, in others a normal or university course, and again in others he must be an experienced teacher. In a majority of the states, however, the electors are allowed to choose any person without regard to educational qualifications.

In answer to circulars of inquiry the following information was obtained regarding supervisors:

Wisconsin — By the law of 1895, must hold a university, normal, state, or special superintendent certificate.

New York — No standard of qualification.

Pennsylvania — Must hold a college diploma, or a state or local certificate; must have at least three years' experience in teaching.

Michigan — Must be a graduate of a reputable college, university, or state normal college, or must hold a state or first-grade certificate.

Mississippi — Must hold a first-grade certificate.

Texas — Must be a person of educational attainments and hold a first-grade teacher's certificate.

Tennessee — Can be appointed only from applicants who pass an examination on questions sent out by state board.

Georgia — Must pass a satisfactory examination.

Louisiana — Must have a common-school education.

Montana — Must hold a first-grade certificate and have one year's experience as teacher.

South Carolina — Must be able to conduct a teachers' institute.

Kentucky—Must be able to obtain a first-class teacher's certificate, hold a state diploma, or state certificate.

Arkansas—Must have a first-grade certificate.

Maryland—The county school board may require applicants to be examined by the state superintendent.

Utah—Must have a valid certificate not lower than the grammar grade.

West Virginia—Must be skilled in the art of teaching.

Iowa—First-class certificate, good for two years, a state certificate, or a life diploma.

It is unquestionably true that a supervisor should be as well and as highly educated as the better teachers he supervises. He should be a man of broad and generous culture, a lover of good books, versed in the best literature of the day, one whose presence is an influence for good, and whose words are an inspiration. To require him to be in every case a graduate of some higher school would be unreasonable, perhaps, but he should be a friend of higher education in every sense of the word. He must for a long time continue to be one from whom will come the influence which will lead the pupils in the rural district to strive for the highest education possible under the circumstances. His influence should be given to the establishment of rural or township high schools wherever the population will permit it. These schools should include in their courses whatever is required on the one hand for entrance to the school of the next higher grade, or, on the other, those studies, a knowledge of which can be made so to change life on the farm, in its various forms, that it will become more attractive and more profitable. In the establishment and conduct of such schools the influence of the supervisor should be a very prominent factor.

A supervisor should have a thorough knowledge of school work. He should know what a teacher ought to do in managing a class of pupils of any age on any subject. This is one of the things he is paid to know. He should be an expert to whom teachers may go for advice and direction. If the advice is good and the direction wise, teachers will have confidence in the administration of the schools, and rely more and more upon the supervisor. The system is thus reduced to uniformity and becomes a source of strength. The supervisor should be able to direct teachers in their professional reading, and select wisely a library of teachers' books, and place them where they are most needed. He should know about school periodicals and be able to form his teachers into reading clubs and circles, and direct their studies. He should be able to arrange teachers' meetings so that time will not be wasted, and that teachers will come with pleasure and stay with profit. He ought to be able to aid in selecting a library suited to the wants and tastes of an agricultural community (*Appendix L*). In school extension he should be a

leader, for he can thus make his influence felt in every part of his territory. In directing the home reading of the pupils and the people he may, if he will, find an immense field of usefulness. He can thus create and foster an interest in the welfare of the farm and the home as adjuncts to the rural schools.

He can understand and sympathize with teachers better if he has an experimental knowledge of their work. No supervisor is so good as he who climbed from the lowest rounds and knows all the steps. That this is indispensable we are not prepared to state. There are some very excellent supervisors who have but little experience in teaching, but who have seen enough and studied enough to know how it ought to be done. Experience would have been helpful, however, in understanding the limitations of their work.

First and foremost a supervisor should be able to instruct his teachers in the methods of organization and management of schools. This is particularly the case in rural schools where so few teachers have acquired skill in teaching. But instruction with a teacher is like instruction with a child. There must be an awakening, an arousing, a hungering after instruction. The conditions of "being filled" are that we must "hunger and thirst." The supervisor must inspire his teachers with a desire for better things. He should lead them to see that time is precious, and that the children in school this year may be on the farms next year and no more in school forever. They must know what to do and do it. The supervisor should be a source of inspiration. His corps of teachers must be alive, and eager, and studious. The thing most to be abhorred in school work is the teacher dead to advancement in professional studies. The supervisor must rouse teachers to work out for themselves plans and methods for building up their schools, and must set forth the principles which should control them in their work.

The county superintendent, or the supervisor of schools in any rural community, should have had recent experience in the schools which he is to supervise. In cases where this is not possible he should make a careful study of the peculiar surroundings of the schools of which he is to take charge. If the new departure which seems to be at hand in rural school education is to be a success, it must be carefully conducted in reference to those environments which are peculiar to each section. The supervisor who is to have a controlling influence in choice of text-books, in courses of study, in the selection and use of libraries, should be thoroughly conversant with the physical characteristics of his district, with the interests of the people, with their sources of wealth and living, and with the home life of the children (*Appendix O*). Whether it be a mining or a grazing region, whether agriculture or horticulture predominates as an interest, he should make himself at home in that domain of science or knowledge which will increase his usefulness as a school officer.

THE HOME AND THE SCHOOL.

The parents of children need instruction as well as the children themselves. The home influence and the school influence should be harmonious, or confusion and uncertainty will arise in the child's mind as to what he should do. The people must be reminded that the school is an integral part of the community, and not a separate affair which the law compels them to support, and which takes their children away when their assistance on the farm is most valuable (*Appendix O*).

In establishing the true relations between the home and the school, between the necessities of physical and those of intellectual education, the supervisor of rural schools finds an unlimited field of usefulness. In rural districts parents are often ignorant of the advancement education has made since the days when they went to school, and they are often too ready to criticise anything new. The supervisor must gain their confidence, so that they will yield their ideas to his, and allow the teacher in their school to follow his directions without any hindrance from them.

The supervisor can exert a wonderful influence in bringing the fireside to the support of the teacher. To do this he must be able to educate the people concerning their relation to the school, as to sending the children regularly, as to providing necessary material, such as books, etc., as to allowing every teacher to pursue those methods of teaching which his skill and experience suggest as best suited to the wants of the school. At meetings of agricultural clubs, at town rallies, at educational "barbecues," at commencements, at spring festivals, at farmers' institutes, he should embrace every opportunity of saying a word for the schools, in order to arouse the people and interest them in the whole system of education. The columns of the country paper afford the supervisor a very ready means of reaching the people. Almost every farmer takes the county paper that comes weekly to his fireside, which gives the news of the outside world and the doings of his neighbors. School news is an important item and should never be omitted. Every week the paper should contain something of educational interest from the pen of the supervisor, though not always over his signature—suggestions for improvement, statistics of enrollment and attendance, new and better ways of teaching, plans for schoolhouse construction and decoration. The press is valuable to every teacher and helpful to the system of education by bringing farmers into sympathy with the great educational movements of the world. The press gives a larger audience, though it enforces a shorter address. But a little every week, full of variety and interest, will eventually build up a healthy sentiment in the county and educate parents as well as children.

The supervisor should have a direct or indirect control of the selection of teachers. The crisis in the history of schools is when teachers are to

be chosen. No one is so well qualified to choose them wisely as a faithful supervisor, and no one is more likely to do so conscientiously, since he knows the value of efficient teachers. This control can be given him directly or indirectly. If he does not wish to have the direct choice in individual instances, the same may be accomplished by giving him the power to examine and license teachers for his supervisory district. No one, then, can be selected by the board of directors except such as are approved by him. He prepares an eligible list to which the board is limited in making its choice. If the superintendent is conscientious and courageous in the preparation of this list, he can safely leave the responsibility of the individual appointments to the board.

In many cases the questions for such examination are prepared at the state office. In some instances the county board conducts the examinations, and in a few the answer papers are sent to the state office for final examination and approval or rejection.

The supervisor should be slow to condemn a teacher who is honestly striving to succeed, but if, after faithful and earnest effort, teachers clearly prove that school teaching is not their vocation, or, after repeated warnings, teachers will not try to do the right kind of work, it is clearly the duty of the supervisor to report the facts to the directors, and his report should be given great weight by them. The power to revoke the certificate is usually in the hands of the supervisory officer. It should be exercised with great caution and deliberation, but fearlessly whenever there is sufficient reason for it.

Since the supervisor is responsible for school methods and for results in teaching, the arrangement of the course of study and the selecting of the text-books should be largely, if not entirely, left to his direction. It is his particular business to know books as well as to know teachers. It is not to be expected that the men who constitute the ordinary "committee on text-books" and whose daily business has no relation whatever to school texts and their use, can decide what book is best for use in the schoolroom. It is very well to have a committee on text-books composed of the members of the board, to prevent possible abuse, but the advice of the supervisor should have much influence in determining the character of the books used in the schools.

SCHOOL DIRECTORS.

It is important that the relations between the supervisor and the school officers should be clearly defined. The directors¹ stand much nearer the people and have an immediate interest in the welfare of the schools. They contract with the teachers, care for the financial affairs of

¹ Director includes whatever term is used to designate the local school officers in any state — as director, commissioner, school committee, trustee, etc.

the district, purchase supplies, and are charged with the general business management. The success of the school depends very largely upon the kind of men who are elected to that office. In the rural districts especially the duties of the director are mainly of a supervisory nature. He should inspect frequently the schoolhouse and school premises; he should see to it that everything is provided which is necessary for the comfort and convenience of both teacher and pupils, that the outbuildings are in a decent condition, and that the supplies are used with due regard to a wise economy. In the discipline of the school he should give a strong moral support to the teacher, and his influence should at all times be on the side of order and obedience. The board of directors should make such rules and regulations for all the schools under its control as it deems necessary for the preservation of school property, for securing punctuality and regularity, and for the general welfare of all concerned, and it should support the teachers in their rigid enforcement. It should be in constant correspondence with the supervisor, so as to keep him informed respecting the progress of the school, and in case a teacher is derelict in his duties, or if for any reason the school needs a special visitation, it should inform him at once. On the other hand it should be the aim of the supervisor to establish the most cordial and intimate relations with the local directors. The supervisor should magnify the office of the director. Whenever he visits the school he should, if possible, induce the director to go with him. If at such visits they inspect the condition of the outbuildings and the premises, the supervisor can often propose plans for the improvement of the buildings which the director will more readily appreciate and approve.

The inspection of a school by a competent supervisor is an object lesson of importance to the director. He is able to see at what points the supervisor is aiming, and he learns something of his ideas and plans. He will thus be better able to counsel and advise the teacher in the frequent visits which he makes to the school, and make more intelligent and specific reports to the supervisor. The practice on the part of the supervisor of calling the directors together at stated times for mutual conference is very commendable. These officers are often ignorant of their duties, but in a large majority of cases they are willing and anxious to learn. There is no more effective way of improving the rural schools than that of instructing and informing the men who have them in their immediate charge. No doubt large sums are lost to the various funds through carelessness on the part of treasurers and secretaries in the rural districts in keeping their accounts. The supervisor should make it his duty to audit these books at least once each year, with a view to accuracy of statistics and economy in expenditures, and this should be one of his duties under the law.

THE VISITATION OF SCHOOLS.

The supervisor's method of visiting schools may be considered briefly. First, he visits schools to see how and what the teachers teach, whether their manner is composed, their method clear and concise, their style interesting; whether they are teaching valuable facts, or wasting time on trifles; whether they are teaching what is right or what is wrong. Second, he goes to find out what the pupils know. This is a test of the past work of teachers, which is shown by the general manner of recitation, the promptness with which pupils reply, the amount of information they have, the degree of skill they manifest, or the power of original thinking they have developed. Third, he inspects the physical conditions of the school building and grounds. He should note the conditions of the outbuildings, and if he finds them unsuitable in any respect, he should say so frankly to teachers and directors, and insist upon a change at once. The supervisor must know whether good light, good seats, proper temperature and ventilation, and thorough drainage are secured. The supervisor should carefully observe the moral atmosphere which surrounds the school, whether it is on the side of order and obedience, of modesty, and of all those virtues which make the character of the typical American citizen. All these are demanded in order that good teaching may be made possible, and good health and public morals may be preserved.

Such being the purpose of the visit, the supervisor should put himself in easy and cordial relations with the teacher and the pupils, that he may have a true understanding of what each can do. The teacher may conduct one or more recitations in the various subjects of study, in order that the supervisor may see the usual methods of instruction. The supervisor can then suggest improvements if needed, and can even take the class in hand and demonstrate them. That he should ask for a class, in any particular study and give the pupils a rigid oral or even written review, while the teacher may be attending to some other duty, is proper, for by this means he can find out how much instruction has been given since his last visit and how thoroughly the course of study is being adhered to. It is, however, often best to allow the teacher to pursue the usual routine of exercises, in order that the supervisor may see the school at its everyday work.

An inspection of the teacher's register should not be forgotten. Such a register in every rural school should show the name and age of each pupil, the studies pursued, where each class commenced and its progress during the term, so that a new teacher can at a glance understand at what point the study of each branch to be taught is to be taken up. The supervisor should insist that such a register be carefully kept by every teacher under his control.

A private record of his own, in which names, dates, classes heard, conditions of rooms and premises, material needed, and general observations, are kept, will aid the supervisor. He can by this means trace the development of any one school and can more readily observe whether it progresses or retrogrades.

SCHOOLHOUSES AND FURNITURE.

Before closing, your subcommittee desires to emphasize the proposition that the supervisor should have a controlling voice in the erection of the rural schoolhouse, as respects all its sanitary conditions. Before the contract for a new building can be legally let, the written approval of the supervisor should be necessary, certifying that as concerns heating, lighting, ventilation, and everything which conduces to the health and physical growth of the pupils, the requirements of hygienic rules and sanitary science have been carefully and fully complied with. The rural schoolhouse should be built in accordance with the laws of sanitation and modern civilization (*Appendix M*). It never will be until the state, speaking through the supervisor, compels it as a prerequisite for receiving a share of the public funds.

The supervisor should not be blind to the small things which minister to the comforts of the pupils. Often the rural school-teacher has received no instruction upon these points. If the supervisor finds pupils facing a strong light, he should call attention to the evils likely to ensue, and suggest a remedy. The same is true as regards unsuitable desks or seats. The necessity of proper ventilation and proper temperature should be constantly dwelt upon. Without a thermometer, with no means of ventilation except the door and windows, the rural school-teacher needs and appreciates all the suggestions an intelligent supervisor may make.

Akin to this is the suggestion that the supervisor should insist that the schoolroom be kept clean and neat for sanitary reasons. The floors should be scoured as often as they are soiled; the wood, trash, and ashes should be carefully kept away from around the stove. The walls should be swept free of dust, the chalk racks kept clean, and the window panes polished. Pupils also should be required to keep their desks in order and their books clean. It is stimulating to the little ones and helpful to teachers for the supervisor to have them show their books, and to take occasion to comment on the care or on the untidiness with which they are kept.

No better educational influence can surround the children than a well-arranged schoolroom whose floors and windows are clean, whose walls are free from dust and decorated with pictures, whose school grounds are well-ordered and shaded by trees and adorned with flowers, and the

(1) It should serve to inspire and stimulate the rural school-teacher. If the supervisor is alive to his opportunities, every teacher within the sphere of his influence will be quickened and lifted up to higher efforts for the good of the school. The teachers should learn to look upon him as a friend, and not as a critic; as a wise counsellor, and not as a mere fault-finder.

(2) It should be the means of awakening and stimulating the pupils as well as the teacher. They should look for the visits of the supervisor with pleasure, and profit by his talks and advice. By instituting a system of central examinations for the rural schools, he may quicken and encourage the brighter pupils to obtain the best education within their means. The influence of a scholarly supervisor over the pupils is a very desirable thing in the rural school.

(3) The improved condition of the rural schoolhouse is a sure index of the work of a competent supervisor. The present lamentable condition of these buildings is due largely to ignorance and neglect. Competent supervision in skillful hands can work a marvelous change. The cultivation of a spirit of order and neatness which leads to the ornamentation of the school grounds and to a watchful care over all the environments of the schoolhouse, is one of the purposes of supervision.

(4) Supervision does not accomplish its legitimate purpose when it fails to cultivate a strong, healthy public opinion in favor of everything which tends to make a good school. Hence, the supervisor who contents himself with a perfunctory visit to the school only is not a supervisor in the broad sense of that word. A large share of the work of the supervisor is away from the school and among the people.

3. As to the results to be expected from intelligent supervision:

(1) In regard to the school, it unites teachers for a common purpose, and, by teachers' meetings and by the visitations of the supervisor, it breaks up the monotony and isolation of the country school. Under its influence better teachers find their way into the schools, better methods of instruction prevail, and the tone and spirit of the school are greatly improved.

(2) In regard to the community at large, supervision is just beginning to do its legitimate work. In the establishment of school libraries, in the relation of the supervisor to the directors, in an improved school architecture in which due regard is had to sanitary conditions, in the ornamentation and care of the school grounds, in school extension, in the introduction of studies which will add to the attractiveness and profit of life on the farm, in the consolidation of small districts into larger and stronger schools, in awakening a public interest in rural education, there is a field large enough to occupy the time and thought of the most progressive and most intelligent supervisor. It is here we are to look in the

near future for the best results of supervision as concerns the rural schools of the country.

LAWTON B. EVANS, *Chairman*,
CHARLES R. SKINNER,
HENRY SABIN.

*REPORT OF THE SUBCOMMITTEE ON SUPPLY OF
TEACHERS.*

The Subcommittee on Supply of Teachers has distributed a large number of circular letters of inquiry, designed to elicit information in regard to the agencies now existing for the preparation of teachers for rural schools, and for the improvement of teachers already in the service, and also in regard to certain conditions, as to the manner of certifying, employing, and paying teachers, which affect the supply. In connection with this inquiry the attempt has been made to gather information as to the defects and excellencies of existing systems, together with suggestions for improvement. To these a sufficient number of replies has been received to justify the belief that they give a fair average statement of the conditions which this report has to meet. Without attempting to summarize the returns, your committee would state the results of the inquiry upon the problem presented, and mark out the lines which must be followed, and to what end, in order that the child in the country school may receive the education which is his due. In some state systems progress along these lines is much more advanced than in others, and in some individual cases the desired end has been attained; but this is true, as regards the entire country, in so small a degree that it is unnecessary, even if it were possible, to particularize. With but few exceptions the recommendations made could be justified by reference to various states or communities in our own country, and there are none which do not rest upon successful experiences at home or abroad. It will be found quite impossible to treat the rural school in any of its aspects without touching in some degree upon ground common to all classes of schools, and this is especially true as regards that branch of the problem assigned to this subcommittee.

Certain conditions now very general must be changed in order that the rural school may be supplied with better teachers.

TEACHERS.

There must be in rural communities a clearer appreciation of the qualities essential to a good teacher. It is too often the case that no distinction is made between a teacher of superior scholarship, of proved

ability in instruction and discipline, of long experience, and one far inferior in all the qualities essential to success.

The teacher must be engaged for the school year. In many cases the engagement is from term to term, and these frequent changes are without exception classed among the most potent causes of failure in the rural school. It is widely true that the school is in session less than half the year; it is often true that in this short school year two teachers are employed, and seldom does a teacher remain a second year. Engagements should be for a longer term than one year, or continuous, and terminated only for cause, as is the case in many cities.

One of the most important points to be considered in a system of schools is that of the authorities employing teachers and assigning them to their work. In cases in which the county or township is the unit of school administration, the problem is solved; in case the district system prevails, the district containing one school, it is evident that the employment and assignment of teachers should be transferred to the authorities of the larger school unit, in order that in the assignment advantage may be taken of peculiar abilities and aptitudes.

The authority which examines should not employ.

Closely allied to this question is one of great interest in the southern states, namely, that of assignment of teachers to negro schools. For a full treatment of this subject see *Appendix J*.

SCHOOL YEAR.

The school year must be lengthened to a full school year of nine or ten months. In many states a minimum length is prescribed by statute, but in few cases is this sufficient. Whatever efforts may be made for the improvement of the rural school, until there can be offered a "year's work and a year's wage," it will be difficult and often impossible to retain accomplished teachers for continuous service; with this, many such teachers would choose this service, from family and social connections, and from a natural preference for rural life.

In countries in which people are accustomed to the action of centralized authority, prescription settles the matter, as in France, where the school year is more than forty weeks; in England, where, as conditions of receiving the government grant, the principal teacher at least must hold the government certificate of qualification, the school premises must be in good sanitary condition, the staff, furniture, and apparatus must be sufficient, and *the school must have met 400 times (200 days) in the year*.

In countries like our own, in which popular initiative in political matters has been the rule, success must usually come by other methods, and in this respect we have much to learn from our neighbors. In Canada the schools have been lengthened to a full school year mainly

under the stimulus given by the mode of distributing the government grants.

Letters and reports have been received from the different provinces. By these it appears that the average length of the school year was in Ontario 212 days; in New Brunswick, 216 days; in Nova Scotia, 198.7 days, the full school year being 216 days, and some schools exceeding this limit. A report from Regina, in the province of Assiniboia, states that the full school year is considered to be twelve months less the holidays, amounting to seven weeks, but this limit cannot be attained where the sparseness of the population obliges the pupils to travel long distances, on account of the severity of the winters.*

Adding to our plan of requiring a minimum school year the Canadian plan, already in a degree recognized in some recent school legislation, of making the amount of government grant depend in a large degree upon the length of the school year and the average attendance, consolidating schools wherever practicable, and giving from the larger units of school administration to aid the smaller and weaker, the obstacle of the short term and insufficient compensation can be removed.

SUPERVISION.

Incompetent supervision forms one obstacle to a supply of better teachers. This obstacle may be removed by securing professional supervision, as is provided by the plan of district supervision so successfully applied in Massachusetts, and just enacted in Maine. The subcommittee on supervision treats this subject fully.

It is necessary that more definite tests of professional fitness for the work of supervision be instituted. The extension of pedagogical instruction in colleges and universities in recent years is gradually elevating the work of supervision to a higher pedagogical plane, yet the point has not been reached of demanding professional preparation as an essential condition. For examples of the requirements of more definite tests of fitness see Ontario and France (*Appendix N*).

It is not unreasonable to hope that in the not distant future the popular standard of education may be so raised that on all educational boards of control, from the state board down to the county or township school board, so much of pedagogical fitness, from the professional point of view, may be demanded as to insure the intelligent consideration of such questions pertaining to the profession as may come before them.

*The subcommittee is under obligation to more than it can name, throughout the United States, for information. For aid in its inquiries received from the provincial school authorities of Nova Scotia, New Brunswick, Quebec, Ontario, and Manitoba, and from Mrs. Etta F. Grover, of Regina, Assiniboia, and Mr. Chisholm, Principal of the high school in Regina, it would here express its thanks.

There are various recognized agencies for the improvement of teachers.

ASSOCIATIONS.

The state associations are mainly in the control of teachers representing systems of schools; in but few states are rural school-teachers much in evidence at these meetings. The fact that in some states the opposite condition holds shows that the state association may be made a powerful means of uplifting for the rural schools.

In many of the states vigorous county associations are found, although this is by no means universal. In these the rural school receives more recognition, but not often all which is its due. When the county association holds frequent sessions, and makes the interests of the rural schools prominent, it proves one of the most efficient agencies.

Some of the states report local associations of rural school-teachers which are very efficient. Generally the success of these is largely dependent upon the spirit of the local or county superintendent. With good professional supervision in township and county, the wants of rural schools and their teachers can find due consideration in local and county associations; and by proper organization of rural school sections in the state associations there may be secured such an affiliation of state, county, and local associations as will insure in time a full recognition of the peculiar needs of the rural schools.

It is desirable that the affiliation between these associations be such as to secure in part the working together, along the same lines of thought, during the same years, by the local, county, and state associations, under the inspiration of the State Department of Education.

SUMMER SCHOOLS OF SEVERAL WEEKS' DURATION.

In some cases summer schools are apparently conducted for the purpose of enabling those attending to pass examinations for certain certificates. The tendency is necessarily toward cramming for the examinations, and so far they cease to be educative in any proper sense of that term.

There is another class of summer schools, often held in connection with colleges and universities, conducted by able teachers, specialists in their departments, for the purpose of advancing education along true lines. Among these, the Agassiz School at Penekese many years ago, was a revelation and an inspiration to the teachers of the United States. These schools have multiplied in number and enlarged in scope throughout the land, and have proved of great advantage to thousands, not only by increasing their knowledge, but also and much more by bringing them under the personal influence of leaders of thought and masters in teaching.

A third class, with professional courses in psychology, pedagogy, and methods, often combining the character of the second class, preceding, offers great advantages for professional improvement. There should be in every county one of these for the especial benefit of teachers of the common schools; they should be free of tuition, organized and conducted under the supervision of the State Department of Education, continuing from four to ten weeks. There should be provision for practice teaching, and the instructors should be familiar with rural schools, their condition and needs.

INSTITUTES.

The normal institutes, so-called, organized in some states, especially in the West, are essentially the same as the third class of summer schools, described above.

County institutes of one week or more, held during the school year, may exert a great influence in the improvement of teachers. When they are conducted under efficient supervision, with a body of instructors capable of increasing the range of thought of teachers, and are organized under such laws as will secure the attendance of the teachers of the county, they prove a powerful means of educational advance.

For the description of such an organization of institutes and results see *Appendix P*.

Teachers' conventions or institutes of one day, as conferences between teachers, or with superintendents, will prove effective to a greater or less degree according to the purpose, plan, and mode of conducting. In order to secure the best results, they should be held at intervals so frequent that the effect may be continuous.

READING CIRCLES.

The success of the Chautauqua movement, of various organizations for home study, and of teachers' reading circles, in some cases, proves that these may be made generally efficient. There will be no lack of interest on the part of the teachers, if the organization and direction be wise.

The problem is apparently not a difficult one in the larger places, with systems of schools, where numbers of members are readily brought together, but the case is quite different in the case of rural schools. The results reported clearly indicate certain elements essential to success. To secure the advantage of organization there must be a central board of control. This may be a state board with auxiliary boards in counties and towns. Not only are books for reading to be selected, but a plan of work should be carefully drawn up and widely circulated among teachers. The central board should keep in touch with the members of the circles,

papers based upon the books read should be written and carefully examined, and the results attained should in some way be passed to the teacher's credit; thus, for a certain number of certificates indicating the completion of a course, a diploma may be granted.

The plan of organization is perhaps best formed by the teachers of the state acting through their associations, and the courses of reading can best be made out by committees chosen by the teachers for this purpose; the work may be directed by a committee, but, from comparison of results reported, the varying degrees of success, and the many failures, your committee believes it desirable that there should be in the state department of education a bureau of teachers' reading circles, with sufficient force to keep in touch with the local circles, to conduct and encourage correspondence with them, and in every way to promote their interest and efficiency.

Effective study demands the use of books for consultation and reference. Hence the reading circles should be conducted in conjunction with the lending libraries hereafter mentioned.

The reading circles must be considered as a means of improvement, especially for teachers already in the service. No other agency can really take the place of personal instruction in the original preparation of a teacher for his work. (See *Appendix Q.*)

LIBRARIES.

The country town has suffered, and still suffers, from the lack of books. In many states there is now a movement toward the extension of free library privileges, and wherever there is a town library every school should be made a branch. This system of library extension, becoming universal in cities, can be extended to country as well. By frequent exchange of books, under the immediate direction of the teacher as branch librarian, every teacher and pupil will have the use of a larger library in addition to the special library which should be found in every school. Some books should be added to the library for the special benefit of teachers.

The library belonging to the school is a necessity. Books lent for a time serve their purpose, but a love for good books and the ability to use them aright come most surely from daily companionship. From the library center, the school can be carried into the home. A more valuable work can hardly be done by the rural school-teacher than this, of developing a love for good reading.

In addition to these there should be established in the county, or the state, or both, a professional library for the use of teachers. This might well be a state library with county branches, and the management of it might well be under the bureau of reading circles which has been men-

tioned. Such a state school library has been established in New York (*Appendix L*).

TEACHERS' TRAINING CLASSES.

The agencies thus far treated tend to the improvement of teachers already in the service, none of them furnish a first supply for rural schools, and there is a lack of special agencies designed for that end. The investigations of your subcommittee show that the existing normal schools in general do comparatively little in this direction, except by the teaching of their undergraduates. Although originally established for the benefit of the common school, they have naturally tended to keep step with the development of systems of schools in cities and large villages; the majority of rural teachers, often a vast majority, are now without any professional preparation whatever. The tendency is strikingly shown in returns from the Oswego, N. Y., Normal School: "Nine-tenths of our pupils come from the country; not one-tenth ever teach in rural schools." In one of the older states, after many years' existence of normal schools, of more than 12,000 teachers in the public schools of all classes less than 5,000 have ever attended normal schools, less than 4,000 have graduated from normal schools. Over 1,500 vacancies occur annually in the schools of the state; the normal schools of the state graduate about 300 annually, nearly all of whom become teachers in graded schools.

One of the leading states of the Union, with a well-organized school system and a grand equipment of normal schools aiming directly to train teachers for the rural schools, reports that a majority of its teachers have had professional training. Many other states report a much smaller proportion of trained teachers; one, 8 per cent.; another, with one of the best school systems, 30 per cent. As a contrast, an answer to the inquiry of your committee, from Manitoba, states: "Sixty-six per cent. of the teachers employed in the province in 1895 were trained. After this year *all will have training.*" (See *Appendix N.*)

The cause for such a contrast appears later in this report.

The normal-school system was first devised especially for the benefit of the rural schools, and in obedience to a tendency which had become increasingly strong for some years previous to the time of their establishment. Some brief passages of educational history bearing upon this subject are here cited:

In 1823 Samuel Reed Hall opened a normal school in Concord, Vt., a school for the academic and professional education of common-school teachers, with a school for practice in teaching. Here Mr. Hall's lectures on school keeping were delivered to his class. These were afterwards published. The character of his work led to his being called to the principalship of the English department of Phillips Academy at Andover,

Mass. He was afterwards invited to take charge of Holmes' Academy, Plymouth, N. H., and consented on condition that the school should be called a teachers' seminary. He opened this teachers' seminary in 1837 and continued it two years. In this school there was a classical department and no practice school, but the course, as printed in *Appendix K*, shows the pedagogical character of the institution and the provision made for its students to gain experience in teaching.

In 1829 a training school for teachers of the common schools was opened in the town of Effingham, N. H., by Hon. J. W. Bradbury, ex-United States Senator from Maine, now living, at more than ninety years of age, in Augusta, Me. By request, Hon. W. W. Stetson, State Superintendent of Maine, recently visited him to ascertain the facts in regard to this school, and the interview is annexed to this report as *Appendix K*.

The sole purpose of Horace Mann in the establishment of the first state normal school in Massachusetts, a purpose zealously carried out by the principal, Cyrus Peirce, was to elevate the common schools of the country. The course of study of the normal school was for one year. In the first year of the school a model school was organized, in which normal school students had daily practice in teaching. Mr. Peirce himself taught in the model school, as he felt that upon its success the success of the normal school very largely depended. Almost all the pupils at first came from country towns, almost all returned to teach in country schools. There was not then the difference between the rural school and the city school which now exists. In 1847 John D. Philbrick began the experiment of modern grading in Boston, and, with the full development of this system, later, the contrast between the school of the country and the school of the town became more and more marked, and the rural school problem appeared. The normal-school course, at first simple and adapted to the conditions it was designed to meet, developed to keep pace with the developing school system, and gradually drew away from the rural schools.

The normal school is often removed still further from those who would teach in rural schools by the tendency to raise the standard of admission to the requirements of a high-school course. The fact that most of the towns of the state have a high school is no proof that all those who will teach rural schools can go through a high-school course of three or four years, and then a normal-school course of two or three years. Great care should be taken that the normal school does not get too far from those whom it was especially set to serve. There is needed a more careful determination of the qualities and attainments requisite for entrance upon the work of preparation for teaching. These are sometimes given in larger measure by the experiences and responsibilities

of country life than by the graded city high school, and with these every added step in education is great gain. So far as raising the standard of admission is in response to a claim that all academic studies should be taken out of the normal-school course, it may be said that the claim is not universally recognized as valid by those who have had most experience of work at home, and can find but little warrant abroad. In the normal schools of Prussia, Austria, Switzerland, and France, for example, a larger proportion of time is given to academic studies than in many of the normal schools of the United States,¹ but with directions, certainly in France, that in all the course the professional aim shall be constantly kept in view.

It is evident that for the fitting preparation of teachers for the rural school some agency is needed intermediate between the brief convention or institute and the normal school, with its two or four-years' course, so far beyond the reach of the majority of rural school-teachers. What shall it be?

Several facts must be kept in mind in the solution of the problem: (1) A large proportion of the teachers of rural schools cannot afford the time and expense of a two-years' course in a normal school. (2) The receipts from employment in the rural school under present conditions do not remunerate one for the expense of a normal-school course. This is a simple matter of business, and sentiment will not change the facts. (3) Other conditions remaining the same, attendance at a school is in an inverse ratio to the distance between school and home. This is especially true for a short course.

To meet these conditions there is needed a normal training school with a short course of study. The place—a village which will give over its schools to this normal training school for practice schools. These practice schools, organized as primary schools in one room and as grammar schools in another, will show what can be done with schools in the simplest form of gradation. For a part of the course all the grades should be brought together to illustrate the work of the one-teacher school, such work as should be done in the ungraded school. A faculty of five or six good teachers, including practice-school teachers, would suffice for such a school.

This the general organization—what the work? Treatment of matter essential to good teaching would be grounded on simple fundamental principles. Deficiencies in education would be supplemented by sound teaching; principles of teaching and of school management would be taught and illustrated. Many might learn to do well what they had never done at all; most would learn to do better what they had done poorly.

¹ See Report of Committee on Normal Education, Proceedings of National Council of Education, 1892.

From these schools would come many students for fuller courses of training and a still wider usefulness.

This plan in its development would give a system of district training schools, analogous to the county model schools of Ontario, and the training schools of Quebec and Manitoba, with a course of study and training of one year, the first half of which should be mainly academic, for those who need this preparation, the second half mainly professional, the work so planned that those of more advanced scholarship need take only the course of the second half year. Of these schools there should be at least one in every county of the state (*Appendix IV*).

The practice in teaching should be thoroughly organized. Every teacher in the school should be, in a certain sense, a training teacher; he should be responsible for the methods of teaching in his own subjects, and should direct lessons given by members of his classes to children from the model training schools. Besides such lessons, illustrative of methods of teaching, the pupil-teacher should be trained in conducting school work in the schoolrooms, under conditions similar to those which she will find in her own school. While teaching in the practice school under the direction of a teacher in charge, she should be left more and more to her own judgment; she should be held responsible for the control and direction of the school, and for the teaching of a class, not merely of a group.

The membership of the class for training should be limited to such numbers as will give the full advantage of the training course, or, with a practice school of the size presupposed, to about twenty-five. A large class necessitates the teaching of groups, not of full classes with the control of a school. The French law limits the number of students in each normal school to three classes of twenty-five each.

The practice schools should be under the exclusive instruction and control of their regular teachers a sufficient proportion of the time to keep them up to the standard of veritable model schools as well.

The completion of this course should give a teachers' certificate of elementary grade, which would also give admission to the state normal school with due credit on the normal-school course for work already accomplished.

There should be a summer term for rural school-teachers in every normal school in the United States. The plant of the normal school has cost thousands, in some cases hundreds of thousands of dollars, and for two or three months in the summer this investment remains entirely unproductive. The success of the summer term in The University of Chicago is significant, and the Winona plan, adopted this year in all the state normal schools of Minnesota, sets the example for the nation (*Appendix S*). In normal schools the work of the first year—or the first

part of the course—should be so planned as to have a unity in itself as a preparation for rural school-teachers, and the results accomplished in the summer term should count on this course, so as to encourage subsequent attendance at the normal school. The summer term should not be an institute nor a summer school, in the usual sense, but should combine the elements of the other terms of the year; the attendance of children in the training school could be secured easily for two or three hours a day.

There should be organized in all states a system of normal-school extension analogous to the university extension. Wherever a class of sufficient size can be formed, a teacher should be provided. The work should be so organized and conducted as to lead to definite results which can be credited to the members of the class.

There are two possible agencies in the preparation of teachers for rural schools that have not been mentioned :

1. *City Training Schools.*—In large cities it is not to be expected that the city training school will prepare teachers for rural schools; all their graduates usually find employment at home. But cities in this country with a population of more than 50,000 are comparatively very few, and it is reasonable to suppose that training schools in cities of less than 50,000 will prepare more teachers than can be provided with employment in those cities. The surplus will naturally seek positions in the village and country schools.

Birmingham, Ala., a city of about 50,000, has had a training school for eight years. During that time 25 per cent. of the graduates of this school have found employment in the ungraded schools of the county and state. If the training school is encouraged, it can be made an important factor in the preparation of teachers for rural schools. A part of the course in these schools should, therefore, deal with the conditions of the ungraded schools of the county, and the instruction should be specifically adapted to meet those conditions.

2. *Agricultural Colleges.*—Many pupils in agricultural schools and colleges teach during their course. In some cases the agricultural college is brought nearer the people by the establishment of branches. Thus in Alabama there has been established in each congressional district a branch agricultural school, closely related to the agricultural and mechanical college of the state. Cannot such schools accomplish much in the specific preparation of teachers for the work of the rural schools?

3. *High Schools.*—An effective auxiliary in the training of elementary teachers may be found in high schools. In 1894-95 there were in New York 247 such classes, with 2,482 students. The regulations prescribe the professional qualifications of the teachers who are to instruct these classes, and the equipment and the opportunities for observation and

practice to be furnished. The course of study, extending through one year, covers the ground of common-school studies, including with subject-matter the treatment of methods of teaching, the history of education, school management, and school law. The school is to furnish each day the opportunity for the class, or some members of it, to observe methods of teaching in the several grades of common-school work, and, when practicable, the opportunity to teach in such grades under proper criticism and direction.

A system similar to this is in operation in the province of Quebec.

Although these training classes cannot take the place nor do the work of special training schools, yet they offer a ready means for effecting some immediate improvement in the teaching force of the state, and for the selection of those who have such fitness for teaching as will justify their pursuing a special professional course. The teachers of such classes must themselves have received thorough pedagogical instruction, else the result must be a failure; hence the necessity is apparent for pedagogical courses in all colleges.

According to the generalizations of the superintendent of the last census, over an area of our country of 1,688,827 square miles, containing a population of two to forty-five to the square mile, the occupation of the people is mainly agriculture; of this territory 1,096,790 square miles are occupied by a people mainly engaged in systematic agriculture, leaving about 260,000 square miles, with a population of forty-five and upwards to the square mile, in which the leading interests are commerce and manufactures, and in which professional and personal service are in large demand. The numbers engaged in the principal occupations in the United States, according to the latest United States census, were as follows:

Farm and garden,	-	-	-	-	-	8,375,979
All the professions,	-	-	-	-	-	944,323
Domestic and personal service,	-	-	-	-	-	4,360,506
Trade and transportation,	-	-	-	-	-	3,325,962
Manufacturing and mechanical industries,	-	-	-	-	-	5,091,669

In behalf of all these occupations, except the professions and agriculture, the claim has been made and has been allowed that special instruction in their interests be made an important part of the school curriculum—in commercial courses; in cooking; in manual training, on which such vast sums have been expended. Indeed, for many of the professions much of the school instruction is a direct preparation.

Much is said of the necessity for considering the environment of the child; for bringing into his school life the thoughts and interests of his home life, that the school may not prove to him a thing remote and foreign; of making the school a recognition of his past and a prepara-

tion for his future. Little sign of this can be found in the ordinary rural school.

The courses of study in normal schools of all grades should recognize more fully than they do the environment and probable future life of the children in the schools, or rather, they should recognize the lines along which lives of most probable future happiness would lie. As has been shown, much the largest class of the workers of this country is engaged in agriculture. The environments of their children are rural. The rural school should aim especially to make country life more attractive and beautiful, and should pay more attention to rural industries. Every normal school should have as a means of instruction a school garden, planned and conducted not merely to teach the pure science of botany, but also the simple principles of the applied science of agriculture and gardening; and every rural school should also have its garden, through which the training of the normal school may reach the home. This element of industrial training should be especially emphasized in the colored normal schools and rural schools of the South.

Other countries lead us. A *farm* has been set apart for this line of instruction at the Provincial Normal School at Truro, Nova Scotia. The school garden is common in the countries of Europe most advanced in popular education. The school garden and the nursery of fruit trees are a feature of the normal schools of France; there is a course of agriculture in the normal schools for men, of horticulture in the normal schools for women.

The course in agriculture treats of preparation of the soil, special culture of trees and shrubs, of fruit trees, grafting, and the vegetable garden.

The course in horticulture in the normal schools for women treats of the garden in its general arrangements—the fruit garden, the vegetable garden, the flower garden.

Each garden has a space reserved as a botanic garden for instruction in the science of botany.

The instruction received in the normal school is applied in the school garden of the rural school.¹

¹ The school garden in the New Hampshire State Normal and Training School has proved a source of interest and of instruction to pupils of all grades in the training schools and in the normal schools, such as nothing else can replace. In this garden all the grains and vegetables grown in the region were cultivated, together with a great variety of flowers. Each class in school had assigned to it a plot, for which it was responsible. In the George Putnam School, in Boston, a part of the school yard was turned into a garden, which has received several prizes from the Massachusetts Horticultural Society. On certain days the Jardin des Plantes in Paris is used as a place for botanical study by the school children. I found once on the roof of a London schoolhouse, which was used as the girls' play ground, a large and beautiful collection of plants. And yet

A French report says that the French farmer is at first opposed to book farming; but when he sees that the products of the teacher's garden are superior to his own, he is glad to learn.

M. Boutan, an inspector general of public instruction, says in a report: "We can cite several departments in which, thanks to the initiative of the teachers, the wealth of the country has increased from year to year, and from which the exportation of fine fruit has become the source of considerable profit."

There can be no doubt that great improvements in agriculture might result from the general diffusion of such instruction through school gardens, under the direction of qualified teachers. Is there any other means for such improvement in sight of this generation? And a still higher good for the country life might come from thus blending its utilities and its beauties in the thought of the child.

Your subcommittee would also emphasize the importance of two other lines of work already developed in the graded schools, and of a third, which must be made prominent in all schools—language, elements of science or nature study, and morals. Whatever goes into the common school must go into the normal school. Hence, even in the brief course of normal-school training, the instruction in the English language, instruction in the essential elements of its beauty and strength; instruction leading toward such command of its best forms as will tend to make it a transparent medium for the expression of thought, must be held of fundamental importance. There must be such training in elementary science and in manipulation as will give the teacher essential knowledge and skill in this line of teaching, and there must be such instruction in elementary psychology and ethics as is necessary for the comprehension of general principles of method, and of the scope and methods of instruction in morals; and as the result of all the preparation which can be given there should be a clear comprehension of the essential aims of education. Would that all our teachers could have constantly in mind and at hand such a statement as is found on the desks of the common-school teachers of France (*Appendix R*).

EXAMINATION AND CERTIFICATION OF TEACHERS.

Were teaching a profession in the sense in which law and medicine are professions, teachers themselves would formulate the terms of professional recognition; but evidently the time for that is not yet. What the public school is immediately to aim for is uniformity in state examinations, and we have to consider the agencies, the standards, the methods for these the rural school almost utterly ignores its only possible laboratory, the out-of-doors, the garden laboratory, right at hand. Here lies a duty, not a choice merely, for the normal school.—C. C. ROUNDS.]

examinations. The agency may be the state superintendent of public instruction, a special examining board, or a state board of education when such board exists. Times and places for examination should be announced frequent enough and numerous enough to meet all reasonable demand. The scope and character of the examinations should be announced long enough beforehand to enable candidates to consider the matter deliberately, as is now done in regard to examinations for admission to college and for the civil service. Information as to books for use and as to modes of preparation should be given. Each examination should be conducted by an expert, and the papers should be critically examined.

Certificates granted should be graded as to the range of the examination, not as to length of validity, unless the certificate be a provisional one. A one-year's physician would receive little credit; why should a one-year's teacher receive more?

Examinations should cover the range of work required of the teacher, and should be written, oral, and practical. The written examinations should be planned not merely to test the candidate's range of acquirement, but rather his accuracy, his general style of thought and expression. The oral examination should test the range of attainment, the personality of the candidate, and his readiness in resource. These two are generally combined in one—the written form, but there are great advantages in the separation whenever it is practicable.

The examination for the elementary certificate should cover the ground of common-school studies, with so much of the elements of natural science as is demanded for the intelligent teaching of the nature lessons in the common-school course. The questions should be few, but comprehensive, and such as will fairly test the reflective power of the candidate.

The professional examination for the elementary grade of certificate should not be severe, but should require clear general statements regarding methods of conducting recitations and the organization and management of a school.

The practical examination, or the test of skill, for the elementary grade of certificate, should include some test of the candidate's ability to plan a lesson and an examination paper in some common-school subject, and to conduct a recitation. If the candidate has been a member of a class in training, a record of this practical work might be brought over from the work in that class.

So much ability as is implied by this examination is necessary to the good teaching of any school. Wherever this ability cannot be secured now for the rural school, a clear public appreciation of the need will lead to a supply of the means.

The examination for the advanced certificate should in general cover

the ground of an English high-school course of at least three years, or fair equivalents for such a course. A special certificate might be given for a foreign language. This examination should include psychology and ethics, drawing, and the elements of vocal music.

The professional examination for the advanced certificate should include history of education, methods of teaching, general principles of pedagogy, and the organization and management of schools.

The practical examination should include the preparation of plans of lessons and of examinations; judging the character of a lesson and a written paper; teaching, including an oral lesson on some subject in nature study, elements of science, language, or morals.

As in the examination for the elementary certificate, if the candidate is a member of any training class, the practical examination can be taken in that class.

Formulating the preceding statements, teachers' certificates should be graded in two general classes—elementary and advanced—and in each class three grades.

ELEMENTARY.

- (1) Elementary scholastic certificate, Grade 3.
- (2) Elementary professional certificate, Grade 2.
- (3) Elementary certificate of skill, Grade 1.

ADVANCED.

- (1) Advanced scholastic certificate, Grade 3.
- (2) Advanced professional certificate, Grade 2.
- (3) Advanced certificate of skill, Grade 1.

A life certificate of either class and honorable recognition in the profession should be granted after a certain period of successful teaching to those holding the first-grade certificate of that class.

In each class the higher certificate presupposes the lower; thus Grade 1 cannot be obtained without 3 and 2.

Many, if not most, of the examinations of teachers for rural schools in the United States today do not go beyond the range of the elementary certificate, Grade 3, as here given; the elementary certificate, Grade 2, could be obtained by attendance upon a teachers' training class in a high school. A course in a district training school organized as described in this report, or a partial course of one year in a state normal school, should give the complete elementary certificate. In many cases thoughtful and successful teachers in the rural school, by their own study and the help afforded by a well-conducted reading circle and a normal extension course, could rise from the elementary certificate, Grade 3, to the complete elementary certificate. A high-school course would give advanced certificate, Grade 3, and, with the course in a high-school teachers' train-

ing class, might give advanced certificate, Grade 2. The complete advanced certificate could be obtained by a two-years' course in a normal school.

This gradation of examinations and certificates will utilize to the utmost the existing educational agencies, will point out to teachers a way in which they may rise step by step, and will thus encourage their advance, and will secure to the rural school the benefit of their improvement.

A question will arise as to the interval between the elementary and the advanced certificate. (For a wider interval established in Manitoba see *Appendix N*.) In many cases it may be best to lower the standard of the advanced certificate and make it intermediate between the elementary certificate and the normal-school diploma attesting the completion of a two-years' course. On this question your subcommittee pronounces no opinion. It would point out a way by which the teachers of the rural school as it now is may be taken as they are and induced to enter upon a course of advanced study, and by which the school may derive all possible benefit from the advance; and your subcommittee believes that, by such a course, standards will gradually be raised all along the line.

Your Subcommittee on the Supply of Teachers for Rural Schools, in closing its report, would call attention to some of the main points in this discussion.

It appears that there are numerous agencies which may be made available for the improvement of rural school-teachers already in the service. With these the only question is that of more perfect organization.

Although there is in general an increase in interest in educational questions, and an elevation of standards of teaching, yet the large majority of rural school-teachers now enter upon their work with no professional preparation; the improvement in the character of rural schools, where there has been any improvement, has been slow; large sections of the country report no advance, some report a decline.

The causes for this condition, and the changes needed, are not far to seek:-

1. The school year must be lengthened to a full school year of nine or ten months, in order that skilled teachers may be retained. This result can be secured, as it has been secured elsewhere when its absolute necessity has been recognized. The state, among other conditions for payment from the school fund, may prescribe a full school year, which is done in England, as logically as six, or seven, or eight months, now done in some of our states, or it may secure this result, as it has been secured in Canada, by making the length of the school so prominent a condition in the distribution of the school fund as to insure the co-operation of the county and the town to this end.

2. The existing agencies for the supply of teachers for rural schools

do not suffice. There must be modifications in these, and the provision of others.

3. There must be some definite standard for the certification of teachers, coming within reach of the teacher of the rural school, and encouraging advance to such higher degrees of attainment and skill as will give full professional recognition. And your committee believes that some provision should be made to secure inter-state recognition.

The question of finance does not lie within the province of this subcommittee, but it does not believe that the financial difficulty need prevent the necessary reform. When there is once full recognition by the state of its final responsibility for the education of every child within its borders, there will be possible such an adjustment of expenses between it and the lower educational units as will be burdensome to none and just to all.

Your subcommittee has sought to ascertain accurately what the rural school now is; in all its suggestions it has had in view the rural school as it ought to be. It believes that this nation can have such a system of schools for all its people as may challenge comparison with any other, and that it will have such a system when it clearly perceives the injustice and the peril of the present condition, and the way in which safety lies.

CHARLES C. ROUNDS, *Chairman*,
DAVID L. KIEHLE,
JOHN H. PHILLIPS,

REPORT OF THE SUBCOMMITTEE ON INSTRUCTION AND DISCIPLINE.

Your Subcommittee on Course of Study, Methods of Instruction, and Discipline in Rural Schools begs leave to report herewith that it has carefully considered the conditions which prevail in thinly settled districts with the intent to discover the evils that exist in the schools as a consequence of those conditions, such, for example, as (1) the want of classification and (2) the impossibility of thorough instruction on the part of the teacher, as well as (3) the lack of that stimulus which comes to the pupil from working at reasonable tasks in company with his equals. Your committee has hereinafter described and discussed various remedies, which it believes will have useful results in practice.

About one-half of all the teachers in the United States teach what are called ungraded schools. They receive in one room pupils of all ages and all degrees of advancement, from ABC's upward, sometimes even to algebra and Latin. In extreme cases each pupil is a class by himself in all branches, except perhaps reading, writing, and spelling. It quite often

happens that there is no uniformity of text-books, each pupil having a different edition or different author; the teacher is often obliged to borrow the pupil's book when he hears him recite.

According to Mr. Hinsdale's studies of the United States census (see *Appendix A*) the sparsely settled region of the country includes, first, one-third of the whole domain entirely uninhabited or containing fewer than two inhabitants per square mile; secondly, an area of 1,688,827 miles with from two to forty-five inhabitants per square mile, leaving only 260,000 square miles containing more than forty-five to the square mile, and the 443 cities with an aggregate of nearly 19,000,000 people.

It happens that ungraded rural schools with a very small attendance are to be found even in the most thickly peopled states and often in proximity to cities. Rhode Island in 1895 reports 158 out of its 263 schools as ungraded and sixty-four of them as containing fewer than ten pupils each; three towns have in the aggregate thirty-nine schools averaging fewer than ten pupils. Vermont in 1893 reported 153 schools with six pupils or less each. Massachusetts in 1893-94 reported sixteen towns with an aggregate of nearly 100 schools with an average of eleven pupils. New York in 1894-95 reported 2,983 schools with fewer than ten pupils each and 7,529 with less than twenty. Other examples are mentioned in the report of the Subcommittee on Maintenance.

A school with ten pupils of ages from five to fifteen years, of different degrees of advancement, some beginning to learn their letters, others advanced from one to eight or nine years in the course of study, cannot be graded or classified to advantage, but must for the most part be taught individually. The beginner who does not yet know a letter should not be placed in a class with another who began last year and can now read lessons in the middle of the primer. It will not do to place in the same class a boy beginning numeration and another one who has already mastered the multiplication table. The beginner in grammar has not yet learned the technique, and is confused and discouraged by the instruction given to another pupil in his class who has already learned the declensions and conjugations.

Any attempt, in short, to instruct two or more pupils in a class, when there is a difference of a year's work in their advancement, results in humiliating and discouraging the less advanced and in making the maturer pupils conceited. Higher learning in the possession of a fellow-man seems to an illiterate person as something magical, or bordering on the miraculous: he can make combinations of thought which surprise those who are unused to them. The case is worse with the child in school. To him the elevation given by a year's study seems an endowment of nature and not a result of industry. Permanent injury to the pupils is very often occasioned by wrong classification. For not only does the

lower suffer from discouragement, but the higher pupil is necessarily injured by not being held to his best. The teacher is perforce obliged to adapt the lesson to the average of the class. This does not give enough work for the advanced pupil, although it gives too much for those below the average. There is not enough demand upon the first to continue the increase of his powers; he becomes indolent and stops growing.

For these reasons classification as above described ought not to be expected in the rural school; it must remain ungraded, and as a result the teacher must resort to individual instruction wherever there are intervals of a year or more in degrees of advancement between pupils, and this is the actual practice in perhaps the majority of such schools. The older pupils at least should have separate grammar, history, and arithmetic lessons.

It is understood by your subcommittee, as a matter of course, that even in a small school of six to ten pupils there may be two or more pupils of sufficiently near stages of progress to form one class—for example, two beginners in arithmetic, grammar, geography, or history. It may be that a dull pupil has already been studying arithmetic, grammar, or history for a quarter or a half year, and that a bright pupil just commencing the study would be able to keep up with him on a review from the beginning of the book; but it would not do to place a dull pupil commencing a study with a bright one who had already a half year's start in it. It often happens that pupils placed in the same class at the beginning of the year separate widely in power to learn new lessons before the middle of the year. In such cases a class should be broken up to prevent the twofold injury, namely, to the bright pupil by assigning him too short lessons, and to the dull pupil by assigning him more than he can well accomplish.

The teacher, even after forming classes in writing, reading, and spelling, has twelve to fifteen lessons to hear in a forenoon and nearly as many more for the afternoon. There is an average of less than ten minutes for each recitation. The ideal of the recitation or class exercise is that the teacher probe to the bottom the pupil's preparation of his lesson, and correct bad habits of study. If the pupil fails to master by sufficient industry the details—the facts and external items—the teacher counsels and reproves, requiring more work on the same lesson. If he finds that the details are mastered the teacher next tests the combinations, the thoughts that the pupil has used in connecting one fact with another and in seeing relations. Facts are connected so as to form a science when each one is made to throw light on every other fact, and all explain each. So a lesson is learned properly when the pupil can place each item in its systematic relation to the whole. He must understand the bearings of all; he must think out the interrelations.

Hence it happens that the good teacher is not satisfied with a memoriter recitation of the details of the lesson—still less with a word-for-word rendition of the text-book. Not the mere words of the book, nor even the disconnected facts or details which the words indicate, but to bring out the thought which unites these details and explains them, is the main object of the good recitation. But such a recitation requires time. The teacher cannot probe the pupil's knowledge in five minutes and correct his bad habits of study—nor in ten minutes. In the necessarily brief recitation of the ungraded school there is barely time to test the pupil's mastery of the external details of the lesson, the mere facts and technical words. It is for this reason more especially that the rural school has been the parent of poor methods of instruction—of parrot memorizing and of learning words instead of things.

At the beginning of this century only one-thirtieth of the inhabitants of the United States lived in towns of 8,000 people or upwards, and more than 90 per cent. of all the public schools were ungraded schools. The question has often been asked how it is that so many able men who became scholars and statesmen and professional men of eminence could have come from schools as poor as the rural school is said to be. Such eminent men as were produced in those times came from the rural school; there were few graduates from graded schools to compete with them. Of the men now living, past the middle age of life, nearly all received their early education in the rural ungraded school, because even as late as 1850 at least 80 per cent. of all the public schools were ungraded, there being only $12\frac{1}{2}$ per cent. of the population resident in cities. The rural school threw on the pupil the burden of his education. He was obliged to get his knowledge from books, such books as he could come to possess. Bright pupils do pretty well by themselves if given good books and taught how to read and to understand the technique used in the elementary books of mathematics, grammar, and the other liberal arts. Any country boy who acquires a love for books, who has access to the best ones, and studies them with energy, will by middle age become a learned man.

In the ideal classified school the teacher has two classes of pupils, each class containing within it pupils substantially at the same stage of advancement. The pupils of a given class recite together in all the branches, and the teacher has a half hour for a lesson and can go into the dynamics or causal relations of the facts and events treated.

Each pupil in a class learns as much from his fellow pupils as from the teacher direct; for the teacher draws out of the class its store of observations and reflections on the topic of the lesson. He shows up the one-sidedness of the preparation of the individual pupil; some have neglected this point and some that other point. Each has probably neglected

something. But, on the other hand, each of the diligent ones has brought forward something new that is valuable to his fellows. Each pupil finds through the recitation of the others that they have seen some things that had escaped his notice, although he supposed that he understood thoroughly the book presentation of the subject. His teacher suggests many new ideas and criticises the one-sidedness of the views of the pupils and also, it may be, of the text-book. All the statements of the book are brought to the test of verification—either through the child's experience or through other authorities. The child thus learns the method of study.

The ideal classified school can teach and does teach proper methods of study; the rural school cannot do this effectively in its five- or ten-minute recitations. It is because of this that wise directors of education have desired the consolidation of small schools into large schools wherever practicable. Two schools of ten each furnish on an average one-half as many recitations if united as they do when separate, owing to the possibility of pairing or classifying pupils of the same degree of advancement. Ten such schools united into one will give 100 pupils, with a possibility of classes of ten each, which can be more efficiently taught than before, because the pupil can learn more in a class than by himself. The class in the hands of a good teacher is a potent instrument for reaching all sides of the pupil's observation and reflection. Again, it is evident that five teachers can teach the 100 pupils united in one school far better than the ten teachers were able to teach them in the ten separate schools. If still further consolidation were possible and 400 pupils were united in one school, the classification might be improved to such a degree that a teacher could easily take the charge of two classes of twenty pupils, and ten teachers could do far better work for each pupil than was done by the forty teachers in the forty small rural schools before consolidation. Hence, economy becomes a great item in what are called "Union Schools."

Your subcommittee, in this discussion of the advantages of classifying and the corresponding disadvantages of the want of classifying, has assumed that as good teachers are supplied to the rural schools as to the schools of villages and cities—teachers of experience and skill, teachers of thorough academic and professional training in normal schools. It is assumed that states have made provision for good salaries in these ungraded schools, and that the license to teach requires professional training.

It is admitted as a fact, however, that the average rural school-teacher receives a small salary—not more than one-half that of the teacher in the city or large village. It is true, as reported by the Subcommittee on Maintenance of Schools, that some states, notably California, New Jersey,

Massachusetts, Rhode Island, and others to a greater or less degree, are providing, by a wise distribution of school money, to secure skillful teachers for these small, ungraded schools. But the evils above described as appertaining to instruction in ungraded schools are of such a character as not to yield to ordinary remedies.

Your subcommittee would call special attention at this point to the evil results that come from the attempt to remedy the defects of the rural school by forcing on it the system of classification found in cities. It is assumed that some of the benefits of the close grading possible in cities will be gained for the rural schools if they can roughly group the whole school into three or four classes. A rural school of thirty pupils comprising children from six to sixteen years of age, and covering different degrees of progress from beginners up to those of eight or nine years of schooling, are grouped, let us suppose, into four classes or grades—thus leaving intervals of two or more years of school work between a given group and the next one above it.

Your subcommittee has already pointed out the evils of classifying pupils in such a way as to bring together pupils differing in degree of advancement by intervals of two years. In fact, it has been found in city schools that one year's interval between classes is too much. The greatest danger of the graded school system in cities comes from holding back bright pupils for the sake of the slower and duller pupils. Next to this is the evil to the dull ones who are dragged forward at an unnatural rate of progress to keep up to the average rate of the class. The best pupils are engaged in "marking time," while the slowest are constantly spurred forward by teachers and parents to keep with their class, and their school years rendered miserable. Their self-respect is undermined by a false standard, that of mere speed in learning. The "marking time" injures the bright pupil by developing lax habits of study, while the forced marches of the slow pupil tend to destroy his poise of character. It has been found desirable, therefore, in city schools to make the intervals between classes as small as possible, so as to favor frequent transfers, namely, on the one hand, of bright pupils who are becoming capable of a greater amount of work into a higher class, and, if necessary, of those who are falling behind the average of the class into the next one below. Intervals of a half year are, therefore, adopted in a majority of the progressive city school systems, and many prefer intervals of a quarter of a year where it is practicable to make them, that is, where a large number of pupils makes possible the assignment of a requisite quota for each class. At the request of the subcommittee, Dr. E. E. White, an eminent authority on all that relates to school management, has furnished a statement of his views of classification in the rural school, illustrating them by a programme, which allows twenty-five minutes for each recitation. But

the intervals between the classes amount to two years' work, and inasmuch as he expressly provides for capable pupils, letting them "work ahead of their classes," he leaves the question where it is left by the subcommittee, unless the pupils are supposed to do their "advance work" without the teacher's supervision (*Appendix I*).

Your subcommittee would respectfully call attention to the danger of attempting to classify the rural school in imitation of the city school as peculiarly liable to happen in those schools where professionally educated teachers are employed.

The state and city normal schools have very properly laid stress on grading and classification, and on the methods of instruction by classes, and have ignored individual instruction. Their graduates have mostly sought and obtained places in the graded schools of cities and villages. In fact, the graded schools have outbid the rural schools for teachers having professional training. But, with the new movement to secure better teachers for rural schools by larger appropriations from the state, it has happened that many experiments of classification are attempted which result disastrously in the manner described, namely, by demoralizing, or destroying the courage and ambition of the exceptionally bright and the exceptionally dull pupils. The charge has been made that such rural schools as adopt a partial grading system are apt to become stiflers of talent by placing a premium on the average scholars, and holding back the promising youth of the district.

It is obvious from this that where state normal schools furnish teachers for the rural districts there should be conducted a special inquiry into the influence of the size of the school in determining the uses and the dangers of grading and classifying pupils.

There is no doubt, moreover, that the abuse of classification is the crying evil of the schools of villages and small cities. For the average pupil these village graded schools are uniformly good, but they often work injury to the exceptional pupils and are in this respect sometimes inferior to the ungraded schools in sparsely settled districts.

Your subcommittee would here explain that the technical terms "grading" and "classification" are often used, as above, to signify the same thing, namely, the dividing of the pupils of a school into groups or classes, each containing children of the same, or substantially the same, degree of advancement. But another meaning is often given to one of these terms. The work of the year, more or less, is also called the work of a grade, and the work of the elementary school, consisting of the first eight years' work, is divided into eight grades. It will be readily understood in this second use of the word "grade" as covering a year's work that a school may be graded, that is to say, its work may be arranged upon a programme of eight grades, each one of which requires a certain modicum of reading,

writing, arithmetic, geography, grammar, etc., for a year's work, and yet have only ten or twenty pupils, and perhaps these representing only three or four of the eight grades. By a graded school, as applied to such a state of things, is meant simply a school whose programme requires a regular sequence of studies and a full quota of studies for each pupil. If a pupil is at a certain degree of advancement in his arithmetic the programme of the graded system would place him also in a class correspondingly advanced in geography, history, reading, or other studies. But the small rural school has been called "ungraded" because it contains or may contain pupils of all grades, from the lowest to the highest, and consequently obliges the teacher to scatter his teaching force over a wide range of topics. The large school permits specializing by dividing the school in such a way that the pupils of one grade, or perhaps two grades, are taught by one teacher, the next one or two grades by another teacher, etc., permitting each teacher to specialize his work by giving him fewer topics to teach, and consequently insuring longer recitation periods and constant improvement in skill.

It is to be supposed that all schools will be graded in the sense that they will have a course of study, and that pupils will take up their branches of study in due order, and that these studies will be associated, so that a given degree of advancement in one study implies a given degree of advancement in another. What is properly called the correlation of studies presupposes that a certain degree of advancement in arithmetic corresponds to a certain degree of advancement in geography, reading, grammar, and other studies, all of these being determined within limits by the pupil's age. The word "grading," as a synonym for classification, is freely used by your subcommittee in this report, but it has discussed the topic indicated in the other and less frequent use of the word "grading" in that part of its report which follows, relating to the course of study.

THE COURSE OF STUDY.

Your subcommittee has assumed that the course of study in the rural schools should be substantially the same as that of the city schools. The differences should concern only minor details. It would, therefore, refer here to the report of the Committee of Fifteen for fuller details, and for the discussion of the grounds for selecting the several branches of the course of study. The course of study of the elementary school, whether urban or rural, should contain those branches which give the child an insight into the physical world and the means of conquering it for human uses, and also an insight into human nature and the motives that control the actions of men. The child should above all be taught how to combine with his fellows to secure reasonable ends. The windows of the soul are to be opened by the five branches of the course of study, thus enabling the

youth to see (1) the conditions of inorganic nature by arithmetic and the elements of physics and chemistry ; (2) the conditions of organic nature by studying plants and animals, the land, water, and air, and, besides these, the means that man invents and uses to connect each place with the rest of the world—these things belonging to geography. These two “windows” look out upon nature. The three others enable us to see man ; (3) literature and art as revealing human nature, arousing pure and high aspirations in the youth, and freeing him from narrow and mean views of life ; (4) the study of the structure of language, as found in the several subdivisions of grammar and rhetoric ; (5) history, which treats of the greater self—of man as a social whole.

These five branches belong to all schools, for they relate to the substance of humanity and are necessary for entrance upon civilization. Besides arithmetic, geography, literature, grammar, and history, there are collateral branches that each school should include—some of them information studies, such as oral courses in the sciences, in history, and in the arts—others of the nature of disciplines, or arts of skill, such as vocal music, gymnastics, manual training, the art of cooking, and some special attention to the elementary principles of the useful arts practiced in the neighborhood of the school, namely, farming, horticulture, grazing, mining, manufacturing, or the like (*Appendices G and H*).

In general these collateral branches should relate to the pupil's environment and help him understand the natural features of that environment, as well as the occupations of his fellow-men in the neighborhood. There are two things to understand in this matter of the geography of the environment. First, what it is and how it came to be—its land and water, its mountains and river valleys, its climate and soil, its productions, mineral, vegetable, and animal, and their peculiarities, how they differ from the productions of the rest of the world. Second, the means by which man procures from nature what is useful for himself and others, manufactures it and uses it, or exchanges it with his fellow-men so as to share in the productions of all climes and places, no matter how far distant. If a comparison must be made, this second topic of elementary geography is more important than the study of the natural features of the environment, because it is more immediately useful to the pupil and to the community in which he lives.

Let the pupil beginning the subject of geography commence with what is nearest to his personal and social interests, namely, with the products of the industries of his section. Let his studies go out from these products in two directions: first, to the natural conditions which make these products possible and which furnish in general the raw material ; secondly, in the direction of the purpose of this, the uses made of it, the things produced, the needs and wants of his fellow-men near and far ;

and the productions of the other parts of the world which are needed in his section to complete the supply of articles for food, clothing, shelter, protection, and culture. These items, including natural production and the human occupations of manufacture and exchange, may be said to be the chief theme of geography as it should be taught in the elementary schools. But the home environment is also to be kept in mind by the teacher throughout the entire course. Arithmetic should gain concreteness of application by its use in dealing with home problems. Literature should be pointed and applied, so far as may be without becoming provincial, to the pupil's environment; and so the other branches—history, and even grammar—should be brought home to the pupil's knowledge or experience in the same way. The pupil should have prepared for his study a list of the chief provincialisms of speech to which his section is addicted, and to the peculiarities of pronunciation in which his neighborhood departs from the national or international standard of usage.

The Committee of Fifteen has already advanced the opinion that the industrial and commercial idea is the central idea in the study of geography in the elementary schools. It leads directly to the natural elements of difference in climate, soil, productions, races of men, religion, political status, and occupation of the inhabitants, and it explains how these differences have arisen in some measure through cosmic and geological influences. It should be the teacher's object to make the pupil understand, just as early as his growing capacity admits, the peculiarities of his habitat, leading him to study the land and water formations in his neighborhood, and giving him power to recognize in the visible landscape about him the invisible forces that worked in the past, and still are at work in the present, moulding these shapes and forms. On the basis of this knowledge of the elements of difference produced by nature in soil, climate, and configuration of the landscape, he should explain the grounds and reasons for the counter process of civilization which struggles to overcome these differences by bridging the rivers and tunneling the mountains—by using steamboat and railroad so as to unite each particular habitat with the rest of the world. He should see how man adapts to his needs the climate of each place by creating for himself a comfortable temperature, using for this purpose clothing and shelter, as well as fuels of wood and coal or derived from oils and gases, to protect from cold, and on the other hand utilizing ice or power fans, and creating easy access to summer dwellings on the heights of mountains, or at the seashore, to mitigate the heat. He turns the soil into a laboratory, correcting its lacks and deficiencies by adding what is necessary to produce the crop which he desires. He naturalizes the useful plants and animals of all climes in his own habitat. It is evident that the details of the process by which differences of soil, climate, and

production arise, important as these are, should not be allowed to occupy so much of the pupil's time that he neglects to study the counter-process of industry and commerce by which man unites all parts of the earth to his habitat, and progressively overcomes the obstacles to civilization by making climate and soil to suit himself wherever he wishes.

To restate this important point in a word, it is true that the deeper inquiry into the process of continent formation, the physical struggle between the process of the upheaving or upbuilding of continents, and that of their obliteration by air and water; the explanation of the mountains, valleys and plains, islands, volcanic action, the winds, the rain distribution, is indispensable to a comprehension of the physical environment. But the study of the cities, their location, the purposes they serve as collecting, manufacturing, and distributing centers, leads most directly to the immediate purpose of geography in the elementary school, for it is the study of that civilization in which the pupil lives and moves and has his being.

Keeping this human standpoint in view all the time as a permanent interest, the inquiry into causes and conditions should proceed concentrically from the pupil's use of food and clothing to the sources of the raw materials, the methods of their production, and the climatic, geologic, and other reasons that explain their location and their growth. It is important in this as in all matters of school instruction to avoid one-sidedness. Although the human factor should receive the most emphasis, special care should be exercised lest the nature factor should be neglected.

Your subcommittee would refer to the discussion of this subject under the head of "Geography" in the report of the Committee of Fifteen for further illustration.

There is not much use in requiring instruction in branches not yet reduced to pedagogic form. It is necessary that matters taught should be so systematized for school use as to admit of arrangement in a progressive series of lessons, the first of which alone would be useful if no second lesson followed, and the subsequent lessons each useful if the pupil studied none of the following.

Each lesson when arranged in a pedagogic form leads up to the following lesson and makes it easy to grasp, just as each stair makes the next one easy to climb. For example, the first lesson in cookery is an exercise in accurate measurement by spoonfuls and cupfuls, etc., and calculated not only to aid in the next lesson and make it possible, but also to be of use through life in the kitchen. Concerted efforts are being made in agricultural colleges to reduce to pedagogic form the arts of the farm, the garden, and the forest.

THE PROGRAMME OF STUDIES.

Your subcommittee deems it important to call attention again in this place to the prevalence of a misconception in regard to the relation of the course of study to the system of grading and classification. Every school, whether ungraded or graded, should have a course of study minutely arranged so as to show the average or reasonable rate of progress of the pupil of a given age and advancement in the work of the school; but, as has already been shown, it is not required that the school shall contain classes in each and all of these grades, nor indeed classes at any given stage of progress in the course of study as laid down for any particular quarter or term of the year. Above all it must be understood that in laying down the quarters or other divisions of a grade or year's work it is not to be expected or desired that the pupils entering school at the beginning of the school year in the fall should commence at the beginning of any grade's work. If a class consisting of two or more individuals (or of one individual only) left off the previous year in the third quarter's work of the fourth grade, it should begin its work after vacation at the point where it left off, unless there are special reasons which require a review of some portions of the work.

The course of study is the measuring rod or scale which is used to determine at what point in the eight years' work of the elementary course a pupil has arrived. It should not be used as the Procrustean bed on which to stretch the work of the school in order to give it uniformity. It has happened not infrequently in the past that upon the first adoption of the graded system the superintendent of city schools held annual examinations on the completion of the work of the grade, and for this purpose insisted upon the unreasonable requirement that all of the pupils in the school should have begun the work of a grade on the first day of the year and should be expected to finish the grade work in the fourth quarter of the year. This was said to be for convenience of promotion—all pupils leaving the work of one grade and passing to the next were said to be promoted. This fiction has effected serious injuries in city schools. The apparent reason for such a system was the convenience of the superintendent who desired to make only one set of questions for each grade, and hold his examinations all at one time. If he had adopted a plan of preparing an examination for any class of pupils at the time when they should have completed the work of the grade (whether in the first, second, third, or fourth quarter), such a system need not have existed. The false idea of promotion has also been the source of great evils. When a pupil has finished the work laid down in the course of study for any grade, he should begin the work of the succeeding grade at once, and it is not necessary to have any special examination. The class teacher is supposed to examine her pupils from day to day, for each recitation is

an examination revealing the pupil's understanding not only of the day's work but of his previous lessons; and the principal of the school is supposed to be well acquainted with the progress of his pupils. It is not necessary, therefore, to hold a general examination on the work of the grade if the class teacher and the supervising principal have performed their duty.

It is understood, too, that there should be much written work in the school, but that it should not as a rule take the form of competitive examinations. There is no other exercise in the school more valuable than that of written expression, but this should be limited chiefly to the review work of the pupil. The teacher, for illustration, should prepare questions at the close of the week, on the previous five or six days' work, such questions as bring out the most essential points and the principles which connect the details that have been studied. The pupil should be permitted to sit down by himself with plenty of time before him to write out his answers to these probing questions. By this means he learns gradually to collect his thoughts, and will do more thinking in connection with his written examination than in any other test or study in his school course. The written examination should not be postponed till the end of the year or to the end of the quarter, but should be a matter of at least weekly occurrence. It should be written work of a review character rather than examination of a competitive character.

While the course of study for the elementary school will cover eight years and be subdivided so as to show quarterly, semi-annual, or other stated progress, as already said, it will not be expected that the rural school with its ten or twenty pupils will have each and every grade represented; perhaps, for instance, there will be three pupils in the first grade, two in the second grade, one in the third grade, none in the fourth grade, two in the fifth grade, none in the sixth and seventh, and two in the eighth grade.

Your subcommittee assumes likewise that the discipline of the rural school should be strict though mild, like that of the city school. The fundamental school virtues of regularity, punctuality, and industry are auxiliary to moral virtues and form together a training of the will which is of great importance in producing the future good citizen. It must not be thought that, because a school is small, therefore the discipline is of less importance. The formation of habits of order, and of respect for the rights of the social whole, is necessary for the good citizen, whether of country or town.

REMEDIES FOR THE EVILS OF THE RURAL SCHOOL.

Your subcommittee would here point out that some of the evils of the rural school are due to its non-social character, its inability to furnish to

each of its pupils that educative influence that comes from association with numbers of the same age and the same degree of advancement. The rural school furnishes only a few companions to the youth, and those either above him or below him in grade of progress in studies. The remedy for the evils of the ungraded school are suggested by this very feature or characteristic. Radical remedies in this case must all contain some device to bring together pupils of different districts and bring into wholesome competition with one another the pupils of the same grade of advancement.

Transportation to Central Schools.—The collection of pupils into larger units than the district school furnishes may be accomplished under favorable circumstances by transporting at state or local expense all the pupils of the small rural districts to a central graded school and abolishing the small ungraded school. This is the radical and effective measure which is to do great good in many sections of each state. As shown already by the Subcommittee on the Maintenance of Schools, Massachusetts, in which the plan began under the town superintendent of Concord, Mr. John B. Tileston (about the year 1878 in Concord, or even earlier in the town of Quincy, see *Appendix F*), paid in 1894-95 the sum of \$76,608 for the transportation of children from small rural schools to central graded schools—213 towns out of a total of 353 towns and cities using this plan to a greater or less extent, and securing the two-fold result of economy in money and the substitution of graded for ungraded schools. The spread of this plan to Maine, Vermont, New Hampshire, Connecticut, Rhode Island, New Jersey, Ohio, and some other states (see Report of Bureau of Education for 1894-95, pp. 1469-82) demonstrates its practicability. Experiments with this plan have already suggested improvements, as in the Kingsville experiment in Ohio, where the transportation reached in all cases the homes of the pupils and yet reduced the cost of tuition from \$22.75 to \$12.25 a year for each of the fifty pupils brought to the central school from the outlying districts.

Improvement of Roads.—Wherever this plan of abolishing the small ungraded school is practicable it is by far the best remedy to be applied.

But there will remain large numbers of small ungraded rural schools in which the plan of transportation is not feasible by reason of great distances and poor roads. The Agricultural Department is seconding the efforts of many states to improve roads in rural districts. In many places road improvement is a necessary condition previous to the betterment of rural schools.

Special Appropriations for Small Rural Schools.—The device of securing skilled and professionally trained teachers by providing, as in California, a sufficient salary for each district, no matter how few its pupils (see *Appendix C*), has already been described by another subcommittee (that

on maintenance). It is undoubtedly a wise measure, provided it does not hinder the consolidation of districts through the adoption of the Massachusetts plan. If it works to preserve the small ungraded school in places where consolidation is feasible it will in the end be an injury to the cause of rural schools. Your subcommittee therefore ventures to call attention to the importance of adopting such laws as are operative in California, New Jersey, Massachusetts, and New York, for the better remuneration of rural school-teachers, but with a proviso that makes it a pecuniary advantage to a town to abolish its outlying ungraded schools and furnish transportation to a central school.

Concentration of the Higher Grades of Pupils.—Where transportation of the whole school is not feasible it sometimes happens that the teaching may be very much improved by the transfer of two or three of the pupils of the higher grades who consume very much of the teacher's time. By transportation of these two or three pupils to the central school the teacher thus relieved may find time for much better instruction of the pupils in the lower grades who remain under his charge.

School Exercises at the Town or County Centers.—For the small ungraded schools that cannot be abolished, perhaps one-third of all the schools in the United States at the present time, your subcommittee suggests the provision of occasional meetings at town centers or county centers, perhaps twice a year or oftener, under the direction of township, union township, or county superintendents, as the case may be. The meeting should have as its primary purpose the bringing together of advanced pupils—say sixth to ninth years' work for examination and comparison, the examinations to be chiefly written. Certificates should be given to those who complete the elementary course of eight years as a whole or in any one of its branches, permitting a pupil who passes in one branch this year, say in grammar or history, to pass in another branch at a subsequent examination whenever he presents himself. These examinations have been in operation in several counties of New Jersey for nearly twenty years.

This plan has an interesting and profitable illustration of many of its features in the operation of the Boxwell law in Ohio. (State School Commissioner Corson, Report 1895-96.) It was also carried out years ago in many particulars by Superintendent Wade in West Virginia.

The Proper Use of Competitive Examinations.—It is understood by your subcommittee that the prejudice against competitive examinations is well grounded. It often happens that schools are subjected to mere mechanical drill in order to secure a higher per cent. in this sort of examination. High per cents. cannot be obtained by entire classes upon work which requires not only a knowledge of details, but a knowledge of the causal relations underlying them. Your subcommittee desires to say

that it does not recommend indiscriminate competitive examinations, but that it recommends written work and examinations which test the thinking ability of the pupil and lead him to considerate inquiries and accurate statements. High per cents. on anything except mechanical work, such as spelling, the multiplication table, the tables of weights and measures, and paradigms, are not desirable.

The plan of township and county union exercises of rural schools above described obviously includes the good feature of social interconnection, each pupil of the remote districts working consciously in combination with many others towards a common end, and all the pupils stimulated both in school and out of it by this social motive.

Promotion of Home Reading.—The excellence of the Chautauquan plan for the promotion of home study lies in the same feature. Each reader is stimulated and encouraged by the consciousness that he is working on a task common to the endeavors of a vast multitude. The task is dignified and ennobled by such social participation. The youth in the rural district is by this plan to be made a home student, and his education is thus to be extended beyond the school. He may have obtained his first recognition in the township examination while he was a member of a rural school. He is an object of semi-annual inquiry on the part of the township or county superintendent for years afterwards. Each new teacher that comes to the rural school is charged by the superintendent with the duty of looking up the young men and young women who made a record in the central examinations, and inquiry is made after their continued reading and study. This in itself will be a powerful influence to cause young people to continue self-culture by studying a prescribed series of books in years subsequent to the school period. It will add dignity and self-respect to the rural school-teacher who is charged with the work of making friendly inquiry into this school extension, and of offering help in case of application from any of the parties interested.

Reviewing Studies.—The rural school with its five-minute or ten-minute recitations cannot do much in the way of reviewing previous lessons. The good teacher in a graded school carries on from day to day a review of previous lessons. He gathers up and connects with the lesson of the day all the essential threads that bind it to what has gone before. It is this work of reviewing that will be assisted by the occasional examinations at the township center.

Moreover, the old evil of the rural school, that of having all pupils begin at the beginning of the book at the commencement of each annual term, will be removed. For the superintendent will have a record of the standing of the advanced pupils and will require a report from the new teacher as to their programme of study.

This plan also points to the utility of more written work in the rural

school. A set of questions prepared beforehand and given to a pupil at the close of the week, as above recommended, will test not only his knowledge of the superficial details of his week's work, but also of his understanding of their deeper connections and principles, as no oral recitation could be made to do.

School Extension.—In this connection another branch of what is called "school extension" or "university extension" is practicable. Home reading can be managed from the same center, namely, the rural school. Everything that adds social importance to the rural teacher may be of service. It is evident that those pupils who have graduated from the public school and have entered upon the business of life may profitably carry on useful courses of reading in the various departments of literature and art, science, and history. The township or union township superintendent, in conjunction with the county superintendent or state superintendent, should set into operation as far as possible courses of home reading, employing the aid of the rural school-teachers to carry this into effect. A record containing the names of the persons who have undertaken home reading, the names of the books completed, and the dates of such completion, will form an interesting record. This home reading, moreover, should have its social gatherings in which there are discussions of the contents of particular books that are read. For this purpose the township superintendent or the county superintendent may select specially well-fitted persons who shall present analyses of the books and discussions of their contents. It is desirable that the course of home reading shall not be one-sided, but shall move in each of the three directions: literature, including poetry and prose; science, looking towards the organic and inorganic kingdoms of nature, the plant, the animal, and the details of matter and force; and towards archæology, ethnology, and sociology, and politics, history, biography, and art. One must not be altogether dissatisfied if it is found that the novel is the chief book in demand, especially in the first five years of the home reading circle. In our day the novel discusses every question of history, politics, sociology, and natural science. The old-fashioned novel which describes manners has its great use, too, in the fact that it gives to the people of whom we are speaking, the people of the rural districts, a ready knowledge of manners and customs of polite society. In this respect it is sometimes more useful than books of science and history.

Lancasterian or Monitorial Plan.—The topic of written work suggests a further topic of great importance in the rural schools, namely that of the occasional employment of older pupils in the work of supervising the exercises of less advanced pupils—a committee of two or three pupils to examine and mark the papers written by those studying geography; a monitor assigned for some hour in the day to inquire into the work of a

backward or dull pupil who has reached a difficult place in arithmetic; a similar assignment of a pupil to help another in a grammar lesson or a history lesson; these are cases where the monitorial or Lancasterian system may have greater or less utility. It cultivates directive power and self-respect in a pupil to be called to the aid of the teacher. But the dangers of it are well known. No weak disciplinarian should try the monitorial system. On the other hand, every strong disciplinarian in the ungraded school can use some features of it to advantage.

The bane of the Lancasterian system was its use to furnish cheap assistant teachers in graded schools. It resulted in bringing into the schools a class of so-called "pupil-teachers," educational novices in the place of experienced and professionally trained teachers who ought to be everywhere employed in graded schools. Limited entirely to ungraded schools and to teachers with disciplinary power, the older pupils may profitably be employed to help in the work of the school. But they should not take up any work continuously—it should all be occasional, inasmuch as every thread of the school work must come under the eye of the schoolmaster frequently—daily, or nearly as often. If he has asked an older pupil to explain a point in arithmetic to a dull pupil the latter will show the degree of efficiency of that help, in the first recitation after it.

Another rule for the guidance of the teacher is: never to employ a monitor unless such assignment of work is useful both to the pupils taught and to the pupil-teacher.

A teacher may gain time needed for assistance of the advanced pupils in some important study by requiring in advance the assistance of these pupils in some of the following forms:

- (1) Marking examination papers.
- (2) Helping pupils over some difficulty in arithmetic, grammar, or other branch having strict logical sequence in its topics.
- (3) In explaining the thought of a reading lesson to a backward pupil.

The effort of one pupil to explain to another a difficult passage of literature is one of the most profitable of all school exercises. There will undoubtedly be crudities in the explanation, but this will all come out under the teacher's subsequent tests, and the exercises will increase in profit through the final explanation given by the teacher.

- (4) In assisting to test mere memory work on the part of a pupil, as in the case of the spelling of difficult words, the learning of paradigms in grammar, the learning of the required tables of weights and measures, the multiplication table, etc., or in any other necessary data that have to be fixed in the memory. In general, what is nearest to mechanical work may be supervised at times by monitors, and monitors may be useful in assisting in the preparation of thought lessons that are to come later

before the schoolmaster, as, in the example given, the getting out of the thought of a reading lesson—or even of a history lesson.

In conclusion your subcommittee would lay chief stress on the function of school extension, above sketched in outline, as the most profitable line of work for the improvement of the rural school—both pupils and teachers.

WILLIAM T. HARRIS, *Chairman*,
ADDISON B. POLAND,
LLOYD E. WOLFE.

Mr. Poland, while concurring in most particulars, desires to add the following statement :

While I concur most heartily in nearly all of the recommendations made by the Subcommittee on Course of Study, etc., I feel compelled to state that, in my opinion, the report somewhat exaggerates the difficulties and dangers of attempting to classify pupils in rural schools. It fails to discriminate between rural schools of ten pupils each and schools of a larger number, say thirty to sixty pupils each.

The general argument is based upon conditions that exist in a "school with ten pupils of ages from five to fifteen years;" and the conclusion drawn is that "for these reasons, classification as above described ought not to be expected in the (any) rural schools."

The conclusion, it seems to me, is altogether too general. My own observation of rural schools in the states of Massachusetts, New York, and New Jersey has led me to believe that their efficiency as a rule is in direct ratio to their wise and careful gradation; that, in fact, the best-graded schools are the most efficient. I am speaking, of course, of rural schools containing twenty-five pupils and upwards, where partial grading, at least, is generally believed to be practicable. Grant all the cases of individual hardship that the report truly affirms of misgraded pupils, yet the total loss of efficiency is immeasurably less than where no grading is attempted. Economy of teacher's time, longer recitation period, class emulation, etc., more than offset the disadvantage, often only theoretic, of a pupil's working in advance of his point of "maximum efficiency."

I am not, therefore, in full harmony with the report, in so far as it may have the effect to discourage teachers from attempting to classify pupils, whenever and wherever practicable.

A. B. POLAND.

Mr. Wolfe, while agreeing in many points with Mr. Harris, desires to make the following statement :

Perhaps my opinion may be characterized as explanatory or supplementary rather than dissenting. Believing with Dr. Harris that the chief

aim of the report of the Committee of Twelve is to provoke thought, I make this contribution to that end. Complete unanimity no more exists among the members of this committee than among the great army of teachers for whom the report is prepared; nor is such unanimity desirable. The subject will be treated under the following heads:

1, *The present condition and trend of rural school grading and classification in the states of the Union*; 2, *Dr. Harris' plea for individual instruction rather than the instruction (in the same class) of pupils who are more than one year apart in their advancement*; 3, *The underlying pedagogic principles that seem to justify Dr. Harris in opposing the doctrine of his report to a body of opinion on classification and grading which is gathering volume and momentum with each decade*; 4, *Objections to the doctrine of the report*.

1. Recent decades have witnessed a strong movement in many of the states of the Union to model the rural school course of study, grading, and classification after the ideal of the city graded school. Several states prepare, publish, and distribute state courses of study for rural schools, and send out, at stated times, uniform examination questions prepared with reference to the course of study and the system of grading and classification set forth therein. In other states, the county school authorities issue the rural school course of study. In still other states, the school journals and associations hold up the grading and classification of rural schools as an ideal to be obtained in the near future.

2. The burden of Dr. Harris' report is: "Be ye not unequally yoked together." Just here a word of explanation of the expression "the ideal of the city graded school." This ideal is a course of study divided into at least eight yearly divisions, or grades of work, the pupils of the school being divided into eight corresponding divisions, or grades. A school is graded when the pupils of a certain year, or grade, are pursuing the work of a corresponding year, or grade, in all the branches. It is, therefore, evident that the word "grade" has two meanings—a grade of work and a grade of pupils. All pupils who are graded are classified, unless there be but one pupil to the grade. But all pupils who are classified are not necessarily graded. A pupil without classmates is graded when he pursues all the work of the corresponding grade, and yet he cannot be said to be classified. Pupils may be grouped in classes, and thus be classified, and yet not be graded, because they may be pursuing work of different grades. Dr. Harris is not opposed to a course of study for rural schools, nor to dividing that course of study into eight divisions, or grades of work, nor yet to grouping pupils into classes, or grades, provided classmates are not more than a year apart in their advancement. But most rural school courses of study necessitate the grouping of the pupils of the fifth and sixth years of advancement into one grade; also, the grouping of the pupils of the seventh and eighth years into another grade. It thus happens that

free-school system, our postalsy stem, and our asylums for physical, moral, and mental delinquents. Having addressed himself to the modification of rural school environment through pupil transportation and pupil-teachers, the Doctor finds himself face to face with a great body of rural school conditions which are unmodified and at present unmodifiable. It is here that he makes his plea for individual instruction rather than the instruction, in the same class, of pupils who are more than a year apart in their advancement.

4. The branches of the eight years' course of the rural school are : writing, drawing, music ; physiology, grammar, civil government ; spelling, language, geography, history ; reading ; arithmetic. We shall be able to get a better understanding of the subject if we suppose a city school of eight grades, four rooms, and four teachers to be suddenly reduced to one-fourth its former number of pupils, rooms, and teachers. There will then remain one teacher, one room, eight grades of pupils and eight grades of work, and, say, forty pupils ; that is substantially rural school conditions. This one teacher now finds that, while he has no more pupils to instruct than he had before, these pupils are scattered among the eight grades. If he adheres strictly to the former graded structure of the school, keeping each grade of pupils distinct in all the branches (allowing six recitations a day to each grade), he will have eight times six, or forty-eight, classes. This gives him an average of about five minutes for a recitation period. The inadequacy of this time for the development of a subject needs no comment. He must group these scattered pupils into classes, largely ignoring grades, and many of these classes will contain pupils from different grades. By almost unanimous consent it is agreed that the pupils of the eight grades can be grouped, for general exercises, in writing, drawing, and music, requiring but one recitation period for each branch. One recitation period will answer for each branch in grammar, physiology, and civil government ; two recitation periods each in spelling, language, geography, and history ; four in reading ; five in elementary numbers and arithmetic. This gives twenty-three recitations, ranging from ten minutes in the lowest grades to twenty in the highest. It will be observed that I state above that many of these classes will contain pupils from different grades. Here appears the significance of my definitions of *class* and *grade* in the beginning of this discussion—definitions on which the teachers of this country are far from being a unit. The fundamental principle underlying *grading* is symmetrical development ; the fundamental principle underlying *classifying* is harmonious development. Symmetrical development aims to advance the pupil with equal pace in all the branches ; harmonious development aims to advance him in harmony with his individual capabilities. Many of the pupils of our best graded schools are classified in violation

of the principle of harmonious development. This statement takes no note of mistakes in grading, by which pupils are assigned to the wrong grades. The grading of schools in accordance with the principle of symmetrical development necessitates a violation of the principle of harmonious development. I have reference to those pupils who are assigned to the right grade in a majority of the branches they pursue, but who, in one or more branches, belong to grades above or below the one to which they are assigned. It, therefore, follows that the reorganization consequent upon transforming the four-teacher school into the one-teacher school would bring some pupils into classes better suited to their abilities than the classes to which the graded system had assigned them, thus bringing about a classification more in harmony with the principle of adaptation of instruction to the capacity of the learner. Classification and its correlative principle of harmonious development are the corner stone of the rural school; grading and its correlative principle of symmetrical development are equally fundamental to the city school. In a graded school the pupil is assigned to classes belonging to one grade only; in the country school he is assigned to classes adapted to his capacity, regardless of the number of grades represented by these classes. I institute no comparison here as to the relative merits of the principles—harmonious development and symmetrical development—but simply state the fact of their relations respectively to the city and rural schools.

If practical adaptation of instruction to the capacity of the pupil were really attainable in the graded school, I should hesitate to recommend a classification that would group, in one class, pupils more than a year apart in their advancement. But such adaptation is largely ideal and theoretical. However well the school be graded, the strongest pupils and the weakest are separated by a long distance in the character, or grade, of their work. Whether in the primary, the grammar, the high school, the college, or the university, a certain per cent. of the students do most of the highest order of work. These strongest pupils discover and develop the deepest relations. The weaker pupils soon learn to repeat the stereotyped expressions of these relations, and to store them away in their memories to be fished forth at stated intervals by the written test. The apostle Paul, that he might not offend his brother, would eat no more flesh while the world stood; but a large per cent. of the students of all grades, not from fear of offending their brother, but from their very mental constitutions, abstain, with equal fidelity, from the strongest mental diet. I can select, at random, one-half the pupils from Grades 6 and 7 of a city school, and put them to studying, indifferently, North America, South America, Europe, or Asia, and the former leaders in Grades 6 and 7 respectively will still lead. What is true of geography is true of history,

civil government, physiology, spelling and reading, and, in a measure, of grammar and arithmetic. Certain pupils are mentally built for accuracy, clearness, depth, and power; others, for relative inaccuracy, obscurity, shallowness, and weakness. A rule requiring, as a condition of promotion, that all pupils, of any certain grade, should do as high an order of work as is being done by some of the pupils of that grade, would virtually stop the wheels of promotion. Many of the pupils would never reach a higher grade; many others would do so only after repeated attempts and failures.

The gist of Dr. Harris' objection to grouping pupils who are more than a year apart in their advancement is that the more advanced pupils will be kept marking time, while the less advanced will be dragged along at an unnatural rate. My answer is that the stronger pupils will do the higher order of thinking, just as they always do, while the weaker pupils will do the lower order of thinking, as they always do, getting some knowledge from the books, some from the teacher, and some from their stronger classmates. The rural school has the advantage over the city school in that its pupils learn much from the recitation of classes to which they do not belong. In a graded school, the walls of the schoolroom shut pupils out from what is being recited in other grades. In a rural school, the pupil can listen to the recitation of any grade. You tell me that this is absorption, that the pupil gets this outside knowledge at the expense of the preparation of his own lessons, and that the practice of listening to other recitations militates against the principle that a great aim in education is to learn to master the printed page; but it is nevertheless the testimony of many of our greatest educators that the knowledge thus obtained by them in the country school was invaluable. The mind has strange and subtle methods of threading its way to knowledge, not always in harmony with the pedagogue's theory. What teacher in arithmetic (who has had the courage, temporarily at least, to lay aside his cut-and-dried solution-formulæ) has not been surprised and delighted at the ingenious methods different pupils have of solving problems? What master of the topical method in history, civil government, or literature has not marveled at the rich relations revealed by pupils when left free to take their own initiative? A nation does not postpone its entrance upon a career of republican government till all its members are ready for self-government. The members of a church are not of equal intellectual or spiritual caliber, nor are the members of a family; yet they are associated in one class—the state, the church, the family. In actual life, persons of all degrees of advancement behold alike the same procession of the heavens, the same succession of seasons, the same world-happenings; but all do not get the same kind and amount of information from the mar-

shaling of the constellations, the budding and fruiting of spring and summer, and the drama of events daily unfolding. I grant that the examples above given are not identical with the thing to be exemplified ; but they present important elements of similarity. Finally, I am fully convinced that the rural school conditions necessitate a departure from the doctrine so ably laid down by Dr. Harris, and I believe principles can be found to justify such departure. Whether or not I have found these principles and set them forth in this supplementary report is another question.

L. E. WOLFE.

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APPENDIX A.

SOME SOCIOLOGICAL FACTORS IN RURAL EDUCATION.

[From a paper read before the Department of Superintendence of the N. E. A., at Jacksonville, Fla., February, 1896, by B. A. Hinsdale, Professor of the Science and the Art of Teaching in the University of Michigan. (See "Journal of Proceedings and Addresses of the Thirty-fifth Annual Meeting, held at Buffalo, July, 1896," pp. 261-9.) A discussion on the same lines, but much fuller, will be found in Dr. Hinsdale's work, entitled "Studies in Education," pp. 313-38.]

First we will give our attention to density of population. The importance of this element in the rural school problem becomes obvious at a glance. In populous districts fewer schools and districts relatively are called for, while, at the same time, owing to the larger numbers and the more varied attainments of the pupils, the system can be more fully developed. The school and the home, under the present system, cannot be far apart; otherwise children will attend the school with difficulty, or not at all. Once more, the interest and enthusiasm of pupils and teachers depend directly upon the number and the ability of the pupils present. For the majority of children individual instruction, or anything closely approaching it, is not to be commended. Aristotle condemned such instruction on political grounds. It may also be condemned on pedagogical grounds. Children need the inspiration of numbers. Besides, numbers contain ethical value. As a rule, you can no more make a good school out of a half dozen pupils than you can make a powerful galvanic battery with one or two pairs of plates. Then, again, the question of cost is directly involved. Where pupils are scattered and the schools are small education is necessarily very expensive, provided it is at the same time good. Generally, however, it is bad.

To illustrate: Some twenty years ago I investigated one of the old townships in northern Ohio with respect to its school condition, and with these results: Schools, 7 in number; youth of school age enumerated, 191; pupils enrolled in schools, 103; average daily attendance, 71; average size of schools, 10 pupils; largest enumeration in any district, 85; smallest, 12; largest enrollment, 37; smallest, 3; largest daily attendance, 25; smallest, 3; largest cost per pupil in any district, \$42.60; smallest, \$18.56. The average cost per pupil the same year in the state was \$13.36. Argument is not needed to show that this was an inefficient and wasteful township system of education. How much better it would have been if the seven schools could have been consolidated, thus putting all the pupils under two or three teachers. I remember a school in Ohio, within sight of my own home, that was kept in session a whole summer with but two pupils in attendance, and those two were all there were in the district. My father, who was a man of close observation, was in the habit of remarking in my boyhood that a farm of 1,000 acres situated all in one school district would, as a rule, spoil the school, by reducing the number of children, and I have often seen confirmation of his statement.

The Census Office at Washington considers those parts of the country that have a population of less than two to the square mile unsettled. These parts amount to a little more than one-third of the whole, not including Alaska. Once more, in constructing its tables and maps to show density of population, the Census Office excludes the cities, or those centers of population containing 8,000 persons or more. In 1890 the second of the two rules excluded 443 centers of population, containing an aggregate of 18,835,670 inhabitants, or 29.12 per cent. of the whole.

The whole country, less the parts excluded by the first rule, the Census Office has divided with reference to certain *maxima* and *minima* of population, as follows :

2 to 6 to a square mile,	- - -	592,037 square miles.
6 to 18 "	" - - -	394,943 "
18 to 45 "	" - - -	701,847 "
45 to 90 "	" - - -	235,148 "
90 and above	" - - -	24,312 "
Total,	- - -	1,947,287 "

The Superintendent of the Census makes some interesting remarks upon the economical significations of these statistics, as follows :

"These limits define in a general way the extent and prevalence of various classes of industries. The first group, two to six to a square mile, indicates a population mainly occupied with the grazing industry, or a widely scattered farming population. The second group, six to eighteen, indicates a farming population with systematic cultivation of the soil, but this either in an early stage of settlement or upon more or less rugged soil. The third group, eighteen to forty-five to a square mile, almost invariably indicates a highly successful agriculture, while in some localities the beginnings of manufactures have raised into this group a difficult farming region. Speaking generally, agriculture in this country is not carried on with such care and refinement as yet to afford employment and support to a population in excess of forty-five to a square mile. Consequently the last two groups, forty-five to ninety and ninety and above to a square mile, appear only as commerce and manufactures arise, and personal and professional services are in demand."

He might have introduced education with equal propriety. The statistics given throw a direct light upon school material, and an indirect one upon school resources. Much the same may be said of churches and the intellectual and moral instruments of society generally. There is, therefore, cause for deep regret that such large areas of country are falling off in population. From 1880 to 1890 more than 400 counties, or about five times as many as there are in the state of Ohio, suffered in this way.

But, secondly, the character of the population must be considered as well as its number. It is evident that a certain homogeneity is very conducive to public education. The children of such a community can be educated together, and hence more cheaply and more effectively. One system of schools suffices for all classes. But if the children must be segregated in different schools according to non-educational tests, one of two things will certainly happen: either public education will become expensive, or it will become inferior in quality. Looking at the subject from this point of view merely, it is unfortunate that in large portions of the United States popular education should be embarrassed by the race question. In 1890 the per cents. of white and colored population, respectively, were distributed in the five great divisions that the Census Office recognizes in the following manner :

North Atlantic States,	- - - - -	98.4	1.6
South " "	- - - - -	63.2	36.8
North Central States,	- - - - -	98.0	2.0
South " "	- - - - -	68.3	31.7
Western States,	- - - - -	94.8	5.2

If per cents. for the states severally were given the contrasts would be still more striking. The per cent. of colored people in New Hampshire, for example, was .18, while in South Carolina it was 59.87. Now there is little probability that the educational value of such statistics as these will be exaggerated. The presence of a large colored population in any state or other community tends to affect popular education unfavorably in three ways: to increase its cost, to make its quality inferior, and to lower both the intellectual and moral level of society and its money-earning capacity.

In one respect the rural parts of the country are better off, upon the whole, than the cities. Religious differences do not disturb popular education to the same extent. Relatively, parochial schools are much fewer in number.

In the third place, the wealth of society is a very important factor in education, and particularly in rural education. Naturally the per-capita wealth of the several divisions of the country varies greatly. In 1890 these were the averages :

North Atlantic States,	- - - - -	\$1,132 per capita.
South Atlantic States,	- - - - -	579 "
North Central States,	- - - - -	1,129 "
South Central States,	- - - - -	583 "
Western States,	- - - - -	2,250 "

In the North Atlantic states the maximum was in Rhode Island, \$1,459 per capita; the minimum in Maine, \$740. In the South Atlantic states the maximum was in Maryland (excluding the Federal District), \$1,043 per capita; the minimum in South Carolina, \$348.

Now it is perfectly well understood that a good modern system of state education can be supported only at great public cost. Still more, the cost is all the time increasing. Our total expenditures for this purpose the last twenty years have been mounting upward by leaps and bounds. At present the money expended by the states together is \$175,000,000 annually, which is more than twice the cost of supporting the national government before the Civil War. Education has come to be a great item in the budget of every highly civilized country in the world.

Fourthly, the character of the population in respect to its money-earning power must be taken into the account. The size of the average family and the relative number of taxpayers, or the adult males, and their productiveness as economical agents, all become educational factors of much importance. If families are large, the number of children to be schooled is proportionally great; which, under some conditions, would add to the efficiency of the schools, and under other conditions would increase their cost. Then the larger the relative number of adult males, and the greater their producing power, the higher their intelligence and educational needs, and the greater their ability to provide the sinews for educational warfare. We need not enter into the correlation of the size of the family and its material condition. It still remains true, however, as in the time of Solomon, that the destruction of the poor is their poverty. In respect to educational possibilities there is the greatest difference between a community having a high ratio of adult male population of large wealth-producing power and a community having a small ratio of such population with small wealth-producing power. The country taken together in 1890-91 showed surprising variations in this respect. There were 91.4 taxpayers for each 100 children six to eighteen years of age; but in different sections the ratio varied from 65.9 to 100 in the South Central states to 156.7 to 100 in the western states. In South Carolina there were but fifty-five adult males to earn the money with which to school 100 children, thirty-two of whom were colored men. Comparing the taxpayer factor with the per-capita tax for education, some very striking results are obtained. Dr. Harris has shown¹ that in Montana a contribution of \$5.85 per taxpayer furnished in 1890-91 \$16.02 for each child of school age, while in Texas a contribution of \$6.55 per taxpayer produced a result of only \$4.48 for each child. Mississippi, after raising per taxpayer about half what Nevada raised, had only about one-eighth as much as the latter state for each child of school age. The causes that affect the ratio of school children to the adult population are beside the present inquiry. But it is perfectly obvious that this is an educational factor of much value.

Little logical acumen is required to see either the educational value or the social congruence of such factors as the wealth per capita of the country or of any state in it,

¹ Report of the Commissioner of Education, 1890-91, p. 24.

the expenditure per capita for public education, the expenditure for the same purpose per pupil in the schools, and the per cent. of illiteracy, taking the population ten years old and more into the account. These items are shown in the following table:

North Atlantic States, - - - -	\$1,132	\$2.06	\$23.65	6.2
South Atlantic States, - - - -	579	.96	8.25	40.1
North Central States, - - - -	1,129	2.81	19.96	6.7
South Central States, - - - -	583	.98	7.59	39.5
Western States, - - - -	2,250	3.55	34.03	11.6

It must be remembered, however, that these statistics are, in part, now several years old.

Perhaps I should observe that statistics may be taken too seriously. We need not now examine the arguments by which Mr. Buckle and others like him have sought to show that man has no free agency, but that society is governed in all its movements by laws as fixed as those of material nature. It answers the present purpose to say that the highest state of education is not always found in the most populous, the richest, or the most homogeneous states. France is much richer than Germany, but she is inferior in education. England is far richer than Scotland, and has been behind her in schools of popular education since the time of John Knox. Relatively, Rhode Island is the richest and most populous of the American states, but she has never led the American common-school column. There are other factors than those that are distinctly social which enter into the problem. Educational traditions and ideas, public spirit, and force of character all tell. At the same time it would be the sheerest folly to exclude or belittle the material factors that enter into public education and all similar social interests.

APPENDIX B.

PERMANENT SCHOOL FUNDS.

I. CONNECTICUT.

It began to be noticed as early as 1824 that the Connecticut common-school fund was not working altogether as it had been expected to work. (See James G. Carter's "Letters to the Honorable William Prescott, LL.D., on the Free Schools of New England, with Remarks upon the Principles of Instruction," Boston, 1824.) Connecticut, however, made the fatal mistake of distributing the income of the fund to the towns and districts without requiring them to raise by taxation an equal amount, or, indeed, any certain amount, for the support of their schools. In 1853 Connecticut was expending on her schools only one-third as much per pupil as the neighboring states were expending, while she was raising by taxation only one-tenth or one-twentieth part as much as they were raising per pupil. Dr. Henry Barnard says: "Taxation for school purposes had not only ceased to be a cheerful habit of the people, but was regarded as something foreign and anti-democratic. The supervision of the schools had become in most societies a mere formality, and the whole system seemed struck with paralysis." And yet the governor of the state had sounded the alarm as early as 1826, while prominent citizens had counseled other states not to repeat the mistake that Connecticut had made. (See a valuable article on the Connecticut School Report, subhead, "The School Fund and Its Effects," in *The American Journal of Education and School Review*, edited by Absalom Peters and Henry Barnard, Vol. I. (1856), pp. 590-9.)

II. TEXAS.

Mr. C. Lombardi, member of the school board of Houston, Tex., contributed to *The Business Record* of that city, November, 1896, the following article, entitled "Our School Fund":

First of all comes the question of revenues. While we have been boasting of our princely educational fund, consisting of millions of acres of land, we have forgotten to inquire into the location, character, and value of this land. It was long taken for granted that any kind of wild land would increase in value as time passes. It was argued that as the amount of land in any country is a fixed quantity, and as population tends to increase steadily, land could not but increase in value as population increases. But a rude shock awaited these plausible theories when suddenly land values began to decline, not only here, but everywhere, in other states as well as in Texas, in Europe as well as in America, along with the depreciation of agricultural products. Many circumstances led to this result, chief of which is the long interval of peace among civilized nations, thus liberating and increasing an immense productive force, formerly largely devoted to the destruction of both life and the means of life; the facilities and cheapness of transportation, and the opening up of immense tracts of land in other portions of the world, made accessible to cheap labor. It was found that the most abundant commodity in the universe is raw, untitled land.

Then as to the character of the land set aside for our school fund. Time was when any kind of land was supposed to have some value, if only for pasturage or mining purposes. Here again a revolution has taken place, making wild grazing lands almost valueless, and mining lands in this state quite so. The demand for range cattle has been transferred to the domestic-fed cattle raised on small farms, and our great cattle industry of the past has practically passed away.

As for mining lands containing iron, copper, and coal, the great abundance of all these found nearer to market and closer to lines of transportation, together with the greater facilities for working old mines afforded by modern invention, and the agitation for a lower tariff policy throughout the South, has put a quietus to any thought of developments or investments in Texas for some time to come.

Hence, while our school fund derived from the sale and lease of land has not increased in value, the scholastic population has largely increased, and the financial demands for public education are increasing every day. They are increasing not only by reason of the natural increase of the scholastic population, but also by reason of the very progress achieved in educational methods and the higher ideal attained. Not only has this higher ideal induced more people to send children to school, but it is demanding a higher standard of ability and character in the teachers, and this costs more money.

What is the remedy? Obviously special taxation as a supplement to our revenue from the school fund. Either that or a curtailing of our school facilities, and this last is not to be thought of. But here again we labor under a singular disadvantage from the fact that we have a school fund, that we have exaggerated its importance and value, and indulged in extravagant boasts about it. Our people have become too much accustomed to rely on this great school fund, and will be unwilling to entertain the idea of raising a school revenue by taxation. Had we never had a school fund, or never talked about it, our people would probably not hesitate to tax themselves heavily for the benefit of the schools, as do the people of Colorado, for example. But it will be difficult to reconcile the glory of our great school fund, which has been dinned into the taxpayer's ears, with the necessity of going deep into his pockets to supply the educational deficit.

It is just as well that we should begin to consider this matter and bring it before the people. It is bound to become an issue sooner or later, and the sooner the better. We must not wait until we are confronted with a deficit so great as to paralyze our schools and destroy their efficiency. Other things demand the attention of the friends of popular education, but this is fundamental.

RECEIPTS OF SCHOOL MONEYS.

[From the Report of the Commissioner of Education, 1894-95.]

State or Territory	From permanent funds (income and rents)	From taxation			From all other sources	Total revenue (excluding balance on hand and proceeds of bond sales)
		From state taxes	From local taxes	Total from taxation		
I	2	3	4	5	6	7
United States	\$8,336,612	\$33,252,941	\$119,019,984	\$152,272,925	\$16,988,154	\$177,597,691
North Atlantic Division.....	620,882	12,532,368	44,143,714	56,676,082	7,413,662	64,710,626
South Atlantic Division.....	441,619	4,032,340	5,435,338	9,467,678	680,486	10,589,783
South Central Division.....	1,944,798	6,332,407	4,153,512	10,485,919	666,703	13,097,420
North Central Division.....	4,589,521	7,618,618	58,006,497	65,625,115	7,099,015	77,313,651
Western Division	739,792	2,737,208	7,280,923	10,018,131	1,128,288	11,886,211
North Atlantic Division:						
Maine	0	516,608	1,265,090	1,781,788	0	1,827,828
New Hampshire (1893-94)	14,753	86,817	729,176	815,993	60,963	891,709
Vermont	48,622	93,556	680,580	774,136	68,225	890,983
Massachusetts	6175,944	0	10,469,368	10,469,368	16,044	10,661,356
Rhode Island	9,105	118,834	1,163,720	1,282,554	55,162	1,346,821
Connecticut	168,870	255,883	1,850,316	2,106,199	183,205	2,458,274
New York	30,312	3,856,804	13,865,890	17,722,694	3,473,141	21,226,147
New Jersey	127,236	2,119,460	2,261,513	4,380,973	101,565	4,009,774
Pennsylvania	0	5,484,316	11,858,061	17,342,377	3,455,357	20,797,734
South Atlantic Division:						
Delaware (1889-90) a.....	60,000	0	209,000	215,000	0	275,000
Maryland	55,323	583,974	1,454,051	2,038,025	142,255	2,235,603
District of Columbia.....	0	0	953,155	953,155	0	953,155
Virginia	43,804	930,548	805,025	1,735,573	44,911	1,824,288
West Virginia	35,134	318,506	1,089,197	1,407,703	196,646	1,639,483
North Carolina (1893-94)	0	646,543	1,323	659,866	117,213	777,079
South Carolina	0	437,143	75,918	513,061	35,020	548,081
Georgia (1893-94)	212,952	1,008,752	389,702	1,398,454	64,019	1,674,525
Florida (1893-94)	35,306	100,874	445,967	546,841	80,422	662,509

Montana.....	524,789	181,766	524,789	181,766	501,405	36,016
Wyoming.....	0	0	181,766	181,766	186,493	4,727
Colorado (1891-92).....	108,463	0	1,462,109	1,462,109	2,323,754	753,182
New Mexico.....	0	0	119,673	119,673	165,799	46,126
Arizona (1893-94).....	a 5,770	a 156,400	a 43,400	a 199,800	205,611	a 41
Utah.....	98,002	276,195	594,304	780,499	842,595	62,096
Nevada (1893-94).....	14,331	11,941	83,770	95,711	194,793	1,080
Idaho (1893-94).....	90,278	0	303,641	303,641	320,766	2,794
Washington.....	162,948	0	924,715	924,715	1,029,286	14,293
Oregon (1893-94).....	a 260,000	0	744,397	744,397	1,047,749	140,404
California (1893-94).....		2,292,672	2,388,359	4,681,031	5,007,960	66,929

^a Not reported; a part is included in "other sources."

^c Report incomplete.

^a Approximately.

^b Includes tax on dogs, etc.

^c State appropriation for colored schools.

APPENDIX C.

THE CALIFORNIA SYSTEM OF SCHOOL MAINTENANCE.

Every portion of this state is embraced in the 3,243 school districts into which California is at present (1896) divided. Under our law every city and incorporated town constitutes a separate school district, unless subdivided by the legislative authority thereof. Only two cities of the state are subdivided into separate school districts.

SOURCES OF REVENUE.

STATE—

(1) *Permanent Fund*.—The permanent school fund of the state consists of the receipts from the sales of school lands (sections 16 and 36 of each township), and now amounts to \$4,000,000. The interest on this fund, together with the interest on school land, yields an annual income amounting to \$260,000, or more.

(2) *Poll Tax*.—There is a state school poll tax of \$2 levied on each male inhabitant, between the ages of twenty-one and sixty years. From this source the state school fund receives nearly \$370,000 annually.

(3) *Collateral Inheritance Tax*.—There is a tax of 5 per cent. on collateral inheritances, which is paid into the school fund of the state. The amount received from this source, of course, varies from year to year.

(4) *State School Tax*.—The statutes require that there be levied on all property in the state an ad-valorem tax sufficient to raise the sum of \$7 yearly for each census child. On account of the allowance made in levying the tax for possible delinquencies, the actual sum realized is somewhat in excess of \$7 per child.

The revenue derived from these four sources for the fiscal year ending June 30, 1896, was:

(1) From Permanent School Fund,	-	-	-	-	-	\$264,429.00
(2) From State Poll Tax,	-	-	-	-	-	362,794.12
(3) From Collateral Inheritance Tax, etc.,	-	-	-	-	-	102,688.45
(4) From State School Tax (ad valorem),	-	-	-	-	-	2,320,270.08
Total State Moneys,						\$3,050,181.65

The school census for the year was 323,130. The average, therefore, per census child from all state sources was \$9.43.

COUNTY—

Each county is required by law to levy a county school tax, the maximum rate of which shall not exceed 50 cents on each \$100 of taxable property, nor the minimum rate be less than sufficient to raise \$6 for each census child in the county.

DISTRICT—

The charters of cities having boards of education provide for the levying of school taxes within the corporate limits, in addition to the state and county school taxes.

School districts governed by boards of school trustees may, by vote of the people, levy additional taxes for school purposes, the maximum rate being fixed at 30 cents on each \$100 of taxable property. They may also, in any year, levy a tax of 70 cents per \$100 for building purposes.

BONDS—

Any school district in the state may, by a two-thirds vote, bond itself for the purchase of lots, erection of buildings, etc.

The constitution and law of the state require that all property shall be assessed at

its "full cash value." The word "property," as defined in the constitution, includes "moneys, credits, bonds, stocks, dues, franchises, and all other matters and things real, personal, and mixed, capable of private ownership."

DISTRIBUTION OF SCHOOL FUNDS.

For the purpose of fixing a primary base for the distribution of school funds, there is taken, during the month of April, each year, a census of all the children in the state between the ages of five and seventeen years. The term "census children" must not be confounded with the term "children of school age," as the latter embraces all children between the ages of six and twenty-one years.

The method of distribution is unique, combining, as it does, the enumeration and average daily attendance methods. Its strong point is the marked recognition it gives to the principle that the state, as a whole, is interested in the education of all its citizens. To that end the rich and populous centers are made to contribute to the poor and sparsely settled districts. At the same time the local and county taxes imposed are a constant reminder that each locality must share with the state the responsibility of educating its youth.

All state school moneys are apportioned by the superintendent of public instruction to the several counties in proportion to the number of school-census children, as shown by the returns of the school-census marshals of the preceding school year, and the moneys so apportioned are distributed to the several county treasurers by the state treasurer, on the order of the state superintendent.

The county school funds are collected by the county tax collector, and turned over by him through the county auditor to the county treasurer, who is the custodian of all school funds. It is the duty of each county auditor to notify the county superintendent of schools of all school moneys received — both state and county. The entire revenue is distributed by the county superintendent of schools to the various school districts (including cities) on the basis of the number of teachers to which each district is entitled. This number is determined by calculating one teacher for every seventy census children, or fraction thereof of not less than twenty census children, in the district. He then apportions to each district \$500 for every teacher assigned to it. Should a district have less than twenty and more than nine census children, he must apportion to it only \$400. Districts having less than ten census children lapse, unless supported by voluntary contribution. Such districts usually lapse, their territory being absorbed by adjoining districts. This provision of the law is not intended to govern the number of teachers actually employed by a district; it simply furnishes a basis for determining the amount of money to which a school district is annually entitled from the public funds.

All school money remaining on hand after distributing \$500 (or \$400, as the case may be) per teacher is apportioned to the several districts in proportion to the average daily attendance in each district during the preceding school year. The amount varies in the different counties, ranging from \$2 or \$3 per child in average daily attendance in a few sparsely settled counties to \$10 or \$12 in the more densely populated. The average for the entire state is not far from \$8 for every child in average daily attendance.

In distributing the school money the county superintendent considers each city in the county, no matter how large, simply as a school district, which it is under the law; and for this purpose each city superintendent must report school statistics to the county superintendent, just as does the teacher in the most insignificant district in the county.

As an illustration of the method of distribution, suppose district "A" has a census roll of 1,000 children, and an average daily attendance of 600 for the preceding school year. The county superintendent discovers from the school statistics in his office, after apportioning \$500 for each teacher in the county, that the amount per child in average daily attendance is \$8. Dividing 1,000 by 70, we find that "A" is a "fifteen-teacher district." Five

hundred dollars multiplied by 15, plus \$8 multiplied by 600, equals \$12,300, the amount that "A" receives in a year from the state and county school funds.

As before remarked, the treasurer of each county is the custodian of all school funds; all orders on said funds drawn by the local district or city authorities must pass through the hands of, and be approved by, the county superintendent before they can be paid by the treasurer.

It might be urged that such a system, while it guards the educational rights of children in the poorer districts, may overstimulate a desire for the creation of new school districts. It has that tendency, but the state has thrown some safeguards around it (although perhaps not yet sufficient) by imposing certain restrictions upon the creation of new districts in the way of distance from the nearest schoolhouse and the minimum number of census children required. Under the law the schools of the state are enabled to maintain an average of eight and seven-tenths months per year.

SAMUEL T. BLACK.

Sacramento, Cal.

APPENDIX D.

THE COUNTY AS THE UNIT OF SCHOOL ORGANIZATION.

The following paragraphs are from an article by Mr. Lawton B. Evans, Superintendent of Schools for Richmond county, Ga. (See the *Educational Review*, April, 1896.)

I believe very firmly that the county or township is the proper unit of educational organization. If one system of schools can be made to extend over a whole county, including the city and villages, the organization will be upon a basis of territory. By this means the entire country can after awhile be brought under a uniform organization. So long as the organization is by cities we merely organize by locality, which can never be uniform or entire. It will always remain a one-sided development. A proper policy is to induce the people hereafter to organize by area rather than by spots. The effect of this will be to give to the rural child the same school advantages as to the city child, and there is every reason in equity and good sense why these advantages should be the same.

I come from an illustration of this kind of organization, and it may not be amiss to tell something of the schools of Richmond county, Ga., in which county is situated the thriving city of Augusta. Here for the past twenty-five years has been in operation what is known as the county system.

One board of education, composed of representatives elected by the people for a term of three years, one-third of the membership expiring every year, has charge of the entire school interests of the city of Augusta and of the county of Richmond. This board of education has the unique power of levying a school tax directly upon the people of the county, without revision by any other authority and without any limit as to rate or amount. The school tax is levied and collected as a uniform rate upon all property of the county, whether it is in the city or out of it. This forms the general school fund of the county, supplemented by the state appropriation.

When it comes to the distribution of this fund no regard is paid to the amount raised by any ward of the city or any district of the county, but the fund is distributed according to the necessities of each ward and district, determined by the number of children to be educated. The school fund of the whole county is raised by a tax on all the property of the county, and is distributed upon the basis of the school population of each community. Thus it happens that a community rich in naught else but children will get a flourishing school paid for by its wealthier but less fortunate neighbors.

As a matter of fact, a large part of the money paid by the city is annually spent in

the rural districts, for the city has nine-tenths of the taxable property, but only three-fourths of the school population. So it happens that the rural schools pay one-tenth of the school tax and receive the benefit of one-fourth of it. Augusta has spent in the past twenty years the sum of \$200,000 in building schoolhouses and paying school-teachers for the children who live in the country districts around her. Augusta has shown her faith in the proposition that every city needs to be environed by an intelligent, industrious, and contented population.

When it comes to the teachers the same qualifications are demanded for rural schools as for city schools. Upon the regular examination terms, and upon issuing of licenses to teach, an applicant does not know whether he will teach in the city or out of it, and to many it is a matter of indifference. And I know whereof I speak when I say that there are young women graduates of normal colleges doing high-grade work in country schools ten miles beyond the limits of the city, and doing it happily and cheerfully. We believe firmly in the further proposition that a country school is entitled to as good a teacher as a city school, and that those who live in the fields are as deserving of education as those who dwell beside the asphalt. Carlyle must have had a country child in his mind when he said: "This I consider a great tragedy: that one soul should remain in ignorance that had capacity for higher things."

The teachers are treated as nearly alike as can be. City and country teachers are paid about the same salary. They get it at the end of every month and on the same day. The certainty and the regularity of a fixed compensation create a sense of security, safety, and comfort for a teacher, and accordingly increase his efficiency. No teacher can do his best work when he works at starvation rates, is paid once every three or four months, and often in scrip that he must discount. There is much philosophy and also economy in the maxim that advises us to pay a public servant well and watch him closely. So we draw no distinction of locality. First-class work is worth as much twenty miles from town as it is in the heart of the city.

The schools of the county all run nine calendar months. They all begin at the same time and close at the same time. During the last year every child of the county, regardless of where he lived, was offered nine months of actual tuition.

So far as schoolhouses are concerned, these are located in rural districts so as to be on an average of four miles apart. No child is out of walking distance of a school open nine months in the year and taught by a good teacher. These houses are owned by the board of education and cost from \$300 to \$2,500 each, according to size and equipment.

One superintendent has charge of all the teachers in the county. The same degree of efficiency that should attend the supervision of city schools is likewise extended to the country schools. An expert teacher for all is the theory, and, so far as human effort can avail, it is carried out in practice. The same course of study is prescribed for the pupils, and the same course of professional reading is required of the teachers. The teachers of the city schools meet for instruction once a week, the teachers of the country schools meet once a month, and in addition have a two-months' institute in the summer months.

APPENDIX E.

COMPARATIVE COST OF THE TOWNSHIP AND DISTRICT SYSTEMS.

The subcommittee has made diligent inquiry as to the relative cost of the township-unit and independent-district systems of carrying on common schools. Naturally, it is a difficult thing to come at, as the elements entering into the problem are so fluctuating. Some testimony is presented below from three well-known state-school executives, all given in response to the inquiries of the committee.

I. FRANK A. HILL, Secretary of the Massachusetts State Board of Education :

I do not think it will be possible without a great deal of special investigation to furnish figures or statistics to show that the town plan is either cheaper or more expensive than the district plan. The expenditures for schools in Massachusetts have been gradually increasing, because of better buildings, better sanitation, better equipment, better teachers, and better salaries. I have a strong conviction, however, that the same amount of money may be made to go much further under town management than under district in the way of securing greater efficiency in the schools.

We are consolidating our scattered and thinly attended schools quite extensively in our rural towns, and transporting the children. In this way towns frequently save a little money, while providing better accommodations and securing better teachers. But the argument we use in favor of such consolidation is not the economical one ; it is the educational one, rather, that the school efficiency is thus increased.

II. CHARLES D. HINE, Secretary of the Connecticut State Board of Education :

It is hardly right to say that the district system [in Connecticut] is an independent system. The town still remains the unit of financial management. All money from the state treasury goes to the town, is added to the town tax, and then is distributed by the town board of apportionment to the several districts. In only 138 of the 1,400 districts is a tax laid. These districts have the power to tax themselves, but you will see that they seldom exercise it. A few districts, probably not more than twenty-five, support their schools in part by district tax. The remainder of the districts mentioned have taxed themselves for occasional expenses, like insurance, repairs, or perhaps for building a schoolhouse.

As to the cost of the two systems, . . . it must always be said, and I impress that upon those to whom I speak, that the two cannot be justly compared, except by going over a period of years. When towns enter upon the town system, they are likely to increase expenses, if their previous expenses have been stingy and inadequate. On the contrary, if under the district system they have been liberal, the economy which the town system permits will enable them to reduce their expenses. It follows, then, that you would have to know the policy under the district system before you could judge whether the town system had made a difference in the case. The tendency in the large districts in this state is to become practically independent, and to support the schools liberally under the district system. There are advantages of directness, power to borrow money, etc., which make it possible to secure liberal appropriations in large districts. The tendency in small districts is to diminish the cost because there are few children.

As a result, taking the average district, the town system shows in this state very much better schools, so far as instruction is concerned, as well as more efficient administration. It would be impossible, of course, to illustrate this by numerous examples. We have not been able to secure legislation compelling all towns to accept the town system. We are, however, advancing slowly toward that result by popular vote. In the last year eleven towns voted to adopt the town system, and now, out of 168, fifty-four are under town systems. It comes slowly, but it is coming as a result of a change of heart and of an endeavor to make better schools.

III. W. W. STETSON, State Superintendent of Schools, Maine :

There is some justice in the claim that the district system is, in one sense, cheaper than the township system. Under the district system the schools were maintained for a much less number of weeks than under the town system, especially in small districts.

When we were running under the district system, patrons of the schools were willing to bid off the board for less than a dollar a week ; sometimes they boarded the teacher without expense to the district, and also furnished wood, repaired the schoolhouse, and

kept it in proper condition generally. It was possible to have longer terms, because of these contributions.

Under the township system the town pays for the teacher's wages and board, and has to provide the wood, make the repairs, furnish a janitor, and provide for keeping the house clean. Shorter terms and donations made the old district school cheap in the sense of using but a small amount of money. It was also cheap in another sense. It was usually taught by some indigent relative of the agent. But in Maine we are not entirely free from this curse, even under the township system. We have discovered that 872 of the 4,600 teachers of Maine are related to or connected with the members of the superintending school committees in such a way as to have an unsafe influence in securing their appointments. There can be no question but that for an equal length of terms, if all the services rendered and materials furnished are paid for, the township system is much more economical than the district system. It is also true that when the conditions prevail that are indicated above, in the matter of money, the district system may be cheaper.

APPENDIX F.

TRANSPORTATION OF PUPILS.

The declining population of many towns and counties, and even larger districts affects the rural schools very unfavorably. (See *Appendix A.*)

I. Hon. C. R. Skinner, State Superintendent of Public Instruction of the State of New York, thus forcibly urges the need of consolidation in the schools of that state:

"In 1860 the school population of the state outside of its cities was 894,432. At the close of the school year of 1895 the school population of the state outside of its cities and villages containing upwards of 10,000 people was 609,146, a decrease of 285,286, or upwards of 31 per cent., while the number of school districts in 1860 was 11,358. While the number of school children has decreased during that time nearly one-third, there has been substantially no decrease in the number of rural districts. It needs no argument to show that the antiquated school-district system, which served the people so well in 1860, has outgrown its usefulness, and that, if the state of New York desires to keep pace with adjoining states in the advancement of her educational interests, some new system must be devised.

"The township system, or some unit larger than the present system, in my judgment, is the only solution of the difficulty, and until the state shall have adopted that system its rural schools will continue to decline in efficiency. There is, in my opinion, no better school in America than the union free school and village school of our state, but the results there obtained cannot possibly be achieved in the weak rural districts, where the average attendance is less than twenty pupils, and, as shown above, in nearly 3,000 districts less than ten. The ambitions and rivalries of the students—incentives to greater exertion on the part of the pupils—which prevailed thirty-five years ago in these country districts no longer exist. The school is lifeless, cannot be graded, there is little enthusiasm among the students, and that activity and earnestness which come from numbers are entirely lacking." (Report for 1894-95, pp. x, xi.)

II. The arguments for the reform have been luminously stated by Mr. A. W. Edson, one of the Massachusetts state agents, as follows (Fifty-eighth Annual Report of the Massachusetts Board of Education, 1893-94, pp. 215-17):

Consolidation and Transportation.—There is a decided tendency on the part of intelligent and progressive communities to close the small schools in remote districts and to transport children to the graded schools of the villages, where better classification, better

grading, and better teaching are the rule. This is done not so much from an economic standpoint as because of the firm conviction that the children receive greater educational advantages there than in the small, ungraded schools.

The number of children in the back districts is small, and growing less every year. With few children and small classes there can be but little enthusiasm and progress.

The leading arguments in favor of the movement are :

1. It permits a better grading of the schools and classification of pupils. Consolidation allows pupils to be placed where they can work to the best advantage ; the various subjects of study to be wisely selected and correlated, and more time to be given to recitation.

2. It affords an opportunity for thorough work in special branches, such as drawing, music, and nature study. It also allows an enrichment in other lines.

3. It opens the doors to more weeks of schooling and to schools of a higher grade. The people in villages almost invariably lengthen the school year and support a high school for advanced pupils.

4. It insures the employment and retention of better teachers. Teachers in small, ungraded schools are usually of limited education, training, or experience, or are past the age of competition. The salaries paid in cities and villages allow a wide range in the selection of teachers.

5. It makes the work of the specialist and supervisor far more effective. Their plans and efforts can all be concentrated into something tangible.

6. It adds the stimulating influences of large classes, with the resulting enthusiasm and generous rivalry. The discipline and training obtained are invaluable.

7. It affords the broader companionship and culture that come from association.

8. It results in a better attendance of pupils, as proved by experience in towns where the plan has been thoroughly tried.

9. It leads to better school buildings, better equipment, a larger supply of books, charts, maps, and apparatus. All these naturally follow a concentration of people, wealth, and effort, and aid in making good schools. The large expenditure implied in these better appointments is wise economy, for the cost per pupil is really much less than the cost in small and widely separated schools.

10. And, again, it quickens public interest in the schools. Pride in the quality of the work done secures a greater sympathy and better fellowship throughout the town.

Mr. Edson reports that the following objections have been made in Massachusetts :

1. Depreciation of property ; decreased valuation of farms in districts where schools are closed.

2. Dislike to send young children to school far from home, away from the oversight of parents ; and to provide a cold lunch for them rather than a warm dinner.

3. Danger to health and morals ; children obliged to travel too far in cold and stormy weather ; obliged to walk a portion of the way to meet the team, and then to ride to school in damp clothing and with wet feet ; unsuitable conveyance and uncertain driver ; association with so many children of all classes and conditions ; lack of proper oversight during the noon hour.

4. Insufficient and unsuitable clothing ; expense to parents of properly clothing their children.

5. Difficulty of securing a proper conveyance on reasonable terms, or, if the parent is allowed compensation, of agreeing upon terms satisfactory to both parties, parents and town officials.

6. Local jealousy ; an acknowledgment that some other section of the town has greater advantages and is outstripping any other locality.

7. Natural proneness of some people to object to the removal of any ancient land-

mark or to any innovation, however worthy the measure or however well received elsewhere.

To these objections Mr. Edson, who is one of the most competent of authorities, replies:

The first one is more imaginary than real, for any level-headed man with children to be educated will place a higher value on the quality of the schools and the school spirit in the community than upon the number and accessibility of the schools. Experience has demonstrated the fact that property in towns committed to this plan has appreciated rather than depreciated in value.

The second and third objections are the most serious. It behooves school authorities to see that the danger is reduced to a minimum. Suitable conveyances, covered, should be provided, and competent, careful drivers selected. No risks should be taken. During the noon hour some teacher should remain with the children who carry luncheon.

The fourth, fifth, and sixth objections have no great weight. The last one has great influence with those people who choose to live, move, and die as did their ancestors, on the theory that this is the last generation, and that any special efforts at improvement are just so much more than is wise or necessary.

III. The experiment in consolidation now in progress in northeastern Ohio is of such interest and promise as to warrant extracts from the annual reports for 1895-96 of the two superintendents who have been most prominent in the work. This recent movement may have an interest for some minds that earlier movements would not possess.

1. Extracts from the report of Mr. F. E. Morrison, Superintendent of Kingsville, Ashtabula county:

The new school system, which is known as the Kingsville system of education, has been formulated and introduced with marked success.

By this system the pupils of the subdistricts are given the same advantages for obtaining an education as the village pupils, and this result has been obtained without working any disadvantage to the village pupils, for we have been enabled to open a new room and supply another teacher in the village schools, thus reducing the number of grades in each room and giving all the pupils better school advantages. We have sufficient room yet for several more pupils without crowding the rooms.

The pupils of the subdistricts have not only been given the advantage of more extended associations and larger classes with which to recite, but they have also the advantages of a school where the teacher has fewer recitations and can give more time and attention to each recitation; thus the pupil's progress is much more rapid than is possible in a school where there are three times as many classes and one-sixth the number of pupils. It is a fact that the work of the teacher depends more upon the number of classes to recite than the number of pupils in attendance. It is a pleasure indeed to note that the attendance in the subdistricts that have availed themselves of the new system has increased from 50 to 150 per cent. in some cases, and a larger increase in all cases; the daily attendance in the same subdistricts has increased from 50 or 60 per cent. to 90 or 95 per cent., thus increasing greatly the returns from the school fund invested. This has been accomplished at a saving of more than one thousand dollars to the taxpayers in the three years.

The Board of Education and citizens of Kingsville are to be congratulated for their progressive and energetic spirit in being pioneers in formulating and placing in operation a system of education superior to any in the state of Ohio, and which is to be the system of the future. The Board of Education has been enabled, under the new school law, to conduct its financial matters by better business methods, buying its supplies in quantities and letting its contracts on competitive bids, and by centralizing the schools, thus saving many needless expenses.

Since the schools were centralized the incidental expenses have decreased from \$800 to \$1,100 per year, to from \$400 to \$600 per year. All other expenses have also decreased, which may be seen from the following table compiled from the clerk's records:

EXPENDITURES OF THE BOARD OF EDUCATION OF KINGSVILLE, O.

1889-90,	-	-	-	-	-	-	\$3,248.05
1890-91,	-	-	-	-	-	-	3,716.23
1891-92,	-	-	-	-	-	-	3,183.54
Total for three years,							\$10,147.82
1892-93,	-	-	-	-	-	-	\$3,153.44
1893-94,	-	-	-	-	-	-	3,072.73
1894-95	-	-	-	-	-	-	2,831.20
Total for three years,							\$9,057.37

In giving these figures we have deducted the \$600 with interest which was borrowed in 1889, and has been paid during the past three years.

It should be mentioned also that the permanent improvements made by the Board of Education during the past three years are nearly double the amount made during the preceding three years.

2. Extracts from the report of Mr. J. R. Adams, Superintendent of Madison Township, Lake county.

In my report to the board one year ago I called attention to the very low average attendance in some of our schools, the great expense per capita of educating the pupils in those small schools, and to the fact that, on account of the lack of interest and enthusiasm therein, good results could not be obtained, and suggested the plan of consolidation as the proper solution to the difficulties.

Acting upon my suggestion, the board, having in view only the best interest of the children for whom our schools exist, voted to consolidate three subdistricts at North Madison, No. 16 and No. 3 with No. 12, and also three at Unionville, No. 10 and No. 11 with No. 4, arrangements being made with the school board of Harpersfield township whereby the pupils of Subdistrict No. 1, of said township, might attend the school at Unionville upon payment by the Board of Education of Harpersfield to the Board of Education of Madison township the sum of \$140 tuition.

Our school opened with two teachers and with an attendance of ninety-three pupils. This was certainly more than the number for which we had planned, and was a great surprise to me, for from No. 10, in which subdistrict there had been the previous year an attendance of only ten pupils, there came eighteen; from No. 11, in which there had been an attendance of only eight pupils, there came eighteen, and from the Harpersfield district, in which there had been an attendance of fourteen pupils, there came twenty-three. The number of pupils enrolled in this school was 107, with an average attendance of seventy-three.

Having tried the new plan for a year, it is no longer an experiment, but an experience with us; therefore, let us now candidly look at the results. First, I wish you to know what the patrons of the consolidated school think of the plan, and then to give you, as briefly as I can, some of my own observations. All the patrons in the school of Subdistrict No. 10 of Madison, and in Subdistrict No. 1 of Harpersfield, have signed a paper stating that they are well pleased with the plan and its results, and asking their respective boards to continue the plan another year. While there has been no canvass at Unionville, Subdistrict No. 4, to ascertain what the people there think of the plan, yet, from what I have heard, I am confident that they are unanimous in its support. The foregoing represents the opinion of patrons who send eighty-nine of the 107 pupils to this school. A large majority of the patrons in Subdistrict No. 11, who send eighteen

of the 107 pupils to the school in question, have publicly expressed themselves as being dissatisfied with the plan, and that under it their children have not received the educational advantages which they ought to have received. Further comment is unnecessary.

Following are some of the good results which have come under my personal observation :

1. A much larger per cent. of enumerated pupils enrolled.
2. No tardiness among the transported pupils.
3. Irregular attendance reduced, the per cent. of attendance of transported pupils from two subdistricts being each ninety-four per cent., the highest in the township.
4. Pupils can be better classified and graded.
5. No wet feet or clothing, nor colds resulting therefrom.
6. No quarreling, improper language, or improper conduct on the way to and from school.
7. Pupils under the care of responsible persons from the time they leave home in the morning until they return at night.
8. Pupils can have the advantage of better schoolrooms, better heated, better ventilated and better supplied with apparatus, etc.
9. Pupils have the advantage of that interest, enthusiasm, and confidence which large classes always bring.
10. Better teachers can be employed, hence better schools.
11. The plan insures more thorough and complete supervision.
12. It is more economical. Under the new plan the cost of tuition per pupil on the basis of total enrollment has been reduced from \$16 to \$10.48; on the basis of average daily attendance, from \$26.66 to \$16.07. This statement is for the pupils in said Subdistricts Nos. 10 and 11.
13. A trial of this plan of consolidating our schools has satisfied me that it is a step in the direction toward whatever advantages a well-graded and well-classified school of three or four teachers has over a school of one teacher with five to eight grades, and with about as much time for each recitation as is needed to properly assign the next lesson.

I am now more thoroughly convinced than ever before that consolidation, or centralization, as it is sometimes called, is the true solution to the country-school problem.

In a private letter, of recent date, Mr. Adams says, since his report was made, consolidated schools have been established at two other points in Madison, at one place four schools, at the other three, each with two teachers. This makes five in the township (which is a very large one, owing to the "goré" on the lake). Five teams are employed to transport pupils, at a cost of about \$1 a day for a team. Every conveyance carries about eighteen pupils. There is no trouble in transporting the pupils, even the youngest, three and a half miles, which is the greatest distance. In 1895 there were eighteen schools in Madison, with an average attendance of 217; in 1896 the number was fourteen, with an average of 260; this year there are ten schools, with an average that will reach over 300. The total expense will be about the same in this township as under the old plan, but the cost per pupil will be much less. Mr. Adams adds that the new plan is rapidly growing in the neighborhood, and the belief is spreading that the new system is sure to prevail generally in northeastern Ohio.

3. The following advertisement well illustrates the care that is taken in Madison township to secure suitable transportation for school children :

NOTICE TO BIDDERS

FOR TRANSPORTATION OF PUPILS OF THE TOWNSHIP SCHOOLS.

Bids for the transportation of pupils of the Madison township schools over the following routes will be received at the office of the Township Clerk until Friday, July 24 at 12 M. :

Route A. Beginning at County Line on the North Ridge road and running west on said road to schoolhouse in Dist. No. 12.

Route B. Beginning at Perry Line on the North Ridge road and running east to schoolhouse in Dist. No. 12.

Route C. Beginning on Middle Ridge road at residence of N. Badger, running thence west on said road to the residence of Rev. J. Sandford, thence north to schoolhouse in Dist. No. 12.

Route D. Beginning at Perry Line on River road, and running thence east on said road to schoolhouse in Dist. No. 6.

Route E. Beginning at the Hartman farm, thence by Bennett road to Chapel road, thence east to A. R. Monroe's, thence west on Chapel road to schoolhouse in Dist. No. 13.

Route F. Beginning at residence of J. H. Clark and running east on Chapel road to schoolhouse in Dist. No. 13.

All whose bids are accepted will be required to sign a contract by which they agree :

1. To furnish a suitable vehicle with sufficient seating capacity to convey all the pupils properly belonging to their route, and acceptable to the Committee on Transportation.

2. To furnish all necessary robes, blankets, etc., to keep the children comfortable; and in severe weather the conveyance must be properly heated by oil stoves or soap stones.

3. To provide a good and reliable team of horses, and a driver who is trustworthy, and who shall have control of all the pupils while under his charge, and shall be responsible for their conduct. Said driver and team to be acceptable to the said Committee on Transportation.

4. To deliver the pupils at their respective stations not earlier than 8:30 A. M. nor later than 8:50 A. M., and to leave at 4:05 P. M. (sun time).

Each contractor shall give bond for the faithful discharge of his contract in the sum of \$100, with sureties approved by the president and clerk of the board.

The committee reserves the right to reject any and all bids.

By order of the committee.

C. G. ENSIGN, *Clerk.*

4. Hon. T. J. Clapp, an active business man of Geauga county, who has also done good service in the legislature, makes a very flattering report of this work, in private letters to the chairman of the subcommittee. He says the centralization movement is spreading rapidly; many townships are using it, and all are delighted with the result. The feeling is becoming common that the old district school does not "measure up" to the demands of the time, and that centralization is the only hope of giving to all the children the educational advantages which they need to keep pace with the city and town schools. The higher educational advantages are placed within the reach of all the children. The pupils riding three and four miles to reach school come to the schoolhouse in better condition than those who walk only half a mile. Mr. Clapp remarks that in his township the old wooden schoolhouses have been abandoned, and a new brick schoolhouse has been built at the center of the town, at a cost of \$6,000, large enough to hold the single township school.

IV. The following reports the first transportation experiment in this country :

Wm. T. Harris, Commissioner of Education.

MY DEAR DR. HARRIS: I received the draft of your report for rural schools; also the pamphlet in regard to carrying pupils, etc. I thank you for them very much.

I looked up the matter of carrying pupils, and send you a copy of the report from the town of Quincy for the years 1874 and 1875, signed by J. Q. Adams, Asa Wellington, C. L. Badger, C. F. Adams, Jr., Wm. B. Duggan, and Jas. H. Slade. I have no doubt but

that this is the first movement in the direction of carrying pupils in Massachusetts. You will notice that this is one year before my superintendency in Quincy. From the report of 1875 and 1876, my first report, are the following items, page 139 :

Lappan Bros., conveying children,	- - - - -	\$129.00
Joseph T. French, " " " " "	- - - - -	392.50

FRANCIS W. PARKER.

CHICAGO, ILL., December 22, 1896.

EXTRACT FROM SCHOOL REPORT, QUINCY, MASS., 1874-75.

CRANE SCHOOL.

A reference to former reports of the school committee of the town will show that for many years the condition of the little school at Germantown has been steadily unsatisfactory. Isolated and small, classification was impossible, emulation unfelt, and enthusiasm absent. Ten pupils ranged from the primer to the proper studies of a high school. The most conscientious teacher soon lost hope and energy in such surroundings. For years committee after committee has striven in vain to afford a remedy. During the past summer, the teacher, who has been laboring there for a considerable period, declared her intention of resigning in despair. The committee, profoundly dissatisfied with the backwardness and lethargy of the school, was unable to assign the fault either to the teacher or to the pupils. At the same time, it became evident that the school building was unfit for occupation during another winter without extensive repairs. It was indeed shamefully dilapidated, decayed, and dirty. Competent mechanics, after careful survey, estimated the expense of necessary repairs to be at least five hundred dollars. Besides this extraordinary outlay, the regular expense in salary, care of house and fuel, incurred to maintain this school of ten scholars, was \$560 a year. And yet this large expense availed those ten scholars but little or nothing. The committee, therefore, determined to try by experiment whether or not at one and the same time in this department the outlay might be reduced and the returns increased. It ascertained that it could contract for the transportation of all the school children in that school district to the Coddington school for about \$420 yearly, and it thought it probable that when there they would be aroused and stimulated by the transfer to a large and graded school. The result has fully justified its anticipations. The whole number upon the register of the old Crane school was twelve, and of these the average number of attendance was never more than ten. Now seventeen are daily transported to the Coddington school from the same territory; and so great has been their interest that the attendance among them has been almost absolutely perfect. Meanwhile, both from the reports of teachers and from personal observation, the committee is thoroughly satisfied that they are making a progress in their studies which they never had approached at Germantown. For these reasons the committee thinks it decidedly for the interest of the town, and clearly beneficial for the pupils concerned, that the present experiment should be prolonged for at least a year more. It is persuaded that this policy will approve its wisdom to those who are now most doubtful if it can be fairly tried. The day of small, ungraded, remote, and isolated schools in a town like Quincy has passed away. Only absolute necessity can now justify it. Even if the plan we recommend was as much more costly as it is really less costly than the old one, we should not hesitate to urge its acceptance as decidedly the cheaper and better.

APPENDIX G.

ENRICHMENT OF RURAL SCHOOL COURSES.

At the Chicago meeting of the Committee on Rural Schools the undersigned were appointed a subcommittee to report, in the form of an appendix, a scheme for the enrichment and vitalization of the work of the rural schools by means of subjects drawn from rural life and surroundings. We do not deem it our province to discuss the theory of the rural school programme, much less the broader problems of the country school. It may, however, conduce to a better appreciation of what we suggest if we frankly state at the outset the assumptions on which we have proceeded.

We take it for granted that the work of every school, rural or otherwise, should embrace subjects drawn from its environment and from the life of its pupils. We assume that it should do this —

Because children should be taught to gather culture, knowledge, and inspiration from everything with which they come in contact;

Because children should acquire the habit of bringing to bear their knowledge and their mental powers upon every subject of thought that falls within their experience;

Because the study of the environment is especially effective in discipline and inspiration, since it is tangible, vivid, and impressive, and awakens strong and clear concepts, and produces deep and lasting educational effects;

Because mental acquisitions thus associated with the environment will be constantly revived by recurrent contact with it, and will thus be refreshed and kept alive and effective;

Because the basis for a successful study of the unseen and the intangible is best laid in clear and strong impressions of things seen and realized;

Because the school work is thereby made directly serviceable to the work of life, the value of immediate and practical utility being added to the superior disciplinary and inspirational values;

Because it puts life and soul into the work;

Because it serves as a bond of sympathy between the out-of-school life and the in-school life;

Because, in time (perhaps not at once, while inherited prejudices last), it will become a bond of sympathy between the patrons of the school and the work of the school.

We assume that a rural school, to be a true *rural* school, must take tone and color from rural surroundings, and must contribute directly to the enrichment and inspiration of rural life. We believe that this will aid in giving meaning and attractiveness to life in the country.

The following suggestions are offered in the hope that they may be helpful to teachers in making use of rural surroundings to enrich the work of country schools and to give vividness to the various formal studies. Our space being severely limited, it has seemed best to develop a few topics with some little fullness and let these suggest the treatment which others may receive. Those which we have been forced to neglect are quite as important and as rich in good material as the ones more favored. All are treated too scantily. What is really needed is a series of primers or a manual carefully worked out, embracing information as well as suggestions. But perfected tools come only with a perfected trade. The pioneer work must be done with poor implements. The progress of the work will bring better facilities.

We shall certainly be met with the criticism that the suggested work is impracticable, that the teachers cannot carry it out. This is far too true, but not wholly true. A success

here and there will be a center of education, and from such beginnings, even though they may be small and scattered, the good work may grow. It must start somewhere and somehow, or must have many little starts in many places and in many forms. This little appendix does not hope to be anything but a passing contribution to an evolution that must be long and doubtless slow. The gravest difficulty lies in the defective education of our teachers. To remove this we would urge every normal school to give elaborate courses in the lines here suggested, and to recognize in other ways that the rural school furnishes a distinct problem that must be solved in its own way. It may be that the establishment of rural normal schools is the mode of solution. We would urge agricultural colleges to give short courses on rural science for the special benefit of country teachers, and to educate the people, through their institutes and by other means, to appreciate and to require the adaptation of the rural schools to rural needs. We would urge upon the agricultural colleges the adaptation and publication of matter on rural science and rural economy suitable for educational uses.

We begin our suggestions with the surface features, partly because a study of them is a natural foundation for that of the remaining environment, and partly because it is directly tributary to one of the leading formal studies.

I. STUDIES UPON THE SURROUNDING LANDSCAPE.

These should be found helpful (1) as a foundation for geography; (2) as a basis for imagining the aspects of other regions which must be studied through maps, descriptions, etc.; (3) as good material for oral and written descriptions, and hence as a basis for language work; (4) as a means for the culture of the sense of the beautiful, thus furnishing a rational basis for modeling, painting, and drawing; (5) as a mode of teaching the significance of things usually regarded as meaningless; (6) as an unconscious introduction to geological processes, and (7) as an aid to understanding many matters of agricultural interest.

1. *Surface Features, their Nature, Origin, and Meaning.*—Let there be a general study of the landscape of the neighborhood and a series of talks upon it for the purpose of gaining a true conception of what a landscape really is, and of laying the ground-work for comparisons with other parts of the face of the earth. The children should gain a vivid and definite idea of the nature of their own landscape as a type; if it be plain, whether it be very plain or but partially so; if undulatory, whether it be gently or strongly undulatory; if hilly, whether gently or roughly hilly; if mountainous, whether of the rounded, the rugged, or the grand type.

From the general survey of the landscape descend to its larger elements.

Note and plot¹ the hills and valleys of the neighborhood, first taking up those near and then reaching out farther and farther, so that there shall be a gradual passage from those that are familiar to those that are only occasionally or distantly seen. From these it will be a relatively easy step to those which must be wholly imagined. Thus the child is led out easily and naturally from his own environment to the general geography of the earth. In carrying this out, walks and occasionally more considerable excursions will introduce the idea of travel and of the methods by which geography is made, and, if verbal and written descriptions, sketches and maps are required, the children are started right in their geographical work by being made young geographers themselves in a limited

¹ It will be understood throughout that the work indicated should be done as largely as practicable and advisable by the children themselves, but the teacher will do well at times to lead them by example as well as instruction. The special mode of carrying out these suggestions must be left to the discretion and resources of the teacher. Our effort is only to point out certain main lines which, of course, need not be followed closely. The teacher will often find a different way preferable for himself, and will always find much to be filled in, and perhaps more or less to be left out as not adapted to the particular school or to its surroundings.

sense. Seeing and learning thus just what geography is, experiencing for themselves just how geography is constructed, they can use their text-books intelligently and appreciatively.

From the general features descend to particulars. Note the way hills and valleys are related to each other. Are the valleys put in among the hills in any regular order or not?¹ As early as it may seem prudent raise the question of the origin of the hills and valleys, but do not be too hasty about answering it. Let the children gradually work it out. Were the hills built up, or were the valleys cut out? Let them ponder upon this question and see if they do not find the answer to it in the hills and valleys themselves. In leading up to this question, direct the children's observation to what is actually taking place. Are the valleys being built up, or are they being cut down? What is happening in the valleys? What is happening on the roadside? Suggest to them to observe the gullies and to contrast the new gullies with the old gullies. How do the new gullies pass into the old gullies? What is the difference in form between the new and the old? Which are most like the valleys? Lead them on thus to see how a trench may be gradually widened and rounded into a valley. Lead them to observe how tributary gullies arise along the sides of the principal ones, and how they grow by widening themselves and by eating back on either side. Lead them to see that, if such creeping backwards and such rounding of the slopes were extended long enough, they would result in little valleys separated by ridges. Lead them on to note how the tributary valleys by eating back may at length cut through the top of the ridge and divide it into hills, and by deepening separate the hills more and more; and so on, step by step, until the children acquire a tangible conception of how valleys with intervening ridges, and, at length, intervening hills, are formed. From this miniature mode of forming a landscape it is an easy step to the comprehension of the way in which the larger valleys and larger hills, that make up the landscape around them, were produced. When this conception is fully acquired, a firm basis has been reached for understanding the formation of landscapes generally. And not only this, but the landscape comes to have a meaning where before it was quite meaningless, and it is the significance of the things by which we are surrounded that gives soul to intellectual life.

References:

- American Geographical Series.
- The Report of the Committee of Ten.
- Davis on "Geography in the University," *Journal of Geology*.
- The Journal of School Geography*.
- See *Appendix L* for list of books.

2. *The Study of Streams*.—Lead the children to observe just how streams flow, how the current plunges into one bank and then is turned about and plunges into the other bank; how it cuts back the bank where it strikes it; how it digs down into the bottom in certain places; how it heaps up material in other places, etc. As they observe, lead them to reason upon what they see and apply it to the study of maps. They will readily come to understand how the bends are made longer and why a stream meanders. They will thus be

¹ In the region of the glacial drift there is often no regular relation between the hills and valleys, but in other regions the hills are generally (not always) simply that part of the surface that has not been carried away in the wearing out of the valleys, and this idea that the valleys are worn out by the wash of the land is the one to be implanted in the children's minds, as it is the germ idea of the formation of most rolling surfaces. In some plain regions the valleys have not been worn out enough to form hills, and we have only a plain with trenches cut into it. In such cases it will be very easy to show the children how the valleys have been formed by the streams and by the land wash. In the glacial regions the hills and valleys may be quite irregular, and it may not always be easy to explain them, unless the teacher is exceptionally well informed on the subject.

led to see the meaning of the tortuous courses of streams. Induce the children also to note the work of temporary streams (*e. g.*, after showers) along the roadsides, in the valleys, and on the slopes of the fields. Have them notice the wash from the surface of the land, and thus lead on to the work of water transportation. Lead them to note that this matter lodges elsewhere, and thus approach to the work of deposit. By seeing when and how this wash lodges they will understand the modes of deposition; the formation of deltas, and the building of bars and spits in the streams, the formation of "bottoms," etc.

To approach the origin and maintenance of streams, direct the children to observe what takes place after a rain; if light or slow, that all water goes into the ground; if heavy and rapid, that some goes into the ground, but much runs away. The latter makes surface streams, but they don't last. Follow the water that goes into the ground. Direct attention to underground water as shown by wells, and connect this with the rain that soaks into the ground. Have the children bring together the depths of the wells at their different homes. Raise the question whether the wells go down as low as the nearest streams. (It will be found almost invariably that the water in the wells is higher than in the adjacent streams, except in occasional flood stages.) Then draw out the general principle that the underground water is higher than the streams, being only the rain water on its slow way through the ground to the streams, and that it is this water which works out to the surface in the low valleys and keeps up the supply of the living streams. The dry valleys lie above this underground water, and hence they are not constantly filled. Water only runs in them after showers. The wet valleys lie below the surface of the underground water, and hence it seeps out or comes forth in springs. The children will easily understand how the seeping out makes bottom lands wet and marshy.¹ The principles here brought out will be helpful later in settling questions of water supply, drainage, etc.

3. *The Study of Soils.*—Incite the children to carefully examine the soil to see how it is made up. Have them wash some of it so as to separate the fine material from the coarse. Direct attention to the natural assorting done by water in the gullies, on the slopes, and in the valleys, and how, on the other hand, fine mud is laid down in the "bottoms" and elsewhere, and thus lead them to see how soils become coarser or finer according to conditions. In most places it will be easy to find pieces or beds of rock partly decayed, and to show that this rotted rock is much the same as soil. From this they may be led on to understand that soil is usually but decayed rock. This will be easily accomplished in regions where the rock lies but little below the soil and the latter graduates down into decaying rock, showing the stages of the process. Induce them to note how the leaves, grass, etc., decay and turn black, and thus lead them on to see that the dark part of the soil comes chiefly from the decay of vegetation. Induce the children to observe the different qualities of soils in different situations; the soils in the valleys, on the slopes, and on the hilltops, and lead them to see how the wash of the surface affects the soil; also how the vegetation affects the soil; and how the soil affects the vegetation. Teach them to notice the difference between wet soils and dry soils; the swelling and softness when wet, the shrinking and the hardness when dry; also the swelling when frozen and the softness on thawing; the effects of the ants, worms, and burrowing animals in bringing bottom soil to the top, letting in air, etc.; likewise the effects of the roots of plants in opening up little tubules, which are often left open when the roots decay, and so lead on to the idea of porosity and of the penetration of the soil by air. With the older students the fact that the air goes into the ground when the barometric pressure is great, and comes out when the barometric pressure is light, the "breathing of the soil," may be taught, and its importance urged. Teach the children to observe the difference in the dryness of culti-

¹ Much marshy land is, however, due to the catching of the surface waters in basins that have no sufficient outlet.

vated and uncultivated soil, of hard soil and mellow soil; and so lead on to the utility of the culture in permitting air and moisture to go in, etc.

Starting again with decay of rocks, lead the children to see that some parts of the rocks do not decay readily, and hence bits are left, and that these are washed about and form grains of sand or pebbles. Let them observe these and see that some are well-rounded and some are angular, according to the amount of wear, and thus the origin and meaning of sand or pebbles will become evident. The rolling action of brooks and rivers and of lake and seashores will be manifest. With a thermometer interesting experiments on the temperature of soils when wet and dry, when hard and when mellow, when stirred and unstirred, etc., can be made.

References :

"The Soil," by F. H. King. The Macmillan Co.

"Rock-Weathering and Soils," by George Merrill. The Macmillan Co.

"The Formation of Vegetable Mold," by Charles Darwin.

See also *Appendix L*.

II. APPLICATIONS OF LANDSCAPE STUDIES.

The study of the features of the landscape may be followed by a study of their influence on human affairs, and on the distribution of plants and animals. The following are some of the lines along which this may be carried out :

1. *The Location of Homes.*—Relative merits of different situations, such as summits, slopes, valleys, etc.; of different exposures, as southerly, northerly, etc.; of different relations to woods, openings, outlooks, etc.; of relations to springs, streams, and other bodies of water; of access to highways or to the several parts of the farm, and the bearing of the surface features on such communications. Do the sites of the later dwellings differ from the earlier? Are there discernible reasons for change? What determined the selection of the material of the first generation of houses? Does the material change with successive generations, and, if so, why?

2. *The Location of Roads.*—How far are they influenced by surface features? How far by other considerations? Distinguish wise and unwise locations. What is the effect of wash, drainage, etc.? What changes of location or of method of maintenance may be recommended?

3. *The Location of Adjacent Towns and Villages.*—Study the reasons for their particular situations. What bearing had natural means of transportation, roadway crossings, river fords or bridges, special agricultural or mineral resources, mill sites and like features upon their location? Do the dates of their founding, the rates of their growth and other features of their history show wisdom or unwisdom in their location? Note the bearings of their location on the interests of the surrounding country.

4. *Development of the Region as Affected by its Environment.*—Study the nature of adjacent manufactures and the reason for their location. What class was first developed, what later, what changes have taken place? Has there been increase or decline, and what is its meaning? What is their importance and the value of their products? How do they affect the rural interests? What sources of power are used and what remain still unused? Note the favorable and unfavorable features in the physical conformation; the presence of mines, quarries, the facilities for transportation by roadways, streams, canals, railways, etc., and their bearing upon the development of the region.

5. *Social and Civil Life of the People as Affected by Surrounding Physical Features.*—Are the physical surroundings favorable to social gatherings and social life? Do the surface features lead to sparseness of dwellings, roundabout and difficult roads, or the opposite? Do they make the earning of a living easy and give time for social intercourse, for education, etc.? How do they affect the character of the people, etc.?

6. *The Distribution of Vegetation as Influenced by Surface Features.*—Sketch the timbered, prairie, marsh, and "bottom" areas. Note the effects of slopes, drainage, soils, etc., upon these. How do the physical conditions affect the roots, stems, leaves, and general forms of plants? Note the adaptation of different areas to different crops; also the adaptation of the region to different kinds of industry, *e. g.*, grazing, grain raising, etc. Note the changes in vegetation and compare the original with the present vegetation. Discuss the removal of forests. Where was timber first removed, and what timber? Where is it now reserved and why? Note the earlier and the later uses of timber supply, and the variation of prices and of uses of timber.

III. THE STUDY OF ATMOSPHERIC PHENOMENA.

In a manner analogous to the foregoing all the features of the air and sky *within the observation of the children* may be treated with interest and profit; the air itself, the winds, the clouds, rain, snow, hail, thunder, lightning, heat, cold, dew, evaporation, etc. The keynote should be observation, followed by inquiry, reading, reasoning, forecast, etc. The systematic prediction of tomorrow's weather at the close of each day will greatly stimulate acute observation of delicate features of cloud, wind, etc., and will build up that judgment of weather which is so important to the farmer.

It is urged that teachers secure from the nearest weather bureau station copies of the daily weather maps, and copies of the monthly summaries of the weather and crop conditions of the United States. A careful study of these maps and summaries, *supplementing the pupils' own daily observations*, will form a good basis for other geographic study. The data furnished by the Weather Bureau are particularly valuable for several reasons: (1) They are collected by trained observers; (2) the stations are so distributed as to fairly represent the whole country; (3) observations are uniformly and regularly made every day at all stations; (4) the various meteorological conditions are automatically recorded by instruments of precision, insuring great accuracy of detail; (5) the various data are appropriately represented daily upon one map which, thus, day by day presents a clear picture of the climatic and crop conditions of the whole country.

By these means the pupils will be much interested in working out the relative amounts of rainfall, cloudiness, and sunshine; also the average and the extremes of temperature found in the areas and belts devoted to the great crops, as wheat, corn, oats, tobacco, cotton, and sugar cane. The relative amounts of rain, cloudiness, and sunshine for the seasons may be readily determined. The incidents of the season in the localities where the pupils live frequently afford excellent opportunity for forming a picture of other localities far removed from their own. Thus a study of the character of the rain and the clouds in winter gives a basis for picturing arctic regions, and the same study in summer an equally sound basis for picturing tropical regions. For example, in June, 1892, there was a fall of nearly eleven inches of rain at Chicago; with the summer temperature, an almost tropical verdure was the result. In September and October in Chicago, in 1891, the rainfall was about two-thirds of an inch; this closely approximated the average precipitation in Arizona, and, when considered in connection with the unusually high temperature of the year, it became an easy matter for the pupils to picture desert conditions and modes of desert formation. By similar means the study is capable of almost indefinite expansion.

IV. THE STUDY OF PLANT LIFE.

In like manner, the plants of the region may be treated. The purpose here, as before, is not so much to learn *about* plants as to come into *actual intellectual contact* with them by observation, interest, sympathy, and appreciation. Not only should the plants be observed in all their parts and functions, but their history, mode of propagation, preferences for soil, topographic situations, exposures, etc., should be studied. The association of plants with one another—"plant societies"—are especially interesting and profitable

for study. The cultivated as well as the native plants should be included, and the reasons for cultivating some plants and neglecting or warring against others afford large possibilities of interest. As farming is essentially plant culture, the vital relations of such studies are evident, if carried out on the right lines. The old-fashioned botany, the grinding out of the Latin names by an "Analytical Key," is not at all the thing here urged, but direct inquiry into the nature, life, habits, functions, associations, and services of plants.

To give a more concrete idea of what we have in mind, the following is offered as an illustration. It is not set up as a model. There are many ways of reaching like results.

1. *Growth from the Seed.*—With several seeds (beans, for example) in the hands of each pupil, invite a careful inspection of their surfaces, as a first step. Write upon the board a list of things observed, *e. g.*, (1) stem scar (hilum), (2) small dot on one side of hilum where pollen tube entered to fertilize the seed (micropyle), (3) ridge on side of hilum opposite from micropyle (radicle), (4) one end of bean has different slope from the other, (5) a light line or ridge extending longitudinally around the seed, etc. Request pupils to bring other varieties of beans, and see how many of the observed points are common to them all. As a training in the *exact* use of words in oral expression require the pupils to describe precisely what has been observed. As a training in written language require the pupils to write out what has been seen. This will react to *intensify* the seeing.

To introduce the quantitative element, let a pint cup, or a straight-sided bottle, or a glass be exactly half-filled with beans, and mark the surface of the beans with a string or rubber band. Now fill the vessel with water and put in a warm place for twenty-four hours. Set some pupil to watch the first stages of change, and charge him to be able to state the next day just what they were. On the next day measure the amount of change in volume. What has caused this change? If the water put in was first accurately measured or weighed (and every country school should have means of measuring and weighing), pour out what remains and measure it. Compute the difference. Compare the loss of the water with the increase of the beans. What has become of the water? By what means have the beans grown? Here are the first steps of growth.

Distribute the swollen beans among the pupils, and let them again look for the points observed in the dry bean. Have any disappeared? Have others appeared? Have any changed in character? Let the skin be removed. What features previously noted are removed with it? Do you now see an explanation of any features noted on the outside? Carefully note the two seed leaves (cotyledons), the radicle, and the now very evident first two leaves. Study the pea, pumpkin seed, and corn in the same manner.

As a next step, fit two layers of thick cloth to the inside of a round pie tin. Wet these pieces of cloth and place between them some of the seeds which have been studied, and turn the two pie tins together to prevent evaporation (which introduced a slight error in the experiment above). Place these in a warm place to germinate, noting the temperature. Encourage some pupil to repeat the experiment in a place where the temperature is between 32° and 45°, recording the temperature from time to time. Urge another to try the experiment, using cloths wrung out very dry. Compare results to find out the effects of heat and moisture. Try different seeds to see what differences of conditions they require. These are capital experiments which fix the foundation principles of moisture and temperature in plant growth.

When these tests have sufficiently advanced, urge the boys and girls to request permission to test the germinatory power of the seeds which their parents expect to plant in the spring. (This seed study is best done from February to April.) Place 100 seeds of a given kind under the conditions described, and note how many sprout in three, four, five, etc., days. All seeds should be tested before planting, and this is practical work

which, if rightly done, will be appreciated by parents as being immediately useful as well as instructive and disciplinary.

2. *Growth from Buds.*—When vegetation begins to start in the spring, make an excursion at noon or after school to gather specimens of large buds. Clip sprigs of the Balm of Gilead, cottonwood, or hickory, set them in water and study in the manner of the bean, and so reach the fundamental idea that the bud and the seed are in nature much the same. Pick off the scales one by one until the leaves are reached, inquiring what the scales are for; what the cotton; what the varnish. Count the number of true leaves, and then go a little later to the trees again and see how many leaves the shoots from similar buds then have. Are they the same in number as in the buds? Or have new ones formed? When were these buds formed? Why were they formed the year before? Let the children ponder over these questions.

Study the arrangement of buds and of leaves on the stems. Lead the children to discover the law that buds and leaves are placed as far apart on the stem as possible, and in a symmetrical order. Lead them to discover that this order places the leaves where there is the least shading, where the movements of sap up and down feed all leaves and branches quite equally, so that the stem will be equally loaded on all sides. Let them learn to distinguish fruit buds from leaf buds. Have them explore the gardens and orchards to see if there is an abundance of fruit buds. Teach them to distinguish between live and dead buds, particularly in regard to fruit trees. All this should be done with a definite educational purpose, in which the utility of the knowledge has also a clear recognition.

References:

"Principles of Plant Culture," Professor C. S. Goff. Published by the author, Madison, Wis.

"Flowers in Relation to Insects." The Macmillan Co.

Gray's Botany.

Bessey's Botany.

See also list in *Appendix L*.

V. THE STUDY OF ANIMAL LIFE.

Along essentially the same lines the animal life may be treated. Here a new and important factor enters, conscious life, and this affords a most fruitful field for educating the sympathies and moral sentiments of the children. Nothing so contributes to a real and vital (not merely sentimental) sympathy with living things other than ourselves as a careful study of their lives and habits. The child comes to see the world as they see it, and to appreciate and sympathize with them in their efforts to work out the purposes of their lives. And even if these purposes strike across human interests, the sympathy will not be entirely absent, and cruelty will grow more and more rare as sympathetic education progresses. The education of the sympathies finds little space in the formal school programme, and hence the special value of utilizing the opportunity here afforded.

There are several other topics which may be treated in like manner, as mensuration in its application to land measurements, etc., various phases of economics as applied to rural affairs, the social and civic aspect of country life, etc.

We respectfully submit the foregoing suggestions, fully conscious of their limitations, in the hope that some little helpfulness may be found in them.

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Committee.

A COURSE OF STUDY FOR RURAL SCHOOLS.

A course of study for country school children should be framed with direct reference to the actual conditions that prevail in country life and, in large measure, determine it. Among the most important points to be kept in mind are the following :

1. *There is a general lack of appreciation of the immediate surroundings.*

This is not peculiar to country people ; it is simply a fact in the country, as it is in the city. Education can confer no greater boon than that of showing how the real pleasures of life may be derived from one's own immediate surroundings, and from the work he is called upon to perform.

2. *There is an almost total lack of scientific skill in farm work.*

The prejudice against farm machinery has been extremely strong. Farmers have been forced into using it because other vocations have drawn away the help that formerly was depended upon for hand labor. The treatment of the soil is, in the extreme, unscientific. The American farmer, in this respect, is scarcely ahead of the Chinese ; his unscientific methods have made him the target of every caricaturist. In this, and in a score of other ways, the farmer pays the penalty of his ignorance.

3. *In the country there is great dearth of social life.*

This, more than hard work, deprives the country of its strength. Bad roads are largely responsible for the present social condition. In many places farmers, and especially the wives and daughters, live in dreary isolation for more than half the year, because no means of travel yet invented will master the mud of country roads. To properly recognize the foregoing conditions, therefore, it would seem that a course of study should contemplate three lines of interest :

1. *In the earlier years, especially, great attention should be given to the picturesqueness and natural beauty of the surroundings.*

Without trained and careful effort in this direction, the intensely practical character of their contact with the various things about them will close the eyes of the children to many beautiful things that should be a source of joy and pleasure throughout life. Much out-door study should, therefore, be encouraged. The children should be familiar with every brook, and waterfall ; with every cliff, wooded copse, and ravine. The hills, cloud-capped, basking in sunshine or glistening with snow, should be permitted to work their silent influences into the children's lives. The country pupils are not naturally insensible towards these scenes ; but the usual tendency of school life is to belittle and destroy all kinship that the children may originally feel for the beautiful. As an adjunct in this phase of study, drawing, painting, and modeling should hold at least equal place with reading, in these early years.

2. *To supply the demand for scientific skill a good deal of attention should be given to—*

(1) *Mechanics.*—Pupils should be taught enough of practical mechanics to enable them to ward off the legion of fakirs that beset the farmer with their labor-saving (?) devices.

(2) *Manual Training.*—Scarcely a day in a farmer's life passes when there is not some demand made for skilled hand work with tools. The "stitch in time" on the farm is frequently fatally delayed when it involves a trip to a neighboring mechanic.

(3) *Mathematics.*—The farmer suffers more loss today from his ignorance in this subject than any other. Bookkeeping, as applied to farm accounts, should be carefully taught. Taking the amount of money at stake on the farm into account, no other business in the world tries to get along with so little bookkeeping. As a natural result, there is infinite waste in a hundred ways that are unnoticed. The time has come when the farmer must learn the lesson that the merchant already knows, that, if he is to gather a competence, or even earn a livelihood, it must be done by a careful saving of *small* margins of profits

upon all the things with which he may work, instead of by large gains upon a few things. Few farmers, simply because no accounts are kept, realize that badly stacked hay and grain, poorly fed stock and illy cultivated fields result in actual cash loss, just as surely as though the money were spent at the gaming table. The arithmetic of the farm account would be of incalculable value to the farm boy if he learned nothing else. The study of form and elementary geometry should be made very prominent. Every farm boy should be taught the elements of trigonometry and surveying. He should know how to "run a line," and how to lay off fields so that the same may be worked to the greatest advantage. He should be taught how to lay out roadways at proper grade, and how to make them. Nothing would hasten the era of good roads more than to show the farmer how much loss in actual cash may be charged to bad ones, through loss in harness, vehicles, horseshoes, horses, and time.

(4) *Biology*.—To show the splendid opportunity before every farmer of intelligence for study in this field, it is only necessary to cite the fact that it was by a close study of domesticated animals and plants that Darwin was able to probe the mysteries of life more profoundly than any before him. It is by no means necessary that the farm boy should study the sunshine only to find its value in pounds of beef; by the nature of the case he is, if intelligent, brought into closer touch with the great problems of life and energy than any other being. It would broaden, not diminish, the scope of this interest if from boyhood he were to learn everything possible about the care and scientific feeding of animals; if he were to learn exactly, for example, how to feed for beefsteak, and how to feed for butter, with the greatest economy. The study of plants would furnish an interesting analogy. The selection of seed; the cultivation of crops with due reference to roots and top; planting, care, and grafting of fruits; the relative value of forage, grain, and other crops, and many similar topics, are subjects for exhaustless study, every hour devoted to which would bring actual cash returns, and at the same time furnish a broad basis for an understanding of the plant world.

(5) *Meteorology and Physics of the Atmosphere*.—By a careful study of the maps and other materials supplied by the United States Weather Bureau, every farm boy should learn something of the nature of the great storms that are likely to visit his region. A careful study of the weather maps, supplemented by good collateral reading, would leave very little to be desired in his geography.

(6) *Mineralogy*.—The composition, the origin, and the treatment of soils, how their productiveness may be renewed and conserved. The relation of the soil to the underlying rock. The origin and relative value of the native rock. The geological history of the country.

(7) *Chemistry*.—A practical knowledge of the principal elements which enter into the soils, plants, and animals. The chemistry of foods.

These subjects should be presented not only from the economic, but also from the more strictly scientific or philosophic side. Because "Man shall not live by bread alone," he has always despised the science of bread for bread's sake. Country children, as well as all others, must be allowed to have an insight into the deeper and more general problems of creation if they are to be satisfied with their work. An intelligent study of nature from the economic standpoint inevitably involves a study from the scientific side also.

It would be a service of inestimable value to the rural schools, and, for that matter, to schools everywhere, if the many government publications bearing upon the studies of nature could be placed in libraries easily accessible to teachers and pupils. The best of these should be in every schoolhouse as books of reference. These works are worth a great deal more than many of the text-books that are far more pretentious.

3. If the country is ever to acquire that refinement which the human being feels it is his right to possess, it must grow it. There are those who believe that, sometime, the

great tide of youth that is now pouring in upon our cities will turn back upon itself, and thus carry to the country the culture that the soil could not of itself produce. It is not to be. Those who are once engulfed in the vortex of the city never go back; and if their children or children's children are by some chance cast out upon the country, they must begin life afresh, as did the primeval man.

Certain physical conditions that now prevail in the country must be improved, or social progress will be forever stayed. The chief of these obstructive conditions is the unspeakable system of roadmaking. Good roads, with their natural *sequela*, would practically solve the problem of country life. They would mean hours of social intercourse instead of hours of dreary, monotonous solitude. They would mean free delivery of goods from the stores in towns. They would mean free and daily delivery of mail. Better have three- or even four-cent postage, if necessary, with free delivery every day, than one-cent postage and the "catch-as-catch-can" delivery of the present time. Good roads would mean the rapid extension of the trolley-car system, which would reduce to the minimum the labor of exchange of commodities between one locality and another, and between country and town. As in the city the attention of children is being directed more and more to municipal affairs, so in the country let the children study practically all these conditions, which lie at the foundation of their physical, intellectual, and moral welfare.

Whatever else the course of study may do, let it breathe hope for the country boys and girls; not the hope of a life that, to be realized, must be lived in the city, but let it rouse the anticipations of a life that has its background in the sunsets, the hills, the woods, the orchards, and the waving grain fields of the country. A genuine life, intelligently lived, alone can bring culture. Whether the instrument of living is the plow or the pen, it matters but little; the furrow well turned, and the line well written, are both fundamental and absolutely uninterchangeable in human society.

Country life, not less than that in the city, may have its aspirations that are truly noble. The schools must not confuse or destroy these by trying to "citify" the country or by seeking to "countrify" the town.

The city and the country express the equation of life; a weakness in one member means the ruin of both. Each must supplement, but not destroy, the other, and both must be preserved.

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APPENDIX H.

THE FARM AS THE CENTER OF INTEREST.

Nowhere on earth has a child such advantages for elementary education as upon a good farm, where he is trained to love work and to put his brains into work. The best-taught school in a densely populated city can never equal in educative value the life upon a good farm, intelligently managed.

The child on the farm is made responsible for something, for some work, for some care-taking, and out of this responsibility grow trustworthiness, habits of work, and a feeling of personal power in all the essential elements of character, with the exception of those much-needed phases that spring from personal contact with society outside of home.

The surroundings of the child upon the farm in contrast with the complexity of city surroundings are comparatively simple; the same forms, colors, sounds are repeated in endless succession, presenting innumerable variations and at the same time complete harmony and unity. The trees, the shrubs, the foliage, the flowers, the fields, the hills, val-

leys, plains, and brooks create distinct, everlasting images in the child's mind; images impressed, concentrated, and expanded by countless sensations, by countless contrasts, that stream in through every avenue of the soul.

Then, too, everything appeals to the child as useful or non-useful. Farm work means the necessities of life, the comforts of home, the possibilities of an education. The reaction of the child upon his environment is the main thing, however; his power to conquer nature with his own hands and mind, together with continual lessons which bring home to him the inevitable action of and his dependence upon the laws of nature, as they assist, or as they baffle, his efforts.

The child enters school with senses keen, character in full tide of formation, and the impulse to act fully organized. He has, besides, acquired a comprehensive knowledge of his environment. This instinctive, spontaneous growth should go on and have full opportunities for complete development.

The statement of what a farm does for a boy in its general lines may easily be taken from the experience of a farm boy in New England, for instance. It is possible for me to give the story of such a one from actual experience—what he learned, what he studied, and what he acquired.

The scene is upon a rocky farm in New Hampshire; the boy an ordinary child, such as you may meet anywhere in this world of ours. As soon as he found himself upon the farm, at eight years of age, he began to study—to study in the best sense of that much-abused word. He began the study of geography—real geography. He observed with ever-increasing interest the hills, valleys, springs, swamps, and brooks upon the old farm. The topography of the land was clear and distinct; its divisions into fields, pastures, and forests were to him the commonest facts of experience. The image of the whole farm and all that it contained is one of the clearest and most distinct memories in his mind today.

The boy not only studied geography, but the foundations of geography, geology, and mineralogy. He knew in an elementary way the nature of the soils; why one field was better than another for a certain crop, and began to reason upon cause—sunshine, drainage, drought, and fertilization.

He studied botany. All the kinds of grasses he knew—timothy, clover, red top, silver grass, pigeon grass; how they were sown, how they came up, grew, were cut, cured, and fed to the cattle; what kind of hay was best for sheep, and what for oxen. He knew the different weeds, too—the rag weed, smart weed, pig weed; he had a practical knowledge of these from close contact, with the hoe and his bare hands. This knowledge of plants took in medicinal herbs—caraway, camomile, catnip, docks, worts, and mints, lobelia, pennyroyal, and g. get. These practical lessons in herbs were doubly impressed, sometimes in a painful way, although they were intended to relieve pain.

The flowers that grew on the farm and surrounding farms, wild and cultivated, hollyhocks and lilacs in the garden, the golden-rod and violets of the pasture, and the sweetest flower that ever blossoms, lifting its delicate petals close by the snow banks in the early spring, the harbinger of the resurrection—the trailing arbutus, taught him lessons of beauty, trained his eye for color, deepened his reverence for God.

He knew the trees—the maple with its sweet burden of spring, the hemlock, and the straight pine which he used to climb for crows' nests. He noted the difference in woods, and their value. As soon as he could wield an axe he cut the trees for lumber, fences, and firewood. With all the shrubs he was acquainted; in fact, he got an elementary but very useful classification that has made the subject an interesting one throughout his life, and prepared him to appreciate the practical value of botany in the schools.

He studied zoölogy, too. The animal life of the farm was very close to him. The brutes were his early companions. The domesticated animals he knew—the frisking lambs, the knowing and antagonistic buck, the tricky mare. He helped to break steers, to kill hogs, to hunt for eggs, to feed the chickens. He knew the wild animals, the squirrels, the rabbits, the woodchucks; the insects, the grasshoppers, and ants; bugs that scurried away when he lifted a stone.

With the birds he was intimately acquainted—the wrens that built their nests in the barn and sheds, the robin redbreast, the shrieking blue-jay, the tiny warblers in the woods, the wise crow, and the timid partridge that would give her life in defense of her young.

He had a practical knowledge of meteorology. He could tell the time of noon upon the instant, by two infallible monitors, his stomach and his shadow. He could foretell storms with nearly as much wisdom as is exercised by the Weather Bureau. The coming of a shower was known to him—the hurry-scurry to get the hay into the barn. The long, steady breezes from the east brought on the storm, and a storm was a welcome thing to a boy on a New England farm! It meant a day of perfect delight on the dear old river. The ostensible purpose of the boy was to catch a few small fish—the real purpose, worship, alone by the rushing floods, the quiet pools, the pebbly beaches, and the silent woods.

In fact, every subject now known in the curriculum of the university this boy studied in an elementary way. He was really grounded in these studies. He observed, investigated, and drew inferences, perfectly unconscious, to be sure, of what he was learning, or how he was learning; but still, he learned, and he studied, and the best lesson of all was his personal reaction upon his environment. His plowing, hoeing, hay-ing, digging, chopping, lumbering, his mending of sleds, and making of cider, sugar, lye, and soap were all so many practical lessons in life which exercised his body, stimulated his mind, and strengthened and developed his purpose in life.

He lived to become a school-teacher, and taught school earnestly and bunglingly for twenty years before he had even a suspicion of the value of his farm life and farm work.

How the work of the children upon the farm is to be brought into the school, concentrated and expanded; how this great, spontaneous, ever-increasing interest is to be made use of; how this organized energy is to be turned into the main life current, are questions of questions. It is the imperative duty of parents and teachers to determine how the farm life of the boy and the girl may be recognized by use in the schoolroom. Which of all the studies the boy has begun should be discontinued? Are they not all essential? Must they be held in abeyance until he reaches the door of a high school or a college? That the child begins them spontaneously and instinctively is argument enough for their continuance.

Without attempting a course of study, I may be allowed to make some suggestions. In these suggestions I present only the common and common-sense things needed in farm work and farm life, and endeavor to show why they form the substantial basis of all study.

GEOGRAPHY, GEOLOGY, MINERALOGY.

The child's knowledge of geography may be made the basis of all his further study of that subject. He brings into school geographical images of the farm and the surrounding landscape. He is tolerably well acquainted with the topography of his district and, it may be, of the town. First, find out how much the pupils really know of these subjects. Get them to describe the farm or any part of it. How many fields are there? Where are the pastures? The woods? What are you raising in each field? How many cattle have you? Describe them. Tell about the sheep, the horses, the hens. Get pupils to sketch the farm on the blackboard, paper, or slates.

A pile of sand in the yard might be used for modeling the farm, showing hills and valleys, plains and brook basins. In winter rough boards with raised edges might be used for sand modeling. Later, chalk modeling should be used to indicate the relief of the land.

The beginning of political geography by the divisions of the farm into fields and pastures may be made. The lay of the land, the relative positions of these, form good lessons in the points of the compass. Pupils would compare one farm with another, so that in time they could model and draw the whole district, including the roads.

If there is a stream in the neighborhood, it may be used as a study of the brook basin, the wearing of water—a good introduction for geology. The examination of the soil after rains, especially loosened soil, may be studied to show the effect of storms in erosion. The dip and formation of the surface, division into hills or plains, bottom lands, and bluffs, may be related to the working of the stream.

The study of mineralogy may begin with the study of soils, the kind of soils, and the forms of the grains. Specimens of gravel, sand, loam, vegetable mold, clay, and rock should be brought by pupils to school and studied. How is vegetable mold formed? What in the soil is useful for plant life? How does the soil change through vegetation and under cultivation, and also under the action of heat, water, frost? It is easily seen that all these are elementary studies in weathering—dynamical geology.

If there are rocks on the farm, they may be studied; the archaic rocks, the secondary rocks, the strata, and the dip of the rocks—all so many points of introduction to geology. Boys on the farm will know something of the mineral on different parts of the farm, in different fields. In general the bottom land is the richest, and the question might easily be asked, Why? In this relation uses of the different kinds of soil may be studied. Questions of why one crop will grow in one portion of the farm, and not in another, and why crops should change or rotate from year to year, should all be brought in.

Housekeeping, butter and cheese-making, cooking, gardening, and affairs pertaining to home economy should be taken into the school. Draw and describe your garden. Divide it into beds. Locate the flowers, the vegetables. Sketch your hens, the turkeys. How do you make bread?

METEOROLOGY.

Elementary studies in distribution of heat would come through the changes of the seasons. The shadow stick may be used, showing the changes in the sun's position relative to the earth. A sun dial on the schoolhouse should be made. The daily changes in the sunlight coming through the different windows may be measured through shadows on the wall. It is a very easy matter to get the daily weather reports and examine them. Every country school should have a thermometer, barometer, anemometer, and rain gauge, to measure the force of heat, the weight of the air, the velocity of the wind, and the depth of the rainfall. Pupils should make weather reports day by day and compare them with the printed weather reports. The elementary study of air and its composition should be made; its weight, direction, and velocity. The study of evaporation of water, followed by the forms of water in the air—fog, mist, and cloud, should be made. Pupils may be called upon to make daily prophesies of the weather, and give their reasons for the same. Every change of the atmosphere, shower, rain, hail, snow, or wind may be taken advantage of for this purpose.

The uses of water may be discussed, especially the uses of water for vegetable life; the drainage of the land, especially on farms where the land has to be tilled, or where irrigation is necessary. Questions like these may be subjects of investigation: How far does the water go down into the earth? What stops it? The cause of a spring? A brook, creek, rivulet, or river? The saturation of different kinds of soil and rock by water.

Depth of the wells and changes in the water level. Into this discussion would come the question of floods and flood plains, and of silt brought down by the water, how and where deposited, that is to say, if there is a creek or a river on or near the farm.

These are some of the innumerable points in regard to meteorology that impinge on the child from all sides, and lead to higher and more difficult questions and investigations.

PLANT LIFE.

I should place first in this study the crops upon the farm; the study of the corn; its history; its nature; different kinds of corn; the uses of corn. The same may be said of wheat, oats, rye, and barley. How land should be fertilized for different crops. Study of the food of plants, nutrition, etc. The grasses may be studied; different kinds of grasses brought into the schoolroom.

In the spring germination of seeds may be especially noted. Seeds should be planted in boxes in the schoolroom. It would be an excellent plan to have a half-acre garden near the school, in which the experiments could be performed, and in which the farmers of the district would take a deep interest. The garden could be made of value, and should include everything that is raised on the farm. There should be a preliminary study of plants, especially flowers, in regard to function. Little or no attempt, at first, should be made to close analysis, or to classification. The guide in the elementary study of all subjects should be function.

Forests; different kinds of trees on the farm; leaves, and bark of the trees; deciduous and non-deciduous trees; the uses of wood for heat, shelter, and household furniture.

ZOOLOGY.

The study of domestic animals and their functions; cows, and different kinds of cows; milk, and how milk is changed to butter and cheese. The history, for instance, of butter and cheese-making, from the old-fashioned churn to the creamery. Study of horses, and sheep; use of wools; meat of different animals. Study of wild animals, birds. Get each pupil to make a list of all the birds he sees upon the farm during the year; when they come, how long they stay, when they depart. This would bring observations in regard to migration. Name the birds staying upon the farm all summer. Where do they build their nests? How do they raise their young? What do they eat? What birds are injurious to the farm? What birds are useful? The pupils could learn many a profitable lesson; would find that most of the old ideas about birds are totally wrong; that many, if not all, of the birds that have been counted mischievous are really helpful; that birds are needed on the farm to kill destructive insects; that the little damage which crows, for instance, bring about is comparatively nothing to the good they do; that the birds are really "nature's militia" to destroy the enemies that menace the life of vegetable, plant, and tree.

Another study is that of destructive insects; the wood-borers, the cankerworms, the weevil; a very practical study. Then there are the bees, wasps, butterflies, and their uses in efflorescence. The wonders of honey-making. The earthworms and the effect they have upon the soil. The boy will be sure not to leave out the woodchuck, the fox, the coon, or the muskrat. He may even learn that the unpleasant little skunk has a use and a place in the world.

PHYSICS AND CHEMISTRY.

Wherever forces are seen, felt, or handled, an inquiry into the nature of such forces is the study of physics. Meteorology is one of the great departments of physics. Distribution of sunshine, the working and nature of heat, the force and wearing of water, measurements of air, of the wind, are all close to the child, who needs only good teaching to lead him to close and closer investigation.

Practical uses of force suggest many problems: force of running water; running mills; force of wind is turning windmills; the economical application of force in farm machinery from the apple-parer to the reaper; the mystery of the lever revealed by wedge and crowbar; the turning of the grindstone; and the use of the jackscrew in raising buildings.

Chemical changes are taking place in earth, air, and water, and are continually applied in the household affairs. The teacher has an excellent opportunity to call attention to the chemistry of cooking; to yeast; to milk in its transmutation to butter and cheese; the making of lye and soap; the oxidation of metals. The composition and nature of different soils are a fruitful study; the effect of sunlight upon foliage in the production of leaf green; the transpiration of water through vegetable tissues, bearing nutrition from cell to cell. The burning of wood and its change into ashes.

The children upon a farm are called upon to apply daily the laws of chemistry and physics. It is the province of the teacher to lead them to apply these laws more and more intelligently, to the end that a deep interest is aroused and they are made earnest and everlasting students of these subjects.

MATHEMATICS.

There can be no work properly done upon the farm without measuring. Most of this measuring is done by what is called "rule of thumb," or so-called practical judgment. The farmer estimates weight of cattle, hogs, or sheep by sight. He can tell how much cord wood or timber a certain area of forest will produce. In fact, measuring in everything he does is absolutely essential. There is no better way for the teacher to study the processes of measuring, or arithmetic, than to inquire into the everyday demands of farm work, and no better way to teach arithmetic than to bring the measuring necessary for farm work into the schoolroom. The elementary work, and the work that ought to be continued throughout the course, should be largely estimation with eye and hand, of length, of distance, area, volume, bulk, force, and weight; the estimates to be verified by actual measurements. That which a farmer is called upon at every turn to do should be begun with the children. And here the parent can supplement the teacher at every step.

When developing the mode of judgment, the pupil should be trained to use the chain in measuring areas, the yard-stick in measuring cord wood, forceps in lumber, dry measure for grain, scales for weights, liquid measure for milk, vinegar, or molasses.

The outcome of all raising of crops is commercial value. There should be a system of farm bookkeeping, in which writing and arithmetic play a prominent part. Children could be easily trained to keep books for their parents, and the work of the farm be made to present all the problems and conditions for a complete mastery of all essentials in arithmetic.

READING AND LITERATURE.

The suggestions already given are for the elementary study of subjects. Interest in all these subjects will lead directly to a great desire to know more of the observations and investigations of others. Here reading and the study of text-books have their great place. The first steps in reading may be short stories of the farm, of the crops, of the animal and plant life, written in simple sentences upon the blackboard. The reading lessons should be closely related, and from beginning to end bear directly upon the subjects the child studies.

Nor is there wanting a great and extensive literature on geography, geology, mineralogy, and botany. Books like "The Soil," written by F. H. King, University of Wisconsin, and "The Great World's Farm," by Salina Gaye, would arouse an intense interest if the subjects here named were really used for the education of the child. Poetry may be brought in at every step—the poetry of the farm, the clouds, the air, the winds, the

flowers, the fields. The pupil will find that the poet and the artist have embalmed in deathless prose or poetry the commonest things of earth, air, and water by which he is surrounded. Thin, vapid, sensational, injurious reading would have no place in his life if all reading were carefully selected in the direction of his aroused, sustained, and educative interests.

The process of learning to read is a very simple one if the free, spontaneous action of the mind is not obstructed by abnormal methods. When the proper stage of development, which manifests itself in an intense desire to gain knowledge through the printed page is reached, the child will learn to read as easily as he has already learned to hear language. All reading should come close to the child, should enter into his personal experience; should be about something he feels the need of knowing—facts about his pets, about things he loves to do—words that re-image familiar scenes. This would make reading and the selection of good literature a habit for life.

WRITING, GRAMMAR, SPELLING.

Writing is one of the modes of thought expression. The fundamental necessity is *to have something to express*, some image to control and steady the hand, some earnest desire to communicate with others by means of writing. Skill in writing takes care of itself if the teacher writes rapidly and well. Technical skill is nine-tenths imitation. The main thing is the impulse which the teacher discerns, seizes upon, guides, and controls. The farm is rich with interesting subjects, rich for the novice of six, or the pupil of sixteen. Descriptions of animals, plants, forests, fields, pastures, hills, valleys, soils, the germination of seeds, the gardening, the shower, the clouds, the rainstorm, hailstorm, snowstorm, the cyclone, the raising of crops, the cutting and curing of hay, the harvest, the market—these are among the innumerable subjects that may be made of intense interest to the children of the country. The little ones may write a word, a line, or a paragraph; the older ones, pages.

And in such work comes the one sensible method of teaching spelling and grammar. Writing is spelling and punctuation, just as speech is fundamentally pronunciation. Using correct language is grammar, and where can pupils use correct language to better advantage than by writing under the direct impulse of thought?

MANUAL TRAINING, ART.

One central and invaluable thing gained on the farm is the necessity for and habit of work. All work on the farm should be honored in the schoolroom by expanding and concentrating it. The school should send back the children to the farm filled with the dignity of labor.

The work of the farm, in a broad sense, is manual training, but most farm boys get a coarse way of doing manual training. They do not learn to use their hands expertly as they should. On all farms there should be workshops for the mending of tools, construction of materials and apparatus for farm work, and in the country school there should also be a small manual training department in which pupils may be trained to use their hands skillfully in making things needed for the farm and the home.

No argument is here made for manual training; I would, however, enter an earnest plea for its adoption in the school on the score that it would make labor both honorable and interesting, and that its value as a potent factor in the development of the brain would be recognized and appreciated by both parents and teachers.

Apparatus for experiment could be made with a small outfit, a bench, a few tools, lumber, and metals. Much of the lumber could be brought by the pupils from the farm. They could cut the wood. If it needed sawing, it could be sawed at the mill. Wood manual training is one of the best ways to learn the uses of woods. There should be a small forge, and some work in iron and other metals as well. Every boy and girl should

have a work bench at home and wood-carving materials, to develop the instinctive habit of whittling into something useful and ornamental. Long winter evenings could be profitably utilized in manual training and the exercise of the arts.

The objects of art are countless, the modeling, painting, and drawing of land surfaces in geography, and illustrations in geology and mineralogy. Landscape and plant life furnish a great number of subjects for painting. Children have a perfect passion for drawing, until it is crushed by over-attempts at accuracy, or by the drawing of flat copies. With a good blackboard, which is the best piece of educational apparatus ever invented for school or home, children could show the different kinds of crops; draw cornstalks, grasses, flowers, and trees. Of course, these drawings would be crude, but at the same time they would be satisfactory to the child, and justly, for they would correspond with his images; the drawing, in turn, would stimulate observation, and the result would be clearer insight. Exact drawing could be introduced in measuring, or arithmetic, and in making projection drawings or manual training. Experience has shown that children take great delight in such work, and that is in the highest degree educative.

Art study leads to the cultivation of taste, and many farmhouses, many cold and desolate sitting-rooms could be made beautiful by the art of the children; and their comfort enhanced by the manual training. Every effort should be made to project the work of the school into the life of the child. Invention may be stimulated by asking pupils to plan a hen house, wood shed, barn, farmhouse, and the selection of trees and shrubs to beautify yard, garden, and landscape.

INDUSTRIES AND COMMERCE.

The study of the commercial side of farm products should have its place in the school. The cost, the selection, the use of crops, and their value in selling. Here arithmetic and bookkeeping would come in. Transportation of crops would have its place, the team, the railroads. Where farm products are consumed. The subject of farm tools, instruments of work, may be studied. How crops are prepared for the market; the question of mills; the preservation of foods; barns; winter protection of cattle; ensilage. Transportation, beasts of burden, wagons, railroads, steamboats, in our own and foreign countries. The beginning of history, how others live and have lived, is involved in this idea of commerce.

The geographical distribution of soil may be considered, as well as the distribution of air, moisture, heat, and plant life, and through the careful and thoughtful study of the farm the whole earth, in time, may be brought to the child.

HISTORY.

The elements of history are everywhere present on the farm. The history of farming tools, from the sickle to the reaper; from the crude plow of the poet to the steam plow of today; from the hoe to the cultivator. The history of butter-making, from the old-fashioned churn to the model creamery. The story of the mill; the history of the potato; of maize; of the tomato. How beets are now competing with sugar cane. If there is an experimental station in the neighborhood, it should be used as an auxiliary to the school, where the history and present status of agriculture may be studied.

Most towns in the eastern states, and some in the West, have interesting local histories. There are generally stories of the Indians, of settlements, of colonization, of noted men and women, of the part taken by the citizens in the Civil War. A strong love for history can be induced and fostered by beginning this study close to the home.

The breakfast and dinner table furnishes excellent starting points in the study of history. How much does the farm in itself furnish of the food of the family? What is obtained outside, and where is it obtained? History of the making of cloth, the story of the spinning wheel and the spinning jenny; the hand loom and the power loom. The

study of the inventions used on the farm will lead directly to the biographies of their inventors and the relation of machinery to human progress. The history of roads and road making, back to the time of the Romans. There should be lessons in every school upon the necessity and practicability of good roads, and the best methods and material for making them.

CONCLUSION.

The tremendous advantage of a rational course of work in country schools is that it would make a strong, binding union of the home and the school, the farm methods and the school methods. It would bring the farm into the school, and project the school into the farm. It would give parent and teacher one motive, in the carrying out of which both could heartily join. The parent would appreciate and judge fairly the work of the school, the teacher would honor, dignify, and elevate the work of the farm. Farmer and housewife would be ready to discuss the methods of the farm and housekeeping in the school. Children, parents, and teachers could meet at stated periods and hold discussions in the direction of their highest interests. One of the best meetings I ever attended was a union of grangers and teachers in Oceana county, Mich. One hour was devoted to a discussion of how to raise potatoes, and the next was given to the education of children.

The farmers would become deeply interested in having libraries in the schools, carefully selected. Long winter evenings could be spent around the fireside in mutual study; parents helping children, and the children, in turn, arousing and stimulating parents.

Country life too often fails in the proper social conditions. It tends to isolation. A common purpose of education would obviate this. The farmer would often invite the school to visit his farm, and to study it. Pleasant and profitable social meetings would be the order of the day. The teacher with clear ideas of what education ought to be would bring the people of a district together to discuss the welfare of their children. Exhibits of pupils' work, of manual training and the arts would naturally follow and greatly increase the interest.

It is an indisputable fact that cities draw largely upon the country for men of action and affairs. There are, no doubt, some notable exceptions to this rule, but in the main, the leaders, both men and women, successful manufacturers, bankers, doctors, lawyers, ministers, statesmen, have received their early education upon the farm or in the workshop.

Education deserves to be regarded in a broader and more rational light. Real education should be read in terms of character—character translated into action. Sound judgment, common sense, wisdom acquired by observation and tempered by experience, with genius to help one's self, and power to plan and execute, entitle a man to a diploma from the world at large, if not from a university. Education which is worthy the name generates the power that penetrates life and makes it better.

No method, no system of schools, no enrichment of courses of study, not even the most successful of teachers, can ever take the place in fundamental education of the farm and the workshop. No matter how good the city schools may be, or may be made; no matter how good the state of society may be, the vital reinforcements of city life that lead to progress and prosperity, so far as we can see, must always come from the sturdy stock of the farm. This fact, upon which most educators agree, puts upon the country school an immense responsibility. It is no small office to train the men and women who are to lead and guide the future of the republic.

The country schools have every advantage, so far as material means are concerned; their environment is rich in organic and inorganic forms; but in one thing they are lacking—the teacher who can utilize that which offers itself in such abundance. This is a want which every thoughtful person deplores, a want that will be met when the farmers themselves realize what a powerful influence for good their schools may be made.

When skill, expertness, and insight control the methods of country schools; when excellent teachers remain in the same schools year after year, the already powerful influence of country life upon the destinies of the nation will be mightily enhanced.

A large majority of boys and girls upon the farm entertain mistaken notions of life in cities, and early form a desire to enter into the seemingly greater advantages to be found in such centers. This leads to the congestion of cities, and disturbs the social balance. School education alone can cope with this disease of the body politic, and this by fostering an interest in farm life and farm work.

Boys must be led to see something more in farm life than patient, continuous work of planting, sowing, care-taking, and reaping. Many a young man leaves the farm to become a mere counter-jumper in the city, who, if he had the right education, would make himself an influential and successful farmer.

My plea, then, is that the country school should make farm labor and all labor honorable; should dignify it; should show that the environment of the country furnishes inexhaustible resources for intellectual life; should see to it that the æsthetic side of child nature be assiduously cultivated; that the child bring a loving heart to nature, have an appreciative eye for beautiful things; that he be led to see the possibilities in the landscape of the farm—the necessity of making excellent roads, well lined with shade trees; that the so-called practical things of life, hard and severe labor, should have their highest outcome in the cultivation of the love of the beautiful in life—that love which leads the soul to profound reverence for all things of earth, because they are loving gifts of an infinite God.

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APPENDIX I.

THE COUNTRY-SCHOOL PROBLEM.

[A paper read before the National Council of Education, July 10, 1894, by Emerson E. White, LL.D.]

It is not my purpose to deny or obscure the real difficulties involved in what is called "The Country-School Problem." This is not a question of nomenclature, but a problem of school organization under special conditions.

The problem may thus be stated:

Given a school of twenty to forty pupils from five and six to, say, sixteen years of age, accommodated in one room and taught by one teacher.

To find the best possible organization and administration that the conditions will permit.

The facts that enter into the problem are (1) that the pupils possess very unequal ability and attainments, and those who at a given time are nearly equal in attainment make unequal and varying progress; (2) that the pupils need instruction and training adapted to their ability and needs each successive term, and hence this instruction must have *sequence*, thus permitting progress; and (3) that the health and physical endurance of teacher and pupils limit the daily school session to about six hours. It is also to be kept in mind that the problem involves the providing of the best possible instruction and training not in one branch, not merely in "the three R's," but in all the essential elementary branches.

I. NON-CLASSIFICATION SOLUTION.

The first solution proposed makes no provision for the classification of the pupils, but each pupil is taught by himself in all branches of study. It is seen that this plan gives as

a minimum as many separate teaching exercises as there are pupils in the school, provided each pupil has only one daily lesson. If only "the three R's" are taught, and each separately, there will be three times as many teaching exercises as there are pupils, and, if the three exercises for each pupil are combined in one, the length of time devoted to each exercise must be increased. But the modern programme of school instruction includes from five to seven school arts, and, in case of the more advanced pupils, several additional branches of study, as geography, English grammar, history, and physiology.

It is unnecessary to take time to show that it is not possible for one teacher to instruct twenty or more pupils, each by himself, in the essential elementary branches. The number of exercises thus required reduces the length of each to so short a time that no efficient instruction is possible; and hence the non-classification solution proposed for the country school may be dismissed as *impracticable*. The plan of individual instruction is only feasible in a school composed of very few pupils.

We sometimes hear of the old-time country school in which there were no classes, each pupil being taught by himself, if taught at all; but I am satisfied that this school exists in the imagination, and not in history. If it ever had an existence it certainly preceded the organization of the common school, if it did not precede any school composed of more than ten pupils. Even ten pupils under one teacher necessitate some classification to permit any efficient instruction or drill.

My father was a pupil in one of the early common schools in New England, and I was a pupil in a still more primitive school in the then backwoods of Ohio, but neither my father nor myself ever saw the wholly unclassified country school of which the present generation of teachers is hearing. In at least two of the three *common* branches—*i. e.*, branches common to all—the pupils in the old-time school were classified. It is true that little attempt at classification was made in teaching the ABC's or the *a-b-cs*, but necessity forced an early classification in both reading and spelling—imperfect, it is true, but necessary and helpful. I now see in my mind's eye the row of big boys and girls that sat on the back seats and read together in the old English reader, and I also see the rows of boys and girls, who constituted the successive classes in spelling, standing on the floor and "toeing the mark."

No attempt was made in the first schools which I attended at classification in arithmetic, and later the attempt was first confined to the multiplication table, which few pupils perfectly mastered, and so common drills were feasible. As a rule, each pupil "ciphered" by himself, at his own gait, going to the teacher or some pupil for assistance, when needed. The fact that most of the pupils never reached fractions, and fewer ever acquired much skill in integer processes, is evidence of the weakness of individual work even in such a study as arithmetic.

A few clever pupils who needed only opportunity for study made good progress without instruction, sometimes remarkable progress, and this was not only true in arithmetic, but also in geography and English grammar, when these branches were reached. The lack of classification in these studies was doubtless an advantage to these few exceptional pupils, but no one who actually knows the old-time country school can commend the progress made by nine-tenths of its pupils. It is not too much to claim that its helpfulness to the great majority of its pupils was increased by improved and wider classification. I well remember the first introduction of classification in arithmetic in the rural schools of my native state. I now see the little blackboard that was first nailed to the wall of that primitive schoolhouse, for, though scarcely in my teens, I was installed as teacher for the first class formed in arithmetic.

When I passed from the dignity of a pupil-teacher to the honors of a teacher, my best work for the country school was in the introduction of improved classification—not only in reading and spelling, but in all the branches taught. Nearly all of the pupils fell

into groups or classes with positive advantage. Those who could work ahead with incidental assistance were permitted and encouraged to do so.

II. THE GRADED-SCHOOL SOLUTION.

Another solution proposed is the adoption of a graded course of study with term sections—the annual school session being divided into, say, two terms—the plan of grading adopted in most cities. In other words, the solution proposed is the grading of country schools with one teacher on the plan of the graded schools in cities.

It is seen that this organization divides an elementary course of study into at least sixteen sections, each including sections of the several branches, and it separates the pupils into sixteen or more corresponding grades, if there be a term interval between the grades.¹ The fact that the pupils in each grade study several branches necessitates as many class exercises as there are branches of study. It is thus seen that an average of three class exercises in each grade gives at least forty-eight daily exercises.

It is true that in practice there may be no pupils in several of these term grades, but the reduction in the number of classes thus occasioned will be fully offset by the fact that the pupils in several upper grades study more than three branches, and thus require more than three class exercises to each grade. It seems unnecessary to add that such a classification of the one-teacher school is wholly impracticable. I know of no successful attempt to grade the country school with a *term interval* between the grades.

The more common mode of grading the country school is the nominal adoption of the *year* or session interval between the grades. When this plan of grading is strictly adhered to, and there are pupils in all the grades, there are as many separate class exercises as there are year sections in the course of study multiplied by the average number of branches therein. This gives from thirty to forty class exercises—too many for satisfactory class instruction and drill. But in a school of thirty to forty pupils there are necessarily very few pupils in the upper grades, and none in some grades. These breaks are occasioned by the attendance of pupils only a part of the school session, by the failure of pupils to do the work assigned them, and other causes. It thus often happens that country schools may not *at any one time* actually contain more than five or six grades of pupils, even when they are following a graded course of study with eight or nine-year sections; but the reduction in the number of class exercises thus occasioned does not make a strict adherence to this city plan of grading feasible. Hence in practice various modifications are made; and some of these are easily made if the school be not dominated by, and sacrificed to, the fetich called the “graded system.” Several of these feasible modifications may be worthy of consideration.

1. Since the several classes are all taught by the same teacher it is feasible to permit pupils to recite in different grades, strict grading being sacrificed to the best possible classification *in each branch*. Thus a pupil may recite in the fifth grade in arithmetic, the fourth in geography, and so on.

This modification of the graded system is practicable only to a limited extent in cities, since the several grades of pupils occupy, as a rule, separate rooms and are taught by different teachers, and they are thus required to keep a common step in *all* the branches of the course.

2. Since the upper classes in a country school often contain not more than two or

¹ N. B.—The term “grades” is used in this paper to denote those formal divisions of pupils which correspond to the more permanent divisions in the course of study, which are separated by transitional or promotion lines. The pupils in a given grade may be taught in one or more classes in all the branches, or they may be taught in one class in some branches, and in several classes in other branches; and these classes may be changed from time to time, and without reference to grade divisions or intervals. It is thus seen that the terms gradation and classification are not used as synonymous.

three pupils, it is feasible for a bright pupil to work ahead of his class while he continues to recite in it. Thus a pupil may be studying decimal fractions or denominate numbers while reciting with advantage in common fractions; for, while these daily reviews in common fractions may give him little new knowledge, they will increase his skill in fractional processes—and skill in numerical processes is the chief end of elementary training in arithmetic. Indeed, skill of some sort is the chief end of more than half of the exercises in the elementary school, and this requires *repeated action*. Experience shows that it is entirely feasible for capable pupils to work ahead of their classes in such studies as arithmetic, geography, history, etc., and that this is often successfully done with very little assistance. It is thus seen that the one-teacher school permits a happy combination of class instruction and individual work, especially in the case of bright pupils.

3. Another modification may be made in certain art studies, as writing, language, drawing, and singing. For the purpose of drill in these branches, a country school may readily be divided into three classes, and these, except in music, may be taught *simultaneously*, as will be more fully shown later. This arrangement not only reduces the number of classes, but it greatly increases the class practice of the pupils. Nor is it found a serious objection that the classes in these branches are, at any given time, two or more years apart. These arts have phases that correspond respectively to the three psychical phases through which elementary pupils pass as they advance in the course; and the wise teacher can readily so adapt class instruction and drill to the common needs of the pupils in each phase of progress as to afford to all valuable practice. This is successfully done in many country schools.

The feasibility of these and other modifications have saved the country school in many instances from the Procrustean evils that have so often characterized the graded system in cities. The defects of the graded system in cities does not necessarily inhere in the system as it may be practically administered in one-teacher schools in the country. The year interval between grades in cities well-nigh necessitates the "lock-step" advance of the pupils. The classes are too large (or are supposed to be) to permit the teacher to give needed assistance to the strong pupils who may be capable of working ahead in any or all of the studies of a grade, and, at the same time, the interval between the classes is too wide to permit the pupils, with very few exceptions, "to jump over" to the next higher grade. We have seen many city classes in which the pupils in the upper third of the class were in ability one year in advance of those in the lower third, and yet these pupils were chained together for one year, and then the only mode of relief was the non-promotion of the lower-third pupils, thus necessitating their going over again an entire year's work. Thoughtful teachers know what this means. The pregnant fact is that the year interval between the classes in elementary schools in cities is incompatible with a flexible classification of pupils. It is everywhere attended with a serious sacrifice of time and opportunity.

In the one-teacher school these evils of the graded system may be somewhat lessened, but, after all feasible modifications have been made, the system, with even a nominal year interval between the grades, is not a satisfactory organization of the country school. The modifications permitted relate chiefly to the classification and advancement of the pupils, but the course of study must be followed. *The essential thing in the graded system is the graded course of study.* To abandon the prescribed sequence and co-ordination of the topics and exercises in the course of study is to give up the system *as such*. But experience shows that it is not practicable to prescribe an "invariable order" of topics and exercises for a one-teacher school. The limitations and conditions of such a school necessitate variations from the prescribed course in order to reduce the number of class exercises, and hence the course of study as well as the grading of pupils must be flexible. System and order must often be sacrificed to the needs of the pupils and the limita-

tions of the teacher. The adoption of well-adjusted courses of study for country schools has unquestionably resulted in great good, but the blind following of such courses in time and order has often resulted in loss. Much of the difficulty that has attended the graded system in country schools has been thus occasioned. What the one-teacher school imperatively demands is not only a flexible and adjustable classification of pupils, but a *flexible course of study*—that is, a course of study which permits changes in the order of topics whenever such changes will result in fewer class exercises with a positive gain in better instruction.

This leads to the consideration of a third solution of the problem before us, and this may be called —

III. THE THREE-GRADE SOLUTION.

The three-grade organization of the country school, or, if preferred, the three-department organization, is based on the psychical transitions which appear in an elementary course of training.

The first of these psychical periods includes the kindergarten and the lower primary classes, with pupils from four or five to eight years of age. This is pre-eminently the objective period of training in which primary knowledge is taught objectively, and primary skill in reading, writing, number, language, etc., is acquired by doing, largely by imitation. The reader is the only book needed by the pupils.

This is followed by, say, three years that may be called the transitional or middle period of elementary training. In this period pupils pass increasingly from concrete facts to their simpler generalizations, from processes to rules, and from the known to the related unknown by either imagination or thought; and skill in the several school arts is increased by practice under guidance, increasingly under ideals. The only text-books needed are in reading, arithmetic (first book), and, later, geography (elementary), and these, both in matter and method, should be intelligently adapted to the psychical conditions and needs of young pupils. This is pre-eminently the *fact and skill period* of elementary training.

The next three or four years constitute what may be called the advanced or grammar period. The pupils have now sufficient skill in interpreting written or printed language and sufficient thought power to study, with proper instruction, a complete arithmetic, a school geography, and later (seventh and eighth school years) English grammar, United States history, physiology, and the elements of natural science.

It is seen that the grading of the elementary school on this psychical basis is about the same as that secured by its division into three departments when the number of pupils is sufficient to employ three teachers—one for the lower or primary classes, another for the secondary or middle classes, and a third for the more advanced pupils.

This is a natural and simple grading for a country school with one teacher. The distinction in the work of the three grades or divisions is sufficiently marked to permit a definite statement of the knowledge and skill to be acquired in each; and, at the same time, the pupils in each grade can, from term to term, be reclassified, thus keeping the number of classes as few as possible and at the same time putting each pupil where he can make the most progress.

The number of classes in the two upper grades need not exceed two each in any branch, and not more than three separate classes will be needed in any branch in the primary grade—making not more than six or seven different classes in any branch, with an average of not more than four classes in the principal branches. The exercises in writing, language, drawing, and other arts can each be given *in one period*—a very important consideration, since it greatly reduces the number of exercises and, at the same time, secures needed instruction and desired progress.

The course of study can readily be arranged on the same basis. The studies and

exercises of each grade may be grouped, thus dividing the course into three well-defined sections—primary, middle, and advanced—and the attainments required for promotion from one grade to the next higher can be definitely prescribed. It is not necessary to divide the course into year and term sections with a prescribed order of subjects and parts of subjects for each term, as is often done in graded courses for cities. There should be a division of the course into three sections, with a general order or sequence of topics in each, but the teacher should be left free to form classes with varying intervals between them, and the progress of each class should not be fixed by a time schedule—as is sometimes done in city schools with many teachers. To reduce the number of classes in a given grade it may be necessary to take up parts of subjects in a different order from that laid down in the course of study, and no two classes may make equal progress.

The essential provision is that the work provided for each grade be completed *as a condition of promotion to the next higher grade*. This will establish a clear distinction between the several grades, and, at the same time, it will allow that flexibility of classification *between grade lines* which is essential in a one-teacher school.

It is not meant that pupils shall be stopped at the line that separates two grades until they have reached the standard in *all* branches of the lower grade, as is generally required when a school is divided into three departments, each under a separate teacher and occupying a separate room. In a one-teacher school pupils may and should be permitted to pass a grade line in any branch when they are prepared to do the work of the next higher grade. In practice it will be found that most pupils can, with advantage, cross the grade line in all branches at the same time, but this result should not be forced.

THREE-GRADE PROGRAMME.

A course of study on these three psychical grades of work and attainment makes a three-grade programme of class exercises and seat work both feasible and desirable.

I have elsewhere^{*} presented such a programme with a full statement of its uses and advantages in a one-teacher school. It must suffice to insert the programme here, with a brief explanation.

This programme indicates not only the class exercises, but also the study or seat work, the class exercises being denoted by bold-face type and the study or seat work by common type. The day's session of the school is divided into periods of twenty, twenty-five, and thirty minutes each, the spelling drills in the two upper grades being considered one period; and the teacher's time is divided equitably among the three grades of pupils. The A-grade pupils have eight exercises each day, the B-grade pupils six exercises, and the C-grade pupils five; but, as is seen, the A-grade pupils have two more studies than the B-grade, and the B-grade pupils have one more study than the C-grade. The extra time required to prepare and direct the seat work in Grade C will make the time devoted by the teacher to this grade nearly, if not quite, equal to that devoted to the B-grade.

A rural school of some thirty pupils will probably have two classes in several branches in the A-grade, two classes in one or more branches in the B-grade, and possibly three classes in the C-grade; making in all some seven different classes of pupils. The time allotted to any branch (as arithmetic) in a given grade must be divided between the several classes (if there be more than one class in the grade), but not equally from day to day, the time devoted to each class depending on the nature of the lessons. One day the upper class in Grade A in arithmetic, for example, may have only ten minutes, and the lower class fifteen minutes, and the next day this may be reversed. What the programme requires is that the several exercises do not together exceed the time assigned to the grade. Writing, language, and drawing in all three grades are to be taught simultaneously in the same

^{*} White's "School Management," pp. 86-94.

THREE-GRADE PROGRAMME.*

Closing Time	Minutes	Primary (C)	Secondary (B)	Advanced (A)
9.10	10	OPENING EXERCISES		
9.35	25	Seat Work †	Arithmetic	Arithmetic
10.00	25	Number On slate or with objects	Arithmetic	Geography
10.25	25	Number	Geography	Geography
10.45	20	Form Work Paperfolding, stick laying, etc	Geography	Geography
10.55	10	RECESS		
11.15	20	Silent Reading	Geography	Grammar
11.35	20	Reading and Spelling	Form Work Map draw'g, sand molding, etc	Grammar
12.00	25	Excused from School	Reading	Grammar
		NOON INTERMISSION		
1.10	10	†	†	†
1.30	20	Form Work Clay model'g, paper cutt'g, etc	Reading	Reading
1.50	20	Silent Reading	Seat Work †	Reading
2.10	20	Reading and Spelling	Animal or Plant Study	U. S. History or Physiology
2.40	30	Writing ² or Language ³	Writing ² or Language ³	Writing ² or Language ³
2.50	10	RECESS		
3.10	20	Number On slate or with objects	Spelling	U. S. History or Physiology
3.35	25	Drawing, ² Singing, ² or Moral Instruction ¹	Drawing, ² Singing, ² or Moral Instruction ¹	Drawing, ² Singing, ² or Moral Instruction ¹
3.50	15	Excused from School	Spelling	Spelling
4.00	10		Arithmetic	Spelling

† As may be provided for by the teacher.

NOTES: The small figures at right indicate the number of lessons a week.

United States history may be taught the first half of the session, and physiology the second half; or each branch may have two lessons a week.

On Friday the last twenty-five minutes may be devoted to instruction in hygiene, temperance, physics, natural history, etc.

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period. The inexperienced teacher may not see how this can be successfully done, but the apparent difficulty has been solved in hundreds of schools.

The most hopeful improvement of the country school lies in the adoption of a simpler grading than that of the city school, a more flexible classification, with opportunity for individual study and progress, and a workable daily programme. It needs system, but not rigidity—an elastic system adapted to its conditions and limitations. The danger is that the rural school may be sacrificed to rigid grading, as has been true in so many cities. What the country school needs is not a Procrustean system of grading and promotions, but such an organization as will permit its single-handed teacher and diverse pupils to make the best possible use of time and strength.

It is idle to talk of abandoning all attempts to improve the classification of country schools. Attempts at classification in reading and spelling are as old as the school itself, and classification in other branches has attended, if it has not made possible, most improvements that have been made. The disappointments have usually been due to unwise attempts to introduce into rural schools the rigid graded system as developed in the cities. Such attempts ignore conditions and limitations.

It seems wise to add here that the one-teacher school will not permit a perfect organization. It has necessary limitations, and, after the best possible has been done, it will still have its imperfections. It is, however, my belief that the teacher of a country school, if competent, has some advantage over the teacher of the "highly organized" city school. It is certainly possible to make the one-teacher school a most valuable agency for the elementary education of children.

REMARKS.

It seems important to call attention to the fact that the term "grade" in this paper is used in the sense of section or department, and not as synonymous with class. The term grade is applied to the three divisions of the pupils of a school, which correspond respectively to the three recognized psychical periods through which pupils pass as they advance from the kindergarten to the secondary school. It would possibly have been better if the term *section* had been used instead of grade, and, perhaps, still better if the word *group* had been employed, the term used by the subcommittee in its report. Indeed, the reader can substitute the terms *group* or *groups* for *grade* or *grades*, as the case may be, throughout the paper, without materially changing its meaning. The sense in which the term grade is used is explained in the footnote on page 163, and it is also made clear in the paper. The term applies not only to the three groups of pupils, but also to the corresponding divisions in the course of study.

The division of the course of study into three sections or groups has important practical advantages. Among these advantages are:

1. Needed freedom of classification and instruction in each section. This advantage can be fully appreciated only by those who have actually used the plan in rural schools. The fact that the subjects and disciplines in each of these sections are closely related facilitates reclassifications and sometimes a temporary union of classes.

2. A standard and an evidence of progress. The promotion of pupils from one section to the next higher is stimulating evidence of progress, and, as a result, the advancement of pupils from section to section affords a wholesome incentive throughout the entire course. The fact that pupils are known as primary, or secondary, or advanced (Group I., or Group II., or Group III.), affords both satisfaction and stimulus.

3. A needed reduction of class exercises in writing, drawing, language, and other school arts in which skill is the chief end. Reference to the programme on page 167 will show that instruction and drill in writing and language are provided for in only *one period* each day, and the same is true of drawing, singing, and moral instruction. This is not accomplished by making each of these subjects a general exercise for the entire school,

but the pupils in each section (group) have a lesson adapted to their ability and attainments, thus securing desired progress from year to year. It is found entirely feasible to teach the pupils of a rural school in each of the school arts in three sections (groups), and, what is very important, the three section exercises can be taught *in one period*, as shown in the programme. The manner in which this is done in practice is shown in the writer's "School Management," p. 92, and the feasibility of the plan is attested by its successful use by hundreds of teachers. In teaching the several school arts, skill is the chief end, and this can only be attained by guided practice. The needed preparatory instruction in any elementary art lesson can be given within five minutes, and hence in less than fifteen minutes the pupils in three sections, beginning with the highest, can be prepared for fruitful practice; and then the remaining part of the period can be devoted to an inspection of the pupils' work in each section, the giving of needed instruction, etc. It is true that physical exercises and even singing, as usually taught, can be made a general exercise, but it would be a great gain if the pupils in the primary section, at least, were given separate instruction in music. No school art in which progress from year to year is desirable should be taught in a rural school as a *general* exercise. The three-section plan affords time for instruction and practice, and secures desired progress.

4. A workable programme, one that regulates class exercises *and seat work*. I am confident that no rural teacher who uses a section (group) programme long enough to become skillful will ever go back to a class programme with its numerous and unequal divisions of time. The regulation of the seat work of pupils is an important element in school administration.

The great desideratum of the rural school is a practical reduction in the number of daily class exercises. The three-section plan reduces the number of exercises in teaching the several school arts to a minimum, and it also facilitates a reduction in the number of exercises in arithmetic, geography, history, and other branches which require previous preparation by the pupil. The manner in which this is accomplished is pointed out in the paper. It is true that the very best that can be done in this direction still leaves the rural school with too many class exercises and, as a consequence, too little time in each for satisfactory instruction. The brevity of class exercises is, however, in part offset by the fact that the classes are *small*, and also by the further fact that the section programme permits a variation in the time given to exercises, the time depending *on the nature of the lesson*, the essential condition being that the time devoted to the classes in a given branch shall not exceed the time allotted to the section.

It seems unnecessary to guard the reader against the inference that the pupils in each of the three sections are to be taught as one class in each branch, thus giving an interval of two or more years between successive classes. This is only true of *skill exercises in art studies*—exercises that do not require previous preparation by pupils. In these art studies there may be an apparent interval of at least two years between the sections or classes, but this is not a serious difficulty in actual practice. In the other branches the pupils in a section may be subdivided into classes, with a varying interval between them. This interval need not be *common* to all the branches, as in graded schools in cities, but each branch may have its own interval, and this be unequal and varying. The interval between two successive classes in arithmetic in a section may not exceed one term, while the interval between the corresponding classes in English grammar may be a year. It is not only true that a uniform class interval of one year is incompatible with a workable classification of rural schools, but any *fixed* interval between classes results in rigidity and loss.

Nor is it desirable in a rural school to keep the classes in the several branches abreast as they advance in the course, as is the practice in graded schools. It is wholly unnecessary to keep a class in arithmetic, for example, "marking time" while the pupils are

bringing up belated work in grammar or history. In a one-teacher school there is no serious loss or inconvenience if the pupils do not maintain the same rate of progress in all the branches of the course. What is needed is a free movement forward, not only of individual pupils, but of the several classes.

There is, in my judgment, no serious difficulty in teaching the pupils in a rural school in most instances in classes. This can readily be done in all art or skill branches, and in the other branches *most* of the pupils can be classified with advantage. When a pupil can not profitably keep step with a class, he should be permitted and encouraged to work by himself. It may be that in a term or so he will reach a class in which he can recite, at least for a time; and, while he is working by himself in one branch, he may be in classes in other branches.

The rural school must make provision for individual progress, but individual study and instruction should not prevent needed classification and a regulating system. A graded course of study, with its sequence of topics and exercises, and its division into natural sections, makes a return to the unclassified condition of the old-time country school impossible, as well as undesirable.

A hint of my ideal of a one-teacher rural school is given below by means of a graphic illustration. I take a school of thirty (30) pupils, and suppose twelve of these pupils to fall in Group I. (using the terminology of the subcommittee), ten in Group II., and eight in Group III. The pupils are designated by numbers, those in the first group by the exponent 1; those in the second group by the exponent 2; and those in the third group by the exponent 3.

	Group I. (C)	Group II. (B)	Group III. (A)
Reading and Spelling	1 ¹ 2 ¹ 6 ¹ 9 ¹ 11 ¹ 3 ¹ 4 ¹ 7 ¹ 10 ¹ 12 ¹ 5 ¹ 8 ¹	13 ² 16 ² 18 ² 20 ² 14 ² 17 ² 19 ² 21 ² 15 ²	22 ³ 25 ³ 28 ³ 23 ³ 26 ³ 29 ³ 24 ³ 27 ³ 30 ³
Arithmetic Oral in Group I.	1 ¹ 2 ¹ 7 ¹ 8 ¹ 3 ¹ 4 ¹ 9 ¹ 10 ¹ 5 ¹ 6 ¹ 11 ¹	12 ² 13 ² 19 ² 14 ² 15 ² 18 ² 20 ² 21 ² 16 ² 17 ² 22 ² 23 ²	24 ³ 30 ³ 25 ³ 27 ³ 28 ³ 29 ³ 26 ³
Geography..... Oral in Group I.	1 ¹ 4 ¹ 8 ¹ 11 ¹ 2 ¹ 5 ¹ 7 ¹ 9 ¹ 12 ¹ 3 ¹ 6 ¹ 10 ¹	13 ² 16 ² 18 ² 21 ² 14 ² 17 ² 19 ² 22 ² 15 ² 20 ²	23 ³ 26 ³ 24 ³ 27 ³ 28 ³ 29 ³ 30 ³ 25 ³
English Grammar.	For synthetic language exercises, see below		23 ³ 26 ³ 28 ³ 24 ³ 29 ³ 25 ³ 27 ³ 30 ³
History and Physiology			22 ³ 28 ³ 24 ³ 26 ³ 29 ³ 25 ³ 27 ³ 30 ³
Writing and Language	1 ¹ 5 ¹ 9 ¹ 2 ¹ 6 ¹ 10 ¹ 3 ¹ 7 ¹ 11 ¹ 4 ¹ 8 ¹ 12 ¹	13 ² 16 ² 19 ² 14 ² 17 ² 20 ² 15 ² 18 ² 21 ² 22 ²	23 ³ 27 ³ 24 ³ 28 ³ 25 ³ 29 ³ 26 ³ 30 ³
Drawing, Singing, etc.....	1 ¹ 5 ¹ 9 ¹ 2 ¹ 6 ¹ 10 ¹ 3 ¹ 7 ¹ 11 ¹ 4 ¹ 8 ¹ 12 ¹	13 ² 17 ² 14 ² 18 ² 21 ² 15 ² 19 ² 22 ² 16 ² 20 ²	23 ³ 27 ³ 24 ³ 28 ³ 25 ³ 29 ³ 26 ³ 30 ³

Supposing the pupils to have a lesson daily in each branch or group of branches (as indicated), the above scheme gives only fifteen daily class exercises, not including those in Group I. in reading and spelling, number, and geography. Weekly exercises are not

represented. It is possible for a teacher to do good work with this number of exercises with small classes. The largest amount of individual work is found in Group III. In practice there would doubtless be more irregularities in classification than can well be shown in the illustration.

Columbus, O.

EMERSON E. WHITE.

COURSE OF INSTRUCTION FOR RURAL SCHOOLS.

Prepared in accordance with the directions of the Committee of Twelve at its meeting in Chicago, November 18, 1896.

SUGGESTIONS.

[This course of study is arranged in four groups, partly with the thought that whenever the schools of a township are gathered at one or more central points the first two may constitute the basis of work for the lower, and the last two for the higher room. Whether the three-group system explained by Dr. White be used, or the four-group, as indicated in this course, must depend very largely upon the size and advancement of the school. The principles are the same in either case.—HENRY SABIN.]

"The course of study is the measuring rod or scale which is used to determine at what point in the eight years' work in the elementary course a pupil's work has arrived. It should not be used as the Procrustean bed on which to stretch the work of the school in order to give uniformity." (Report of Subcommittee on Instruction and Discipline.)

It is the aim in this course of instruction to present the most essential topics in orderly sequence, without any prescription of methods of teaching. It can be begun at any age from five to seven; it can be continued, often with profit, to a later age than is here stated. It is believed that this course offers every facility for combinations of classes, for transfers of pupils, and for any system of alternation.

This course recognizes the essential elements entering into accepted courses of instruction. Each of the four groups comprises about two years' work. In these groups there will be divisions into sections—as (a), (b)—only when absolutely necessary. Experience has shown that, within the age limits of the several groups, the work as laid down can be done. Whenever a pupil is able to do the work of the succeeding group he should pass to it. In small schools there will be much individual instruction, and in these will seldom be found pupils representing all these grades of work. In large schools, with one teacher, a skilful teacher can to a considerable extent secure assistance from the more advanced pupils in certain work with the younger, to the mutual advantage of teacher and taught, as well as to the school as a whole. This has been done in this country, and is done throughout England today under the pupil-teacher system.

Whenever several schools working on such a course are consolidated so as to employ two teachers, if one teacher take Groups I. and II., and the other Groups III. and IV., the school is at once graded into a primary and a grammar school, and the next step in gradation will give one group to each teacher. In this gradation the work of each group will be expanded as circumstances allow. If, in the course as here laid down, a line of work—as elements of science—must be omitted, the time can be added to other subjects; if in some subjects—as elements of science and morals—but few lessons can be given, even these lessons, carefully prepared and well taught, will tend to make the teacher a better teacher, the pupil a more thoughtful pupil, and to raise the standard of the school.

To carry out such a plan of work as is here outlined, the pupil as he advances must do more and more for himself under the guidance of the teacher, very much to the advantage of the pupil. Thus, in arithmetic, there is provision for but two formal recitations per week in Group III.; for but one in Group IV. For the rest the pupil learns to do by doing.

The studies are grouped, each group comprising about two years' work:

GROUP I. (5-7 years.)**GROUP II. (7-9 years.)****Reading.**

(a) First exercises in reading; from blackboard and chart; Primer and First Reader; and appropriate literature.

(a) Second Reader and literature of similar grade. Fables and folk stories, etc.

(b) First and Second Readers, and other reading of similar grade.

(b) Third Reader or books of similar grade. Literature as supplementary readings.

Children should be taught carefully such selections as will awaken interest and lead to a desire to read for themselves. In all grades children should memorize choice selections appropriate to their age.

(See general directions in I.)

Spelling.

Taught chiefly in connection with reading. Oral and written.

Taught chiefly in connection with reading and other studies of group. Chiefly written.

Writing.

In this section the child should learn to write legibly and neatly, and should form the habit of writing with correct position of paper, body, and hand. Use the pen early.

Use simplest forms of letters; train to uniformity in spacing between letters and words, and in size and height of letters; in short, in all the qualities which constitute a neat and legible written page. Insist upon careful penmanship in all written work.

GROUP III. (9-11 years.)

Fourth Reader at discretion of teacher for drill; the reading should be largely of literature, as supplementary reading.

The drill should be mainly in the reader, and the choice of literature as supplementary reading should be such as the pupil can read with such ease as to give pleasure and thus develop a desire to read good literature.

Take great care to cultivate a taste for good reading. Train pupils in proper use of the library.

GROUP IV. (11-13 years.)

The reading of good literature, as much as can be carefully read. Memorizing of choice selections should receive careful attention. Encourage home reading. III. and IV. should constitute one class each, and the reading lesson drill need not be a daily exercise. From the first give careful attention to the cultivation of the speaking voice.

Reading.

Words to be selected chiefly from reading and other studies of group. Chiefly written.

Words to be selected from studies of group, or spelling-book. To be taught chiefly in connection with written work.

Spelling.

See Group II. Much practice to give ease and rapidity, never sacrificing legibility and neatness. Much writing, to form the habit of easily expressing thought with the pen.

See Group III. Writing in this group should be chiefly in composition, in written lessons, and reviews, in practice in business forms, and in correspondence.

Writing.

GROUP I. (5-7 years.)**Language.**

(a) Conversational lessons on familiar experiences and familiar things. Reproduction of stories told by the teacher; invention of stories suggested by pictures, etc. All this will be training in observation and thinking as well as in expression. Great care is necessary as to choice of words and tones of voice.

(b) Similar to (a), adding written to oral expression; instruction in correctness of the written forms, as the form of the sentences, the use of capitals and punctuation. Memorizing of choice selections.

GROUP II. (7-9 years.)

(a) See (b), Group I. Combination of oral and written work. Seek variety in subjects. Base lessons on nature lessons, readings, etc. Careful attention to form and use of complete sentences in recitation and conversation, to purity of tone, clearness of enunciation, correctness of pronunciation in speaking, to legibility and neatness in writing.

(b) Work of previous years continued and expanded; oral narration, invention (from pictures, etc.), description, with written sentences from the same; letter writing, with special attention to the general form of the letter; careful attention to the vocabulary of the child. Memorizing of choice selections.

In much of this work all the group can be taught as one class, but pupils of very unequal advancement should not be classed together.

History.

Short stories, such as will interest the child, drawn from biography, history, and travels. Explanation of historical pictures.

The teacher must have at hand appropriate books for the readings by herself or by the pupils, hence the necessity for a school library.

See Group I. Conversations on current events within the knowledge or easy comprehension of the child. Conversations, stories, and readings on the lives of eminent historical characters, and on the memorable in historical events, such as can be easily imagined and comprehended by the child. National manners and customs and modes of life, such as can be fully illustrated. All this instruction must be made clear and interesting by stories, descriptions, and illustration.

GROUP III. (9-11 years.)

See Group II. Much written work in connection with and based upon the school work in its various departments. The sentence and its parts; general classification of words into parts of speech according to their use in the sentence, not teaching definitions nor treating of subdivisions. Careful teaching of the construction of the paragraph. Letter writing, with special reference to correct forms of social and business letters. Readings in literature by teacher and by pupil in school and home. Memorizing of choice selections long enough to have unity in themselves.

Some text-book of language lessons must be used in the rural schools, in order that a course of teaching may be carried out effectually.

See Group II. Extension of course of Group II., with wider range, and with more and more readings by the pupil.

Special attention to biography, with oral and written reproduction.

Readings in United States history. See IV.

In III. and IV. the course is by readings or text-book study by the pupil.

GROUP IV. (11-13 years.)

(a) Letter writing, with special reference to subject-matter, to form and expression.

Much writing in connection with school work, and from outlines wrought out by teacher and pupils. Throughout the course careful attention should be paid to the correction and enlargement of the pupil's vocabulary.

(b) A course in grammar by rational use of a text-book. Preparation of plans for themes by the pupil, and writing from them.

(c) Readings in literature by pupils in school and home. Memorizing of choice selections long enough to have unity in themselves.

All written lessons and examinations should be so planned that they will be lessons in composition as well.

By this course of instruction the pupil should now be able to express his own thoughts clearly, in correct form, and in well-chosen words.

(a) Selected epochs of general history, with study of leading historical characters; a course of readings and of conversations. Main object to develop a love for historical reading.

(b) A course of study in United States history.

Language.**History.**

GROUP I. (5-7 years.)**Geography.**

Familiar conversations and simple preparatory exercises, serving to excite a spirit of observation in the child by leading him to observe the most common phenomena of earth and sky. Lessons on relative positions of objects, and distances.

Points of compass learned from position of the sun, and applied. Oral lessons to teach terms of geographical description from the child's own observation. Modeling in sand. Stories of travel. Object lessons on products, domestic and foreign.

These lessons in I. and II. are of necessity mainly oral until the pupil can read fairly well; then geographical readers and primary geographies will give much assistance.

Arithmetic.

(a) Instruction at first entirely objective; objects gradually discarded as the facts are learned. Numbers and the combinations which form them up to 9. Throughout the course the child must learn through his own perceptions and self-activity.

(b) Combinations represented by the digits in pairs up to 9 and 9. The fundamental operations or computations taught, so far as possible, while teaching the combinations; thus $3 + 1 = 4$, $2 + 2 = 4$; 3 and 1 are how many? (addition); 3 and how many are 4? (subtraction); two 2's are how many? (multiplication); how many 2's in 4? (division); etc. Fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$. Grouping by tens, to give the fundamental idea of the decimal system. (The course in combinations (a) and (b) follows the grouping of the decimal system.) Reading and writing of numbers to 100. Constant application to concrete problems.

Number lessons in Group I. are mainly oral.

Simple problems involving addition, subtraction, multiplication, and division, using numbers of not more than three places.

GROUP II. (7-9 years.)

See Group I.

Home geography: Observations of phenomena of earth and sky; of the seasons; of contour, surface, mountain, valley, plain, brook, river, pond, soils, vegetation; in short, of whatever elements of geographical study can be brought under the observation of the child, that his knowledge of his environment may serve as a basis for his future studies of the world.

Modeling in sand. Notion of map. Extension of study to immediately related regions. Notion of form of the earth; the globe. Illustrated lessons on races of men, and on the picturesque and curious in their customs and manner of life.

See Group I. (a) Reading and writing three and four place numbers. All the fundamental operations with numbers to 1,000. Values and relations of coins in United States money. Exercises with fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{5}$, $\frac{1}{6}$. Many concrete problems with much objective illustration. Establish connection between arithmetic and the experiences and businesses of farm life by simple, interesting, varied problems. Treat one difficulty at a time.

(b) Writing decimals to one, two, three places; addition and subtraction of the same. Common fractions with one digit for denominator. The units of measures and weights objectively taught; simple exercises involving compound numbers. Rapid calculations with small numbers and easy problems. Objects for counting and combinations in the first steps, and weights and measures illustrating all the tables taught, are necessary. The child should weigh and measure for himself before he is questioned in relative values.

GROUP III. (9-11 years.)

See Group II. Continents and great land and water masses. North America and United States, with incidental treatment of other parts of the world, in connection with history and with current events.

In all the study of geography note its correlations with other subjects, especially with history, literature, language.

GROUP IV. (11-13 years.)

(a) See Group III. Study of foreign countries, apportioning the time devoted to them, according to their relative interest and importance.

(b) Work of this group to be divided if necessary.

The use of modeling, map drawing, and the various means of illustration is presupposed throughout the course in geography, and also the treatment of physical, mathematical, industrial, and commercial geography, in due order and degree. As the subject will usually be taught in the rural school with the aid of text-books in which these topics are developed, it is deemed unnecessary to enter into details in this statement.

Geography.

(a) See Group II. Compound numbers and common fractions, simply treated.

(b) Decimal fractions and percentage, with common business applications in easy problems.

(a) See Group III. Percentage with applications to business.

(b) Ratio and proportion; simple treatment of square and cube root.

Simple geometrical facts and constructions, with mensuration of plane figures. Business forms and simple bookkeeping.

Throughout the course mental arithmetic should receive careful attention.

Arithmetic.

Drawing.**GROUP I. (5-7 years.)**

Drawing very simple familiar and nature-forms of beauty and interest. It is well, also, for the child to represent simple colored objects, as apple, lemon, orange, and natural objects at hand, according to the season, in solid color, as he sees them.

Illustrative drawing, by the children, may be frequently introduced as a means of interest; in all these exercises great freedom should be allowed.

Free paper cutting, as exercise in memory of proportions, may be an occasional exercise.

Practice on lines of various kinds as combined in symmetrical and pleasing figures, so conducted as constantly to exercise the invention and taste of the child.

Symmetrical arrangement of forms (tablets, seeds, etc.), by repetition in a line (borders) and around a center (rosettes); by selecting objects of different colors this may be made an exercise in color as well as form; occasional use of ruler in drawing lines and figures.

Color. — The spectrum colors, from the prism, should be taught, and colors in flowers and other objects should be carefully observed.

GROUP II. (7-9 years.)

During this period of two years, from large models, mainly by the visual appearance and not as form studies in the usual sense of that term, study the sphere, cube, cylinder; spheroid, prolate and oblate; square and triangular prism; pyramid, cone, ovoid; comparing with each other and with objects related to them, noting resemblances and differences.

(Some exercise in drawing these, using soft pencil — black, brown, or blue — and shading a little, avoiding pure outline in picturing solids. This work can be postponed to the next group.)

Paper cutting to the line of drawings and construction may be used as elementary manual training.

Draw circle, ellipse, oval, and other good forms with curved outline; draw leaves, fruits, nuts, and familiar objects of beauty and interest; drill on division of lines, bisection, trisection, quadrisection; judgment of length of lines; proportions of lines one to another; proportions of figures; accurate measurement of lines and distances; drawing and estimation of angles of various kinds; cultivate neatness and accuracy in work; symmetrical arrangements of tablets and other forms, as borders, rosettes, and other ornaments, and drawing the same; a part of each lesson should be given to free-arm movements and to exercises in drawing adapted to give freedom and accuracy in drawing outlines, right-lined or curved.

Exercise in picturing in color, with water color, or colored crayon, the various natural objects studied in this group.

Illustrative drawing.

Color. — Spectrum colors, hues, tints, and shades.

GROUP III. (9-11 years.)

Free-hand drawing of plane figures, right-lined or curved in outline; pictures of geometric solids and of natural and artificial objects, choosing objects good in proportion and outline; interest will be increased by drawing groups of objects. Once a week draw from geometric solids and simple objects in light and shade, drawing the shadows very simply. In autumn and spring, especially, study plant growth, and draw sprays of leaves and flowers; draw vegetables and fruits; construction of forms of regular solids by drawing, with instruments, cutting, folding, and pasting paper and cardboard; studies in design from natural plant forms, using colored crayon or water color if possible. Neatness and accuracy required in all work.

Drill as in II. in free-arm movements and in exercises in drawing, practicing especially on circles, spirals, ellipses, ovals, reversed curves; judgment of proportions of lines and figures.

Commence collection and study of pictures.

Color.—Mixing colors; harmony of colors.

GROUP IV. (11-13 years.)**Drawing.**

(a) Draw pictures of geometric solids and of natural and artificial objects in groups, choosing objects good in proportion and outline, giving special attention to arrangement of groups.

(b) Study foreshortening of horizontal and vertical surfaces; draw pictures of rectangular solids in different positions relative to the eye, singly and in groups; draw books, foliage, vases, etc.; draw in light and shade with simple background, using charcoal, pencil, or brush, and paper of size suited to the object; large paper, nine by twelve inches, is desirable for much of this work.

(a b) Exercises in drawing shapes of faces of objects—top and front—and working drawings with figured dimension lines, with drawing instruments, using pencil, or pen and ink. (Some of this work may be done in Group III.)

Free-hand drill on curves, shade (or tint) lines, and judgment of proportions; drawing of original designs, using color; practice in use of drawing instruments; graphic solution of simple problems in geometry.

Color.—See Group III. Add complementary colors. Study color in vegetables, flowers, leaves, etc.

NOTE.—In drawing, as in the other subjects of this course, the aim has been to construct a course which will be helpful to teachers in the average rural school under fairly favorable conditions. The order of treatment of subjects in each group, and the amount of work done, must depend upon the conditions; in some cases more can be done than is here laid down, in many cases not so much. So far as the child learns to see clearly and to draw truthfully and well what he sees, and as he sees it, good work has been done. He should be encouraged to draw much, aside from his lessons and school exercises, from whatever is of interest to him.

(See Remarks on Drawing on page 184.)

**Elements of
Science, or
Nature
Study.****GROUP I. (5-7 years.)**

In the work in nature study only so much should be attempted as can be well done.

The course in science furnishes an excellent basis for written work.

Simple object lessons, if possible with the object under the eye and in the hand of the pupil; conversational lessons on familiar things and on the phenomena of nature, designed to lead him to give attention, to observe, to compare, to question, to remember. Familiar talks on the human body and the care of it; on common animals known to the child, their distinguishing characteristics and habits; on common flowers and plants, especially food plants and plants of use in the arts, as corn, cotton, etc.; on stones and metals in common use which the child can learn to recognize. As early as possible he should have some care of plants in the schoolhouse or the school garden.

Correlations, especially with language and drawing, with geography and literature, should be kept in mind.

In nature study the development of appreciation of and love for the beautiful should be made prominent.

GROUP II. (7-9 years.)

See Group I. A graduated course of nature study following a systematic order of development, but observing the child's standpoint as determined by his experience and interests, studying things, phenomena, processes, properties, and classification of things, as animal, vegetable, mineral. Conversational lessons on the human body, its principal parts, their movements and their uses; on common animals, so conducted as to arouse interest in animal and bird life, especially treating of the uses of birds to the farmer, and the necessity for their protection, to stimulate observation regarding their habits, and to cultivate a sentiment of kindness in the treatment of them; on plants and the care of them, their parts, as roots, stems, flowers, fruits, seeds, and their growth; on some common minerals and their uses. Lessons on transformations of material in manufactured articles of common use.

GROUP III. (9-11 years.)

Preceding course so expanded and taught as to give clearly some of the more important notions of natural science: the human body and the principal functions of life; distinguishing characteristics of animals taught from the study of types; useful and noxious animals, especially birds and insects; the study, in typical specimens, of the principal organs of the plant; plant growth, its order and conditions; some typical trees, and their characteristics, value and uses of their wood; fruit trees best adapted to the region; lessons on soils.

Every rural school should have a plot of ground prepared as a school garden, in which every pupil may cultivate and study plants. In this case the instruction in Groups III and IV. would be extended to include the preparation of soils for cultivation, the action of fertilizers, the simpler agricultural operations, and the use of garden tools.

GROUP IV. (11-13 years.)

Revision and extension of the course in Group III., giving more of completeness and of scientific arrangement and form to the instruction. Cabinets should be collected for the school.

Physiology. General review by use of a text-book, giving special attention to hygiene and to the effects of stimulants and narcotics. Sanitation of school and home.

Zoölogy. Observation of the habits of animals throughout the year; study of available types; general classifications; geographical distribution.

Botany. Essential parts of the plant; order and conditions of growth; principal groups; geographical distribution of plants; uses of plants; study of trees.

Mineralogy. General treatment of the structure of the crust of the earth; soils, rocks, fossils, with illustrations from the neighborhood.

Excursions and collections by the pupil.

Physics and Chemistry. The elementary facts and principles of these sciences should be taught by simple experiments. The course will vary according to the qualifications of the teacher and the means of instruction. Various courses for this instruction have been prepared, giving methods in detail.

Only such selections from the above as can be well done.

**Elements of
Science, or
Nature
Study.**

**Morals and
Civics.****GROUP I. (5-7 years.)**

Conversations with the children in all the school exercises, in which the teacher shall aim to secure the confidence and familiar participation of the children, and thus to learn their characters so as to guide their tendencies of thought and action. Special care regarding children in whom the teacher notices any moral defect or vicious tendency. Careful attention to propriety of conduct and good manners.

GROUP II. (7-9 years.)

Familiar conversations and kind individual counsel when needed. Simple stories, parables, fables, treated with reference to ideas of right and wrong. (Never make a class lesson from cases involving the conduct of the pupil; these should be treated by private admonition.) Practical exercises tending to arouse the moral sense of the class, by methods of school discipline, by often making the pupil the judge of his own conduct, by training the pupil to draw the appropriate lessons from facts observed by himself.

GROUP III. (9-11 years.)

Continue course of Group II., with somewhat more of method. Conversations so conducted as to interest the pupil and induce the freest participation. Passages from history and literature treated from the point of view of right and wrong. All lessons and readings so arranged as to omit no important point of the following course: duties to parents, duties to brothers and sisters, duties toward employers, duties toward servants and employes, duties of the child in school, duties toward the native land and society, duties toward one's self, as cleanliness, temperance, economy, self-respect, modesty, the Golden Rule; duties toward God, not a course of religious instruction, but emphasizing especially two points: cultivating the feeling and habit of reverence, and a disposition of obedience to the laws of God.

Throughout the whole course kindness to animals should be most carefully taught.

Some work in civics should be taken up in III. as well as IV.

GROUP IV. (11-13 years.)

Instruction along the lines of the preceding course, expanding the instruction especially in regard to social morality and duties to the native land, treating under this last title the organization and principles of our form of government (civics).

As a preparation the teacher should carefully read some systematic treatises on ethics and civics, and the immediate test of success will be the fact that the pupils are heartily interested in the subject.

Morals and civics furnish an excellent basis for training in speaking and writing.

This course in morals, in its general classification and arrangement of topics, is in accordance with the course of moral instruction in the schools of France, and has been tested for several years in a training school in this country.

Morals and Civics.

There is here given a scheme for distribution of time, the numbers representing the lessons per week :

	I.	II.	III.	IV.
Reading, - - -	8	8=16	3	2=5
Language, - - -	4	4=8	4	4=8
Arithmetic, - - -	8	8=16	2	1=3
Writing, - - -	4	4=8	2	0=2
Drawing, - - -	3	3=6	2	2=4
History and Geography, -	4	4=8	4	4=8
Morals, - - -	1	1=2	1	1=2
Elements of Science, -	1	1=2	2	3=5
Totals in I. and II., - - -	66		Totals in III. and IV., 37	

Giving to lessons in I. and II. an average of ten minutes each, and to those in III. and IV. an average of twenty minutes each, the total time will be 1,400 minutes for the week. If the daily session be six hours, and one hour per day be given to recesses and general school business, there remains a surplus of 100 minutes per week at the disposal of the teacher, which can be devoted to more instruction wherever needed.

This table is given merely as suggestive of possibilities, and not by any means as an ideal adjustment of ratios. In many schools much more time can justly be given to subjects here left with but little.

In all the work of this course it must be borne in mind that in the average rural school the complete course will never be in working at one time; that there must be much individual instruction; that in every good rural school there must be very much encouragement of the pupil to work by himself under the general guidance and direction of the teacher.

REMARKS ON DRAWING.

Object of the Course.—To develop correct notions of form as it appears and to represent these notions truthfully by drawing, and to cultivate appreciation of beauty of form.

Materials.—Geometrical solids large enough to be seen from any part of the room. These can be found in common objects or made from stiff paper or cardboard and tablets showing geometrical figures. A prism for teaching color; sticks one to five inches long for laying forms; paper for cutting and folding; good drawing pencils, soft and medium in hardness; drawing paper with surface to take pencil well; a good blackboard, and clear, soft crayons, with a few colored crayons; some colored pencils for pupils' use; water colors; some charcoal for more advanced work; an ample supply of common objects, leaves, flowers, fruits, etc., renewed from day to day from the neighborhood.

The statements of this course are necessarily brief and general; it is supposed that teachers will be aided in matters of detail by some of the published courses in drawing.

In teaching drawing as a truthful representation of the visual appearance of form there is not necessarily the strict sequence in the use of geometric models which there would be in a course of form lessons. For lessons in representation of the facts of forms as a basis for construction in connection with working drawings, see Group IV.

Some prefer in the early stages to drill only on planes and lines, postponing solids to a later period. In the French course in drawing the solid does not appear before our Group III., and then at first the drawing is a carefully graded course from low relief.

Those who prefer to work at first entirely from nature can select in order such exercises as are in accordance with this theory and mass the technique in the later stages of the course.

Historic ornament is left to the discretion of the teacher, as in most cases limitations of time would exclude it from the rural school. Teachers should themselves gain such

knowledge of historic ornament and of the history of art as is possible. Excellent books treating of these subjects can be easily obtained, and the knowledge thus gained will enable them to add much of interest and value to their instruction.

For the complete treatment of this course it is desirable that the teacher should have had some special preparation for teaching drawing. In the rural school selections will often have to be made according to circumstances and the ability of the teacher. There should be at least three lessons a week, of twenty minutes each, in Groups I. and II., and longer lessons in Groups III. and IV. Exercises included in parentheses are left to the discretion of the teacher.

In all parts of the course in drawing care should be taken to cultivate an appreciation of the simple elements of beauty, and to develop a love for the beauties of nature and art; and the schoolroom should be furnished with some classic examples of art for study as well as for ornament. In this regard note the analogy between the study of art and the study of literature.

APPENDIX J.

NEGRO TEACHERS FOR NEGRO SCHOOLS.

The answer to the question "Should white teachers be employed in negro schools?" requires some knowledge of the past conditions of the negro, as well as an intelligent and sympathetic appreciation of his present status. I propose then to consider the question in the light of certain broad, fundamental principles which involve, essentially, the welfare and progress of the negro race.

Thirty years have passed since the emancipation of the negro became an accomplished fact. For thirty years he has been the subject of much contention and the object of much solicitude. During this period new nations have been born to civilization. Japan, for instance, whose birth was almost coincident with negro emancipation, has established herself "Queen of the Orient," and has demonstrated her right to a place of honor among the great nations of the earth. While much progress has been made by the negro race in the South, it must be admitted that this progress has been due too little to himself, and too largely to the external influences of the civilization under which he has lived. While marvelous development may be found in individual instances, the condition of the masses of the race is but little improved; the solution of the vexed negro question is as problematical as ever; the education of the race is still in an empirical stage. Unlike other races that have attained to civilization, the negro, with a few individual exceptions, has been content to be merely a passive spectator of the processes that have affected him. Incapable of initiative and executive power, and wanting in genius for organization, he has never been an active agent in the work of race redemption. He has never been accustomed to voluntary activity; he is here not of his own choice; a docile slave, he wrought on southern plantations until, without an effort of his own, he was made an American citizen. Having received his political elevation by legislation, he naturally expected to obtain a commercial, intellectual, and moral status in some such mysterious way. The progress of the negro race, remarkable though it may be, is not the result of social and political self-evolution, but an effect produced by extraneous causes.

If the education of the negro is to be anything more than a veneer, the race must obey that great law of human development which makes voluntary energy the source of power and progress. The intellectual power developed must be energized by proper incentives into self-activity; it must be made reproductive within the race itself. It is not enough that the race shall be environed with all the accessories of civilization. Its consciousness

must be aroused, its powers energized, its sense of responsibility quickened. It must be taught to work out its own salvation, if its progress is to be real and enduring. The gospel must be preached by its own preachers; its schools must be taught by its own teachers. It must consciously realize its own responsibility for the effective use of the means at its command in the work of race development.

The position of the negro as a race has heretofore been one of dependence. Lacking the virtues of thrift, foresight, and economy, he is still very largely supplied from the white man's table; and in time of trouble, confidently appeals, and seldom in vain, to his former master for aid and relief. The negro wears his master's religion, and sometimes his politics, very much as he does his old clothes, as something entirely foreign and external to himself. By perpetuating this dependence, intellectual and moral, we acquiesce in a species of spiritual bondage that is almost as unfavorable to race progress as slavery itself. "Our real friends," says Emerson, "are those who make us do what we can." Judicious aid to a dependent people is necessary and praiseworthy, but, in my judgment, it should stop short of doing all their intellectual work for them.

To cultivate in the negro the sense of intellectual and moral independence, such avenues of service as will enable him to effect the uplifting of the race should not be closed against him. He requires these as worthy incentives to arouse his ambition and to stimulate his sense of responsibility. To be the teacher of his race is the one position of honor, dignity, and responsibility to which he may legitimately aspire. To throttle his energies and to close against him this avenue of activity and usefulness would be an unwarranted assumption of responsibility by the white race and an injustice to the negro.

But a further and more potent reason for employing negro teachers to teach negro schools is the fact that race identity is an important factor in educational work. The teacher and the taught must possess a common consciousness, a mutual affinity, as a condition of proper intellectual and moral growth. The teacher must embody in his personality the historic race epochs and processes of development represented in the pupil, in order that the intellectual powers of the child may be invested with that atmosphere of sympathy and appreciation necessary to their healthy activity. The historic consciousness of teacher and pupil must possess certain intuitive elements in common, as the result of common race processes, if the teaching is to be efficient and the development natural.

Again, it is a fact that cannot well be called in question that white teachers in negro schools can never realize, even approximately, the ideal relation that should exist between teacher and pupil. This is forcibly true in elementary schools. That relation requires love, not philanthropy; affection, not charity; sympathy, not pity. Occupying planes so widely separated, spheres of activity so diverse; without common blood or social ties, common history or common interests, common origin or common destiny, a white teacher and a negro class will never realize the ideal school. In such a case the teacher cannot appeal to the inner life of the pupil, and the craving consciousness of the child finds no responsive chord in the teacher. They must meet, if they meet at all, upon the cold, abstract plane of reason. The instinct of race identity, as strong in one race as in the other, as strong in the pupil as in the teacher, intervenes as an insuperable barrier. Between teacher and pupil must ever remain this chasm of race difference, as deep as human consciousness itself. Call it prejudice if you will, but it exists as a God-implanted instinct of which the teacher can never divest himself—out of which the pupil can never be educated. Although it be tempered by philanthropy, sweetened by religion, or even smothered by fanaticism, it still exists, and will continue to exist as long as humanity.

The principles here emphasized are not restricted in their application to the negro race; like all natural laws they are universal, and are modified in their operation only by the variation of the conditions involved. They are true in their application to the American Indian and to the Mongolian, to the Fiji Islanders and to the Kaffirs of South Africa.

Experience in the missionary field has demonstrated the fact that the successful

propagation of the gospel requires the preparation of native teachers and native preachers as a primary condition. The foreign missionary may direct and supervise, aid and inspire, but he remains a foreigner still—a being apart and something different from the people. The native teachers and preachers of our missionary fields are the hope of heathendom, because they alone can fulfill the requirements of the law of race identity.

Nor is this principle confined to race relations; in a lesser degree it operates between different families of the Caucasian race, and indeed between any two people differing in nationality and language. School men of wide experience will testify to the fact that few teachers of English or American birth can successfully manage a school of Irish, German, or Swedish children; on the other hand, a native French or German teacher, be he ever so proficient in scholarship, or fertile in resources, finds much difficulty in the discipline of American children, and years of striving are usually required to bridge the chasm of difference.

In elementary and secondary education I regard this law of race identity as vital and imperative, but in the province of higher education its authority, under certain conditions, may possibly be relaxed without serious consequences. Institute instruction, however, and the guidance and supervision of negro teachers by the whites must still be continued as a matter of duty and as an administrative necessity.

The important principle involved here is primarily that of co-ordination—not of textbooks and curricula—but the vital co-ordination of the teacher with the child. When we impose upon the child a relation so incongruous, physically, intellectually, and morally, we violate a primary law of nature as well as an established pedagogical principle. The fact that the vast majority of negro teachers are deplorably incompetent no one will deny. But the remedy is to be sought in the improvement of these teachers, and not in the substitution of white teachers. Novel as the statement may appear, I confidently hold that no white teacher is competent to teach negro children. We must remember that for the teacher there are conditions and qualifications antecedent to scholarship, and tests more important than the uniform state examination.

Other considerations in the same line might be adduced, such as the necessity for modifying our courses of study and adapting our methods of teaching to the wants of negro schools. It remains to be seen whether the instruction of an infant race can proceed along the same lines and by the same methods as that of a race whose culture is based upon centuries of struggle and self-effort, without involving the violation of all sound economic and pedagogic doctrine. But the consideration of these lines would carry me beyond the limits and the object of this discussion.

In conclusion let me briefly summarize the argument for employing negro teachers in negro schools:

1. The educational development of the negro must be from within, and by the race itself, and not solely through extraneous agencies.
2. The intellectual and moral dependence of the race should not be perpetuated. The negro needs to be stimulated to independent activity.
3. As a teacher of his race the negro occupies a position of trust and honor, which he needs to quicken his sense of responsibility, and to furnish him the incentives and the means for race elevation.
4. The teacher and the pupil must possess a common consciousness, whose historic processes have common elements, resulting in common intuitions. The teacher must embody in his character the race epochs and processes represented in the child.
5. The instinct of race identity renders impossible the realization of an ideal relation between the white teacher and the negro pupil. The teacher and the child must be co-ordinated.

Birmingham, Ala.

J. H. PHILLIPS.

APPENDIX K.

J. W. BRADBURY.

Hon. J. W. Bradbury, United States Senator from Maine 1847-53, was a teacher for ten years, commencing at the age of seventeen. He had among his pupils Hawthorne, Longfellow, Abbott, Cheever, Cilley.

He had completed his studies for admission to the bar in 1829, but it would be some months before the court could make provision for his examination.

He had learned in visiting schools that teachers were ignorant of proper methods of instruction, and, hoping to assist them to some definite ideas of what studies should be taught in the common school, the order in which they should be taken, and the methods which should be used in teaching them, he gave notice in August, 1829, that a training school for teachers would be opened in Effingham, N. H. The school was in session during September, October, and November. About sixty teachers were in attendance. Instruction was given in the subjects taught in the public schools and in the methods that should be used in teaching them, and the ability of his pupils to comprehend the instruction in methods was tested by *requiring them to teach the subject to the class under his criticism.*

At this time he had not heard of the existence of such a training school in this country.

In the winter of 1829-30 Mr. Bradbury was a member of the school committee of Parsonsfield, Me. The methods which he had taught in his Effingham training school were adopted in Parsonsfield. By improved methods of examination of teachers better teachers were secured, the quantity and quality of work done in school were raised, and the schools of Parsonsfield were placed on a higher plane. It is some evidence of the character of this movement that more than 600 women have gone out from this small country town and become good teachers.

TEACHERS' SEMINARY AT PLYMOUTH, N. H.

[Extracts from catalogue, 1839, in which year the school was closed from failure in appropriation.]

"This seminary has been founded with the hope of improving popular education, by elevating the character of teachers. . . . The trustees have three prominent objects in view: (1) to educate teachers for common and other schools; (2) to fit students for college; (3) to furnish the means for a thorough English education. . . .

"The school embraces a department for males and one for females. . . . The course of study in the Teachers' Seminary requires four years in the male department and three in the female department, with the exception of one term each year, during which the members may be absent to teach school."

In the course of study were taken English language, history of the United States and of England, physics and chemistry, with experimental lectures; mathematics, including trigonometry and conic sections; political economy, intellectual and moral philosophy, logic, natural theology, lectures on the history of education and the art of teaching, in addition to the common-school studies.

Studies were suspended in the winter terms of the last three years of the course in the male department to allow students to teach, and in the summer terms of the same years in the female department for the same purpose.

Although the students in the classical department far outnumbered those in the teachers' department—eighty-seven to twenty-eight—yet all the statements show that the teachers' department was the leading one in the interest of the principal, and scholarships, of which there were several, were founded only in this department.

APPENDIX L.

NEW YORK STATE SCHOOL LIBRARY.

The New York legislature of 1895, in an act entitled "An Act for the Encouragement of Common Schools and Public Libraries," authorized the State Superintendent of Public Instruction to establish a state school library for the benefit and free use of the teachers of the state. . . . The books selected embrace those bearing directly on the profession of teaching, with others relating to studies in psychology and the training of children, together with those referring to special studies in school. Particular attention has been given to the selection of works on civil government, political economy, and social and moral questions, as discussed by teachers with the children. Volumes on the natural sciences have been provided for popular use rather than for technical or professional reading. Care has been taken to provide, to a limited extent, books relating to history, general literature, and art.

Any teacher may have the use of the books of this library free of expense, except for postage and express, and he may purchase books from the list at a fixed price. (From Report of State Superintendent of Public Instruction, New York, 1896.)

LIST OF BOOKS FOR RURAL SCHOOLS AND COMMUNITIES.

The committee has endeavored to make out a list of books for study and reading for parents, teachers, and pupils in the country schools. It wishes to acknowledge the assistance of President F. W. Parker, of Professor L. H. Bailey, of Cornell University; Professor F. H. King, University of Wisconsin, and Professor D. L. Kiehle, of Minnesota.

Colonel Parker makes this suggestion: "The mere reading or study of these books, without copious illustrations direct from nature, would be like reading any other books without experience back of them. My suggestion is this: that the books be read in connection with the study of nature. The teachers can easily make the right selections; for instance, the study of soils in the time of plowing, the study of plants in the time of growth, etc. Specimens may be brought into the schoolroom, or better, the pupils may go to the specimens by field excursions.

"I am quite sure there are many other books, but I have not had sufficient time to get hold of them.

"I wish to call the attention of the teachers to a fact that should be well known, that the United States government publishes some of the best books on farming and nature known. I have appended a very brief list here, but the trustees of schools and principals of schools can very easily get all of these valuable documents from their representative in Congress."

AGRICULTURE.

The Soil, Franklin H. King (Rural Science Ser.). The Macmillan Co. Reading and study for school and home; excellent for study of upper grades, and farmers meetings.

The Fertility of the Land, J. P. Roberts. The Macmillan Co. Reading and study for home and school. Excellent.

First Principles of Agriculture, Edward B. Voorhees. Silver, Burdett & Co. Reference.

Irrigation Farming, Lute Wilcox. Orange Judd Co. Reference.

Farm Drainage, C. G. Elliot. United States Department of Agriculture (Farmers' Bulletin No. 40). Reference.

Tillage and Implements, W. J. Malden. G. Bell & Sons. Reference.

Our Farming, T. B. Terry. The Farmer Co., Philadelphia. Reference.

Yearbook of the United States Department of Agriculture. Reference.

Farmers' Bulletins, United States Department of Agriculture. Reference.

Relation of Soil to Climate, E. W. Hilgard. Bulletin No. 3, United States Weather Bureau Department.

Some Physical Properties of Soil in their Relation to Moisture and Crop Distribution, Milton W. Whitney. Bulletin No. 4, United States Weather Bureau Department.

Fluctuations of Ground Water, Franklin H. King. Bulletin No. 5, United States Weather Bureau Department.

Laws of Rainfall, Gustavus Hinrichs. United States Department of Agriculture.

Forest Influence upon Climate, Water Supply, and Health, B. E. Fernow. Bulletin No. 7, Division of Forestry.

HORTICULTURE.

The Principles of Fruit-Growing, L. H. Bailey. The Macmillan Co. Reading and study for home and school.

American Fruit Culturist, J. J. Thomas. Orange Judd Co. Reference.

Landscape Gardening, Edward Kemp. Orange Judd Co. Reference.

How to Make the Garden Pay, T. Greiner. Orange Judd Co. Reference.

Principles of Plant Culture, E. S. Goff, Madison, Wis. Reference.

Plant-Breeding, L. H. Bailey. The Macmillan Co. Reference.

Nursery-Book, L. H. Bailey (Garden Craft Ser.). The Macmillan Co. Reference.

Horticulturist's Rule-Book, L. H. Bailey. The Macmillan Co. Reference.

BOTANY.

How Crops Grow, S. W. Johnson. Orange Judd Co. Reference.

How Crops Feed, S. W. Johnson. Orange Judd Co. Reference.

Familiar Trees and their Leaves, F. S. Mathews. D. Appleton & Co.

Familiar Flowers of Field and Garden, F. S. Mathews. D. Appleton & Co. Excellent for reference. May be profitably studied with the flowers and plants throughout the year.

The Garden's Story, G. H. Ellwanger. D. Appleton & Co. Reference.

How Plants Grow, Gray. American Book Co. Reference.

Botany for Public Schools, Abbie G. Hall. Geo. Sherwood & Co. Reference.

Botany for Young People, Gray. American Book Co. To be read with specimens by intermediate grades.

From Seed to Leaf, J. H. Newell. Ginn & Co. Reader.

Talks Afield, L. H. Bailey. Houghton, Mifflin & Co. For teachers. Good for field excursions.

Chapters on Plant Life, S. B. Herrick. Harper & Bros. To be studied with specimens and microscope by intermediate grades.

How to Know the Wild Flowers, Mrs. Wm. S. Dana. Chas. Scribner's Sons.

Plants and their Children, Mrs. Wm. S. Dana. American Book Co.

SCIENCE.

- Sunshine, Amy Johnson. The Macmillan Co. Reading book for grammar grades.
 Forms of Water, Tyndall. D. Appleton & Co. Eighth grade.
 Weather, Ralph Abercromby. D. Appleton & Co.
 Natural History of Selborne, Gilbert White. Ginn & Co. Eighth grade.
 The Great World's Farm, Selina Gaye. The Macmillan Co. Charming, and very profitable for grammar grades and home study.
 Elementary Meteorology, W. M. Davis. Ginn & Co. Teachers and parents, and for reference.
 A Popular Treatise on the Winds, W. Ferrel. John Wiley & Sons. Teachers' study and reference.
 Elementary Text-Book of Physical Geography, R. S. Tarr. The Macmillan Co. Excellent for study and reference.
 The Geological Story Briefly Told, J. D. Dana. American Book Co. Excellent for reading and reference.
 First Book in Geology, N. S. Shaler. D. C. Heath & Co. Unexcelled reading book for seventh and eighth grades.
 The Story of the Hills, H. N. Hutchinson. The Macmillan Co. Reading book for eighth grade.
 Monographs on Physical Geography. American Book Co. Excellent for teachers' study.
 Round the Year, L. C. Miall. The Macmillan Co. Teachers.
 Autumn, Winter, Spring. Three small volumes. Ginn & Co. Reading for third and fourth grades.
 Science Readers, Vincent T. Murche. The Macmillan Co.
 Systematic Science Teaching, E. G. Howe. D. Appleton & Co.

ANIMAL LIFE.

- Honey Bee, L. L. Langstroth. J. B. Lippincott Co. A practical treatise. Reference.
 Manual for the Study of Insects, J. H. Comstock. Comstock Publishing Co., Ithaca, N. Y. Reference.
 Half Hours with Insects, A. S. Packard. Estes & Lauriat. Reference.
 Buz ; or the Life and Adventures of a Honey Bee, Maurice Noel. Henry Holt & Co. Reading, eighth grade.
 Boys and Girls in Biology, S. H. Stevenson. D. Appleton & Co.
 Ants, Bees, and Wasps, Lubbock. D. Appleton & Co. Reference.
 The Population of an Old Pear Tree, E. van Bruyssel. The Macmillan Co. Grammar grades.
 My Saturday Bird Class, Olive Thorne Miller. D. C. Heath & Co. Fourth grade.
 Little Brothers of the Air, Olive Thorne Miller. Houghton, Mifflin & Co.
 In Bird Land, L. S. Keyser. A. C. McClurg & Co.
 Tenants of an Old Farm, H. C. McCook. Fords, Howard & Hulbert. Habits of insects.
 Domesticated Animals, N. S. Shaler. A. C. McClurg & Co.
 Life Histories of American Insects, Clarence M. Weed. The Macmillan Co. Entertaining and instructive.

NATURE STUDY.

- Nature Study and Related Subjects, Wilbur S. Jackman, Chicago Normal School.
 Tommy-Anne and the Three Hearts, Mabel Osgood Wright. The Macmillan Co.
 A good reading book for intermediate grades.

- The Beauties of Nature, Lubbock. The Macmillan Co. Home reading.
 Man and Nature, G. P. Marsh. Chas. Scribner's Sons. Reference and reading.
 Forest Trees, Wild Apples, and Sounds, H. D. Thoreau. Houghton, Mifflin & Co.
 John Burroughs' Works. Houghton, Mifflin & Co.
 Winter Sunshine. Parents and teachers. For pupils, The Apple.
 Riverby. Parents and teachers. Selections for home reading.
 Wake-Robin. Parents and teachers. Selections for older pupils.
 Pepacton. Parents and teachers. Selections for pupils: Springs, Idyl of the Honey-Bee, etc.
 Locusts and Wild Honey. Home reading. Selections for pupils: Sharp Eyes, Strawberries, Is it Going to Rain, Bed of Boughs, etc.
 Signs and Seasons. Home reading. Selections for pupils: The Tragedies of the Nests, A River View, Bird Enemies, Phases of Farm Life.
 Birds and Poets. Home reading.
 Bass's Nature Stories for Young Readers. D. C. Heath & Co. Excellent for third and fourth grades.

MISCELLANEOUS.

- Art of Beautifying Suburban Home Grounds, F. J. Scott. D. Appleton & Co.
 A Text-Book on Roads and Pavements, F. P. Spalding. John Wiley & Sons.
 United States Government Reports.
 Water and Land, Jacob Abbott. Harper & Bros.
 What Darwin saw in his voyage round world in Ship "Beagle." Harper & Bros.
 Brooks and Brook Basins, Alex. Frye. Ginn & Co.
 The Story of a Stone, in Science Sketches, David Starr Jordan. A. C. McClurg & Co.
 The Earth and its Story, Angelo Heilprin. Silver, Burdett & Co.
 Formation of Vegetable Mold, Darwin. D. Appleton & Co.
 Science Primer of Physical Geography, A. Geikie. American Book Co.
 Up and Down Brooks, Mary E. Bamford. Houghton, Mifflin & Co.
 Every-Day Occupations, H. W. Clifford. Boston School Supply Co.
 Modern Industries and Commerce, Robt. Lewis. Boston School Supply Co.
 Camps in Rockies, Wm. Grohman. Chas. Scribner's Sons.
 Coal and Coal Mines, H. K. Greene. Houghton, Mifflin & Co.
 The Sea and its Wonders, Mary and Elizabeth Kirby. T. Nelson & Sons.
 Canoemates, Kirk Munroe. Harper & Bros.
 Campmates, Kirk Munroe. Harper & Bros.
 Talking Leaves, W. O. Stoddard. Harper & Bros.
 An Iceland Fisherman, Pierre Loti. A. C. McClurg & Co.
 Hunter Cats of Connorloa, H. H. Roberts Bros.
 John Brent, Theo. Winthrop. Henry Holt & Co.
 The Electrical Boy, J. T. Trowbridge. Roberts Bros.
 How to Study Geography, F. W. Parker. D. Appleton & Co.
 Methods and Aids in Geography, C. F. King. Lee & Shepard.
 The Story of the Plants, Grant Allen. D. Appleton & Co.
 Wonders of Plant Life, S. B. Herrick. G. P. Putnam's Sons.
 Intelligence of Animals, Ernest Menault. Chas. Scribner's Sons.
 Elementary Meteorology, F. Waldo. American Book Co.
 The Food of Plants, A. P. Laurie. The Macmillan Co.
 Agriculture, R. H. Wallace. J. B. Lippincott Co.
 Garden Craft Series. The Macmillan Co.
 Rural Science Series. The Macmillan Co.
 The Story of our Continent, N. S. Shaler. Ginn & Co.

Glimpses at the Plant World, F. D. Bergen. Ginn & Co.
Animal Memoirs, Parts I.-II., S. Lockwood. American Book Co.
The Survival of the Unlike, L. H. Bailey (Garden Craft Ser.). The Macmillan Co.
Elements of Geology, LeConte. D. Appleton & Co.
Town Geology, C. Kingsley. The Macmillan Co.

APPENDIX M.

HYGIENE AND HEALTH IN PUBLIC SCHOOLS.

Dr. G. Stanley Hall has said: "What shall it profit a man if he gain the whole world of knowledge and lose his health?" In our public schools, especially in the high schools, many a promising young life has been sacrificed by over-study. The system of marks and medals, now happily disappearing from many of our best schools, has driven many an ambitious boy and girl to an early grave at the point of a pencil, because that system stimulates those very pupils who need no spur and whom the spur injures. More frequently the health of pupils is injured by ignorance of the most obvious laws of health, or by criminal neglect of those laws, and by the impure air of schoolrooms. Unsuitable furniture which cramps and distorts the growing bodies of children, and poor light which impairs the sight, have also a long account to settle with children thus ruined for life.

The evils of unsanitary schoolhouses have attracted most attention in the crowded schoolrooms of cities, but these evils are not confined to densely populated places. They appear equally in the rural districts, and they are less known only because the cases of injury are scattered, and the statistics are less easily obtained.

The vigorous country boy and girl may for a time resist the evils of a schoolroom, alternately too hot and too cold; of drafts of cold air in winter through cracks in the floor and poorly-built walls; of outhouses too filthy for use and sources of moral defilement; of seats and desks, built for cheapness and not for comfort, and more racks for torture than like a proper resting place for the growing bodies of little boys and girls. But however much the injury may be concealed, the deadly work goes on in many a country school. Take a single instance. Many a man has suffered for years from hemorrhoids brought on by ignorance or neglect in childhood; neglect, because proper accommodations were not provided or not properly cared for at the schoolhouse; ignorance, because the school gave no instructions in hygiene—not the technical hygiene suitable for physicians, but the obvious, ordinary hygiene that relates to clothing, proper bathing, eating, and the excretions.

Physiology is now required by law to be taught in the schools of nearly all the states. As too frequently taught, it concerns itself about the chemical effects of certain substances upon various parts or processes of the body. Such a treatment of the subject is too abstruse for children in the schools, it goes beyond their knowledge and their experience. They need to be taught the effect of green apples upon the stomach before they are taught the effect of alcohol upon the brain. We ought to learn wisdom from the concrete teaching of nature about eating green apples in her monitory pains. People mean well when they teach the evil effect of alcohol to little boys and girls who do not know what alcohol is. It would be better to teach these children the good effect of wholesome food and drink, and especially to teach them that the whole alimentary canal should be kept in healthy, regular, and daily movement throughout, and to teach this and all that relates to the necessary bodily functions with delicacy and propriety, and without any squeamishness. Is any teacher too delicate, cultured, and refined a lady or gentleman to give this instruction concerning the bodies of the children? Then let them be relegated to the

land of spirits, to teach where the mortal coil has been shuffled off. It is high time to inaugurate a campaign of hygiene, and not the least important branch of child study is the study of their bodies, and how those bodies may be made in school to grow strong, robust, healthy, natural, at ease—"the temple of the living God."

In making the many advancements in education in recent years the pedagogical literature of the past three hundred years or more has been ransacked, and the educational philosophy of many eminent and venerable teachers has been exploited to constitute the new education—Comenius, Pestalozzi, Froebel, Herbart, and the rest; it is worth while now to bring to the front the maxim, "*Mens sana in corpore sano*," and to found an educational philosophy on that. Already we have physiological psychology which seeks to trace mental phenomena through a study of the brain, and missionaries are now learning to convert the heathen by making their bodies comfortable without their eating the missionary. Benevolence now seeks to raise humanity, both intellectually and morally, by first improving men physically. Let the schools follow the lead of philosophy and of religion in this regard.

It is well known that no child can learn well or grow mentally when in bodily discomfort. Dullness, uneasiness, and consequent disorder in a school, are directly traceable to vitiated air. If the body is numb with cold, if the feet are damp and chilled, the mind becomes stupid; and the sweltering heat of a badly ventilated schoolroom, the uneasiness of an over-loaded stomach, of constipation, and of uncomfortable clothing, will produce the same result. Moreover, an abnormal condition of the body is often the source of immorality. We blame the first Adam too much; the real Adam is nearer home, and of this generation and every generation that neglects the laws of health. The outbuildings of ill-governed schools with ill-taught children sometimes give evidence of fearful demoralization, and the demoralization is contagious, like a plague.

An important part of school hygiene, then, relates to the lavatories or water-closets. This is not the only, nor perhaps the most important, part of school hygiene, but it needs emphasis most at present, because it is nearly always neglected. In rural districts the outhouse is generally located in a remote part of the grounds, where its offensiveness may not interfere with the school, and it is the prey of tramps and bad boys who delight in defiling it. The closet should adjoin the schoolhouse, and be accessible through the house only. This location would compel its being kept inoffensive, and make it easy to do so. It should then be used by every child with the same freedom as at home in a well-regulated family. And the child should be taught in school to respect his body in every part and in all its functions—that nothing about it is defiling unless he himself makes it so; and that, while we are animals, we should be rational animals, and not brutes. Such teaching should not be indelicate nor obtrusive; but it is important, because respect for the body is at the foundation of self-respect and true manliness. This special teaching of hygiene has often been neglected through a false modesty which is highly indelicate, and which is itself the evidence of an impure mind.

For health, for comfort, and for intellectual and moral well-being, the schoolhouse should be well-constructed and suited to its use. It should stand in the middle of the grounds, high, well-drained, and ornamented with trees and shrubs. The well should be so located as to supply pure water. The architecture should be simple and show a refined taste, for the schoolhouse is an educator. It should be as convenient and as well-built as the best homes, in order that the children of the well-to-do may not despise it, and in order that the children of the poor may see how the best people live. The schoolhouse will thus become an inspirer in the young to higher living, for education is more than learning from books. It is a training also in how to live.

Churches are built as an example of noble architecture, to be an object lesson leading upward to a higher life. They are usually grander than the houses of the wor-

a ownership in them. Municipal
the community's ideal of a home
e and to some extent the aspira-
an the best dwelling house.
tolerated in any community where
ideal room may be repeated in a

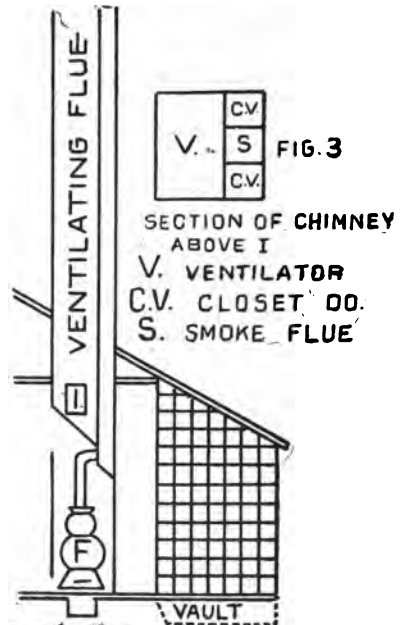
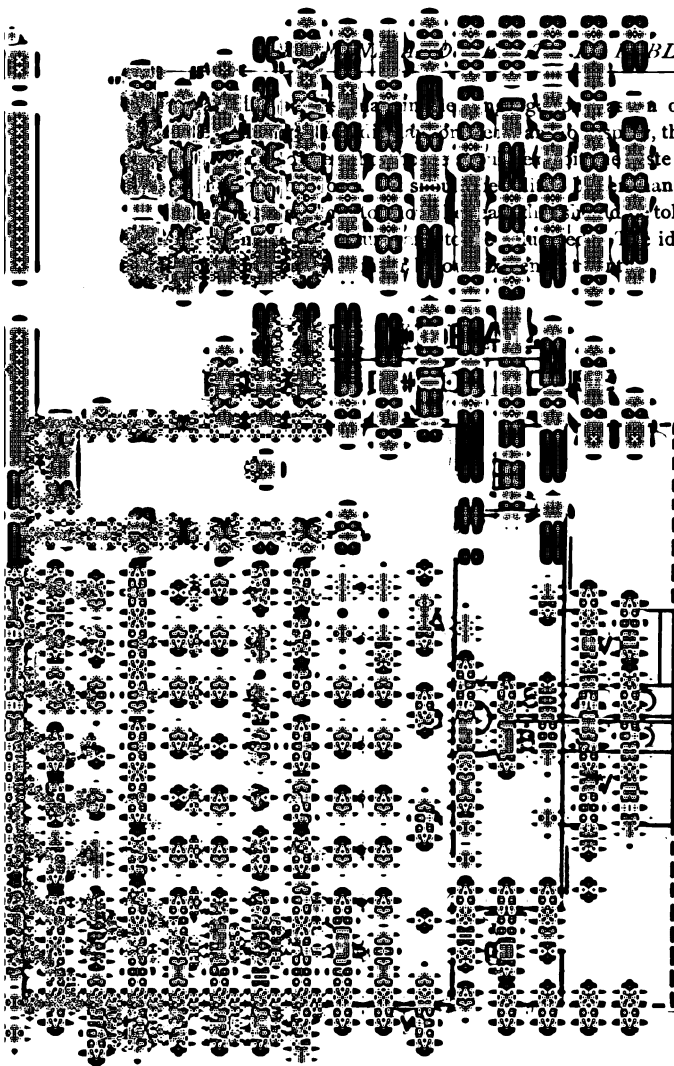


FIG. 2 ELEVATION.

desk and chair in each of the squares,
front are at right angles to the
a greater angle than the last, till
desk is at T in the left front. The
forty-eight pupils, which is the least
9,720 cu. ft., or 200 cu. ft. each
when all the pupils are present.
ft., with (B) boys' entry and (G)
windows as near each other as the
four feet of the corners of the
the floor, and they should extend
ones need to be built so as to open.
girls' side, another door leads into

the cloakroom, which is 11 ft. by 6 ft. in size, and each cloakroom is provided with a sink (S) and two windows, five feet from the floor, one looking into the entry opposite a corresponding one above the outside door, and the other looking into the back piazza. The last of these windows must be stationary, the one looking into the entry may be open in summer, but never in winter, for a reason that will appear later.

From the entry on each side of the house another door opens backward upon a piazza accessible in no other way, and enclosed with heavy lattice-work (shown in Fig. 2) or stout wire screens, and from this piazza a door leads into the closet, which is provided with a single window protected by heavy screens.

Each vault must be built as nearly air-tight as possible (preferably of brick), must be connected closely with the under side of the floors, and must have a ventilating pipe of galvanized iron leading from the end of the seat at the top and entering a separate flue in the chimney next to the smoke flue, as seen in Fig. 2.

The furnace, F (Fig. 1 and Fig. 2), has a large stove, with 10-inch fire-pot (if for coal) enclosed in a brick chamber, some 3 ft. by 3 ft., from which a door opens into the schoolroom. This door is six or seven feet high and three feet wide, and is very carefully protected on the inside with tin, or better, it may be made of tin or sheet-iron. Above this door is a transom, three feet wide and two feet high, either open entirely or filled with a screen of light wire and large mesh, and from the top of this transom and within the chamber or furnace a sheet-iron partition or diaphragm slopes backward, at an angle of about 45 degrees, to back side of the furnace.

Below the stove and in the bottom of the furnace is an opening 2 ft. by 2 ft. connecting with a fresh-air duct of the same size that extends beneath the floor to the outer walls beneath the outside steps, where it must be covered with a wire screen and be protected from the dust.

The tin door of the furnace being closed and the stove heated, the air becomes rarefied, rises to the top, is deflected by the slanting partition or diaphragm, and enters the schoolroom through the transom. At the same time the fresh air is supplied to the bottom of the furnace through the duct described above. This duct should be supplied with a valve by which it may be closed if necessary. The smoke flue of the stove is shown in Fig. 2, and behind it is the flue for ventilating the vaults.

But the warm air will not enter the room unless a corresponding volume of air is withdrawn at the same time; and this exhaust should be from near the floor, and on the same side of the room on which the fresh air enters near the top of the room. For the purpose of exhausting the vitiated air of the schoolroom, the furnace flue is extended upward through the roof; and it should be contracted near the top. This flue is represented in Fig. 2 (the large flue); and it will be heated by both the smoke flue on one side of it (which may be of metal) and by the diaphragm or slanting partition at the bottom. This diaphragm will be heated by the hot air impinging against its under side.

The vitiated air from the schoolroom reaches this ventilating flue as follows: The partition between the schoolroom and the cloakroom is raised 2 inches or 3 inches from the floor; on each side of the flue and above the diaphragm there is an opening of 18 inches by 24 inches, through which the air is exhausted from the top of each cloakroom, and as the doors and windows of this room are always closed (as said above) in cold weather, the vitiated air is withdrawn from the schoolroom into the cloakroom, where the clothing is thus warmed and ventilated.

In order to secure warmth and perfect ventilation, it will be perceived that the floor of the schoolroom and the cloakrooms must be perfectly tight, and the walls should be lined with brick, or otherwise made tight, at least three feet from the floor, and all the entry doors must shut very close. In other words, good construction is indispensable to comfort — both warmth and ventilation. It is for this reason that double windows are requi-

site in cold climates. All the warm air within which strikes the cold glass of a window is at once chilled, falls to the floor, and creates a draft. Moreover, the best-lighted part of the room is close to the window; and the first row of seats may be placed near the windows, as shown in Fig. 1, if the window is double.

At night and before the children arrive in the morning the cold air duct and the ventilating flues (I) leading from the cloakrooms may be closed. In that case, the door (D) of the furnace being open, the air within the schoolroom will come into direct contact with the stove, rise through the transom, and thus rotate throughout the schoolroom and warm all parts of it; and children may one by one warm their feet at the stove. But when the room is filled with children, the door (D) would be closed, and the fresh-air duct and the ventilating flues (I) must be open, in order that the stove may constantly heat the fresh air and ventilate as well as warm the room.

In summer the diaphragm above the furnace may be raised to a vertical position; if then the door (D) be closed, the warm air of the schoolroom may pass upward through the transom and the ventilating flue, while the fresh air is supplied through the entry doors and windows, at W W (for this purpose and not for light), and through the two windows that may be raised in the front. In mild weather or on damp days a fire in the enclosed stove will help to produce the upward draft without heating the room.

A pailful of dry earth must be thrown into each vault every day, and the contents of the vault must be removed every week. This can be done by sliding outward a water-tight trough made for the purpose and fitted into each vault. These troughs should then be replaced, and each door through which the trough is drawn should be securely locked.

The house should have a dry, clean, and warm cellar; but where this cannot be afforded the house should stand on a sufficient number of posts two or three feet high and boarded around to the ground. These posts, and especially the foundation of the chimney and of the vaults, must be absolutely secure from frost, and the floors might be boarded below the joists and plastered between; and there must be felt or thick layers of paper between the floors. A cold floor is costly and dangerous; and the cold schoolhouse costs more in the end, in health and in fuel, than it costs to build a tight, warm house at first.

As to the light. The best light for the pupil comes from the left, with no cross lights; but if the whole left side of the room is one continuous window, then the pupils in the back part of the room will face the light, though the window is at the left. To obviate this difficulty the first rows of desks might be placed with the axis at right angles to the window. After the first two rows, each desk is placed with its axis at a greater angle than the last, till the last row is at an angle of 45 degrees. Such an arrangement is novel, but upon reflection there seems to be no necessity for the prevailing rectangular placement of school desks, with the teacher at the middle front. In this plan the teacher is at the left front of the pupils at T, and the oblique situation of the desks is shown. This position requires chairs and not shelves for seats—the only rational seat; and there is no excuse for any but adjustable seats and desks.

The best light is from the top of the window. A window properly lights the room only at a distance of one and a half times its height. The south light is the best. The north light is too cold in winter and lacks the effect of the sun's rays in the room—chemical and hygienic effects not explained, but known to exist. The east and the west window admit the slanting rays in the morning or afternoon. In summer, though the rays are hot, they are nearly vertical at noon and do not shine directly in at the windows of the south exposure. But there should be very light shades to roll from the top and temper the light when it is too bright, and dark shades to roll from the bottom to shut out the light sometimes—to shut it out from the bottom because, as said above, the light from the top of the window shines across the room. An awning of white cotton cloth on a

rectangular frame outside the window would be inexpensive and worth many times the cost in a single summer.

Any intelligent carpenter could build a house like the one described, and if some architect would build into it only a little good taste and chaste beauty, the house as well as the teacher would be an educator and a public benefactor.

A. P. MARBLE.

New York City.

APPENDIX N. SCHOOL SYSTEMS.

ONTARIO.

[From Ontario School Regulations, Arts. 93-6.]

The system of public education in Ontario requires that every position be filled by a trained teacher, and no teacher receives a permanent certificate who does not possess the requisite qualifications as to (1) scholarship, (2) a knowledge of pedagogical principles, and (3) success in teaching as shown by actual experience.

The institutions for the preparation of teachers are, first, the county model schools, which one must attend for a session in order to be eligible for examination for a third-class certificate, without which no one can begin teaching in any public school in Ontario; the normal schools, of which there are two, one at Toronto and one at Ottawa, and which one must attend in order to obtain a second-class certificate and a permanent license; and the School of Pedagogy at Hamilton, in which are trained the first-class public-school teachers, the assistant and principals of high schools and collegiate institutes, and the public-school inspectors. Only first-class teachers can be appointed principals of county model schools or members of county boards of examiners. The board of examiners for any county may, with the approval of the education department, set apart any public school to be a county model school for the professional training of teachers.

There are sixty county model schools in Ontario, averaging about thirty pupils in attendance. Pupils may be admitted on a high-school primary certificate, which is granted to those who complete the first two years of a high-school course, although the pupils have often completed three or four years of the course. The course of study and training continues from the first of September for four months; it comprises school organization and management, methods of instruction, school law and regulations, music, and physical exercises; the course in training comprises observation of the work of the regular teachers, practice in teaching, criticism of work, and discussion of methods.

The minister of education may prescribe a course of reading for teachers of public schools. The course shall extend over three years, comprising three books each year. Any teacher who desires a certificate of having taken the public school teachers' reading course shall make a synopsis of not less than ten nor more than fifteen pages of each book read, and transmit the same to the inspector of his district. The managing committee of each teachers' institute shall appoint two persons who, with the inspector, shall form a committee, to determine whether the synopsis made by the teacher indicates that the books have been intelligently read, and for each book so read the inspector shall issue a certificate, and any teacher submitting a certificate for nine of the books prescribed shall receive a diploma certifying to the completion of one full reading course of three years.

In Ontario the law requires that the inspectors of schools shall hold first-class certificates, certifying to completion of the course of professional study of the School of Pedagogy at Hamilton, and shall have had three years' experience in teaching.

NEW BRUNSWICK.

The salaries of teachers shall be provided for from the three following sources, *viz.*: firstly, the provincial treasury; secondly, the county school fund; thirdly, district assessment. All other items of fixed or current expenditure shall be provided for by district or local assessment. In the distribution of the provincial and county school fund the number of days of school session and the average attendance are made factors of such importance as to encourage a long school year (average for the province, 215 days in 1895) and regularity of attendance.

The amount of provincial and county money to be received in any district in aid of schools will depend almost exclusively on the direct efforts made by the inhabitants of each district in maintaining their own schools . . . and every such effort will be duly supplemented by funds from the county and province. ("Manual of School Law of New Brunswick," Arts. 12-23, and Remarks, p. 56.)

MANITOBA.

In reply to inquiries contained in the circular of the National Council of Education, forwarded by your correspondent at Regina, I beg to say that there is one normal school for the province for the training of first and second-class teachers, and four training schools for professional instruction of teachers holding third-class certificates. No academic work is done in either the normal or training school. The normal-school course is five months in length, that of the training school three months. These institutions are public, and supported by the province and controlled by the educational department. The training schools are conducted by the inspectors, who spend eight months of the year in the rural schools and are thoroughly conversant with the requirements of rural districts.

No one is admitted to either normal or training school until he has a non-professional certificate of the grade for which the school affords professional training. The examination for third-class certificates covers the ordinary subjects of the public-school course, with physics, botany, algebra to the end of simple equations, and one book of Euclid, with deductions. Certificates of this grade are good for three years, subject to a limitation to be hereafter mentioned.

The second-class non-professional certificate covers ground corresponding in the main with the requirements for matriculation into Harvard, and the first class corresponds with the first year of university work, omitting in each case all languages except English. About one-third of the time of the above courses is given to practice in teaching. In the schools of the towns where the normal and training schools are situated practice is given in each of the grades, but the time spent in the first four grades is about three times that spent in the second four. Practice in teaching and a written examination on history of education, psychology, management, methods, etc., count equally in determining a candidate's fitness to receive a certificate. The certificate issued is good for one year. If, after this year of probation, the inspector so recommends, a third-class certificate good for three years, or a second or first (according to the grade of non-professional certificate held) good for life or good conduct, is issued. Otherwise the certificate lapses.

Heretofore the holder of a non-professional certificate was allowed to teach without training for one year. Hereafter, however, no teacher will be allowed to teach in any public school who has not at least the professional training above outlined for third-class certificates.

About 75 per cent. of the graduates are from rural districts and country towns. Sixty-six per cent. of the teachers employed in the province in 1895 were trained. After this year all teachers will have training.

Institutes are held by the inspectors and normal-school instructors at points chosen by the Department of Education. They last from two to three days. Eighty per cent.

of the teachers attend. The aim of these institutes is to stimulate to professional study. They are a valuable means of stimulating teachers and arousing interest.

Circulars are sent to teachers and secretaries of school districts, giving notice of place of meeting and programme. Provincial grant is payable to districts whose teachers attend the institutes, as if the school were open.

Upwards of 80 per cent. of the teachers of the province are organized into voluntary associations. The aim and scope of the work are much the same as those of the institutes, but the work is done by the teachers themselves instead of by the normal instructors and inspectors. Several associations sometimes combine to secure the services of a prominent educationalist from outside of the province. The only qualification for membership is that of being a teacher actively engaged in teaching.

Reading circles have been organized only to a limited extent, and the data for reply cannot be obtained. All teachers take one or more teachers' journals. The desirability of doing so is kept before teachers by the inspectors. Certificates to teach are granted only by the Department of Education for the province, so that the provincial or state certificate is the only one valid here.

Teachers are chosen by the school boards of the various districts. Teachers in rural schools are engaged from year to year as a rule. In towns and cities the engagement is continued without re-election. It is impossible to say to what extent anything besides merit operates to determine the choice of teachers in rural districts. In towns appointments are made largely on advice of the supervising officer.

The maximum salary is \$1,400 in towns and \$720 in rural schools, with an average of \$428 for the province and \$368 for rural districts. In ten years the average salary has fallen about \$90 per annum, owing in part to general depression and in part to competition of large numbers of young teachers using the profession as a stepping stone to some other line of work.

All improvement in educational work, and in status of teacher, must come through better education of the teachers. It is only where our class-rooms are filled with cultured and earnest men and women that teaching will become a profession, and take rank in public estimation in accordance with the importance of the interests committed to the schools.

Winnipeg.

DANIEL MCINTYRE.

FRANCE.

In France, which has made so great an effort in late years to advance popular education, the law requires that the candidate for the office of inspector of schools shall be at least twenty-five years of age, shall have had several years' experience in teaching, and shall hold certificates indicating a high grade of scholarship. In his written examination he is required to write a paper on some subject in pedagogy, and one on some subject in school administration; then follows an oral examination covering a wide range of psychology, ethics, pedagogy, and school administration; and then a practical examination, which consists of the inspection of a school, followed immediately by a verbal report.

In view of the increasing importance of inspection it is recommended that the standard be raised so as to require a certificate of qualification for a professorship in a normal school.

NORWAY.

The main obstacle in the way of perfecting the rural schools of Norway is of a geographical kind. Mountain peaks and ranges, valleys and woods, rivers and rapids, are so many barriers to human intercourse of any sort. There are few clusters of farms or cottages sufficient to form villages, so that children very often have to go miles to and from school without other means of transport than sleds, skis, or skates.

In spite of these natural hindrances, Norway is well known to have a more enlightened rural populace than most other countries. Every Norwegian peasant under fifty can read, write, and figure; all can read.

Some, or rather many, years ago the country districts of Norway had itinerant teachers, perambulating from farm to farm, gathering about them the nearest children where they came. Teaching of this kind was necessarily very defective, and often the teachers knew so little that it was a case of the blind leading the blind. Norway has changed all that. For twenty-five years or more the teaching force has been uniformly good, trained in the state-endowed seminaries or normal schools. A great majority of these rural teachers are sprung from the people amongst whom they work; they have the advantage of knowing their pupils' condition, peculiarities, and points of view.

Most inhabitants of the city above the laboring classes send their children to higher schools (*Borgerskoler* and *Middelskoler*), if they in any way can afford the school fees. In the country it is different. There even well-to-do farmers send their children to the public schools; they have no choice, unless, indeed, they go to the trouble and expense of employing private tutors, which some do.

As a rule, the school children are divided into two classes or grades, attending alternately every other day; each child, in this way, getting about fourteen to eighteen hours' schooling a week, or say 500 to 550 hours a year, the summer vacation lasting only one month.

The branches taught are reading, writing, arithmetic, singing, history, political geography, grammar and composition, religion, and, sometimes, drawing. Norway has an established church (the Lutheran), and all its public schools, therefore, have something of a parochial stamp. Biblical history and the catechism have their hour or even two daily—a serious drawback, admitted to be such both by religious persons and those more latitudinarian. Dissenters' children are, however, exempted from religious instruction, if their parents so desire.

To an American these school hours may seem few; but then the Norwegian children have an advantage over the American: above the primary grade no time is wasted on spelling, it being taken for granted that any child who has arrived at a tolerable command of the mother tongue knows how to spell. To be sure, the Norwegian language has fewer difficulties of pronunciation and spelling than the English.

Quite a prominent factor in the educational system of Norway are the authorized readers. Beginning with short rhyme and moral stories, they carry the child through the country's great past by means of selections from the sagas; contain chapters on botany, zoölogy, physics, and physiology, besides selections from the poets; but the best thing about these readers is their valuable information on almost all topics of vital national interest, from the Lofoden fisheries to the mining industries; they give, in short, a complete picture in miniature of the whole country.

Of late these readers are being discarded for one that promises to be still better, especially in a linguistic respect. As far as language is concerned, Norway is in a somewhat unsettled condition, chiefly in the rural districts. It has an heirloom of old Norse; its various dialects are direct descendants of the language still spoken on Iceland; but its official language is Danish. Of late a fusion of the two has been effected, there is an imperceptible but real change going on, new words are constantly being imported from the dialects into the literary language. Now the chief purpose of the new reader, quite extensive in matter, is to get the actually spoken language as near as possible, the objections to the old readers being that they are too old-fashioned, "bookish."

As to the teachers of the rural districts, they are generally very able men (women teachers are employed in the cities only). They are not men of the world, to be sure; but, looked down on by their urban brethren, living on a pittance, they are, perhaps, truer

"servants of the idea" (to use an old Norwegian expression) than many more favored and respected men. I have often thought that the branches formally taught in a Norwegian country school are of little significance in comparison with the loftiness of intellectual and moral aim often imparted by the teachers to their scholars.

The country schooling is nominally ended at the confirmation age, say fourteen. But in many places the education is continued in the half-free night schools, where the common-school branches are taught as before, special stress being laid on composition, history, and national literature. Under an able teacher these popular evening schools are very delightful, the teacher often being more of an older and wiser friend than a formal instructor.

A few words must be given to the so-called people's high schools (*Folkehøjskoler*), institutions patronized by young men and women generally better off. These institutions were founded by the Danish clergyman and educator, Grundtvig. They have always been of more importance in the land of their origin, Denmark, than in Norway. The principals of these schools are generally university-trained, high-minded men, and many of the leaders in Norwegian public life and literature have been connected with them. Of these schools it might be said what Emerson said of books, they are there mainly to inspire. They might also be styled rural counterparts of the university extension and Chautauquan movements. Much of the best in Norwegian national life can be traced directly back to these schools. They are, however, high schools only by courtesy.

Norway is a democratic country. For that reason forces are always at work in the direction of lifting the lower strata up into the daylight of culture and knowledge. Conventions of teachers and educators for the purpose of furthering this aim are very common. All the while self-education is going on. But a few nights ago I read the following letter addressed to a Christiania editor:

"We have an association of young men here, and a library of about 2,000 volumes. We meet once a week, and have readings and lectures. Last week we had a lecture on Schiller's "*Wilhelm Tell*." With Goethe and Schiller I am fairly well acquainted, but, as Dante is to me an honored name only, please recommend me a good translation of his works."

This letter from a young farmer voices a yearning for light and culture quite common in the rural districts of Norway.

OSCAR GUNDERSEN.

Chicago, Ill.

APPENDIX O.

EXTENSION WORK IN RURAL SCHOOLS.

The following extracts are from a report upon Extension Work in Agriculture, by Professor L. H. Bailey, of Cornell University, Ithaca, N. Y.:

The plan of effort in this teaching was to visit two schools during the day, one in the forenoon and one in the afternoon. The arrangements were made in advance with the school commissioner or the trustees, and the fact that the speakers were to be at the schoolhouse was ordinarily announced some days in advance, so that parents and friends could visit the school at that time if they chose. The teacher was in every case willing to omit the regular exercises for an hour or two, in order that our instructors might take up the work of object teaching with the children. The motive in this work was to find out just how the pupils could be reached by means of object-lesson teaching, and just how much interest they would be likely to manifest in agricultural matters in case it were ever found to be desirable to introduce such teaching as a part of the district school work. The instructor would first explain the reason for his coming, and give the school

to understand that no new text-books were for sale and that no new classes were to be required at the hands of the teacher. He then ordinarily took up some simple object lesson. It might be, in one place, a stalk of corn which he had in his hand, and the process of growth of which he would explain from seed to harvest; it might be, in another case, the germination of a bean or a pumpkin seed; it might be, in another case, the habits or structure of a potato bug or some other insect; it might be, again, the reasons why there were knots and knot holes in the woodwork in the schoolhouse; it might be a very elementary talk upon the different plant foods which are in the soil; it might be, in other cases, a very brief sketch, with charts, of some fungus; and so on. These exercises were uniformly well received by both the pupils and the teachers, and this work has, I think, awakened more inspiration in the minds of our instructors than any other attempt which we have yet made to reach the people. The teachers in the schools have without exception expressed themselves as willing and desirous of taking up some such simple exercises as a rest for the pupils two or three times a week, if only they themselves could be instructed in the proper methods of carrying on the work. In order to afford this instruction to the teachers, we are now proposing to issue a series of experimental leaflets on object lessons and place these in the hands of the teachers.

There is no doubt of the necessity for work of this kind with the children. The love or antipathy of the farm is engendered at a very early age in the minds of the young. This has been demonstrated in these October meetings, when we have asked those children who live on farms and who still desire to do so to raise their hands, and we almost uniformly find that the number who desire to live on farms is far less than those who actually do live on them. With these children, ranging from six to fifteen years of age, the question of pecuniary profits upon the farm has appealed very little, but they are influenced directly by the environments under which they are living. These environments must be improved; and if they are, there is every reason to expect that children will love the country better than the city. We have thought, therefore, that it is eminently worth the while to instill the love of nature and the knowledge of a multitude of living things in the minds of the children. An important question here arises: What is to be the future of our rural schools and of the agriculture of the state if the present generation, as seems so clearly indicated, is not satisfied with rural life and feels no interest in maintaining or contributing to the agricultural and educational interests of the state? While many more rural schoolhouses must become deserted, there are thousands of children already in our cities who are deprived of school advantages because adequate room does not exist for them to get into the schools of the city. The further problem also arises of the difficult economic questions to be met in our cities as the result of congestion of population. The standard of teaching had been much improved in New York state. It had been gratifying to meet so universally teachers who are not only well qualified, but who are doing excellent work in their schools, and who have the true teaching spirit. Our educational forces are thoroughly efficient and well equipped, but there is a need of different application of our school work in rural districts. The life of the district needs to be changed, and it can in no way be so effectively done as through our schools. The best work cannot be done in schools with an attendance of only half a dozen children. School districts will be forced to even greater consolidation in the future, and it would be desirable if families could also be consolidated, for it is the lack of social opportunity that is felt. It is the isolation of the farm home that the boy and girl dislike in these days of close communication and contact with the world which are brought about by steam and electricity. School grounds could be enlarged. They should furnish the opportunity for planting trees and shrubs; for the planting of seeds and growing of flowers; for having a nicely-kept lawn, and, in time, these things, with their influences, would extend to the homes of children who do not have them and bring with them those

attractions and interest that make a home what it ought to be, pleasant and inviting in its surroundings.

All this work, as I have said, has been experimental—an attempt to discover the best method of teaching the people in agriculture. We believe that the most efficient means of elevating the ideals and practice of the rural communities are as follows, in approximately the order of fundamental importance: (1) The establishment of nature study or object-lesson study, combined with field walks and incidental instruction in the principles of farm practice in the rural schools; (2) the establishment of correspondence instruction in connection with reading courses, binding together the university, the rural schools, and all rural literary or social societies; (3) itinerant or local experiment and investigation, made chiefly as object-lessons to farmers and not for the purpose, primarily, of discovering scientific facts; (4) the publication of reading bulletins which shall inspire a quickened appreciation of rural life, and which may be used as texts in rural societies and in the reading courses, and which shall prepare the way for the reading of the more extended literature in books; (5) the sending out of special agents as lecturers or teachers, or as investigators of special local difficulties, or as itinerant instructors in the normal schools and before the training classes of the teachers' institutes; (6) the itinerant agricultural school, somewhat after the plan of our horticultural schools, which shall be equipped with the very best teachers, and which shall be given as rewards to the most intelligent and energetic communities.

All these agencies, to be most efficient, should be under the direction of a single bureau wholly removed from partisan political influence and intimately associated with investigational work in agriculture. Such a bureau should also have most intimate relations with the Department of Public Instruction, for not only must the public schools be reached, but teachers must be trained. The teachers in our public schools are now of a high grade, and they will quickly seize opportunities to prepare themselves to teach the elements of rural science. There should be facilities placed at the disposal of every normal school in the state, whereby it may receive courses of lectures upon rural subjects from teachers of recognized ability, and teaching-helps, in the way of expository leaflets should be placed in the hands of every teacher who desires them. All this work of carrying the modern university extension impulse to the country is too important and too fundamental to be confined to any one particular agricultural interest or to any one district of the state; and it is a work, too, which should be treated as a teaching extension and not as an experiment-station extension.

In conclusion, I must say that the farmers, as a whole, are willing and anxious for education. They are difficult to reach because they have not been well taught, not because they are unwilling to learn. It is astonishing, as one thinks of it, how scant and poor has been the teaching which has even a remote relation to the tilling of the soil; and many of our rural books seem not to have been born of any real sympathy with the farmer or any just appreciation of his environments. Just as soon as our educational methods are adapted to the farmer's needs, and are born of a love of farm life and are inspired with patriotism, will the rural districts begin to rise in irresistible power.

APPENDIX P.

INSTITUTES IN PENNSYLVANIA.

1. Every county holds an institute annually for a week. Towns, cities, and boroughs hold separate ones for a day or two, or for a week. The course of instruction and the corps of instructors in county institutes are entirely determined by the county superintendent, who is always an experienced teacher.

The considerations that secure attendance are: (1) Continuance of salary for the week, if the time be spent at the institute; (2) closing the schools by law during the institute week; (3) the knowledge that the county superintendent will discriminate against teachers not in attendance, and that directors will do likewise; (4) an institute programme that attracts, that wins outsiders interested in education.

Only sickness keeps teachers away as a rule. It is unusual for more than one in a hundred to be absent. Often every teacher is present. The effect of the institutes upon the schools is most potent. The professional spirit of the teachers is intensified, the quality of the teaching is improved, and the interest of the public in education is aroused. It is a great revival period, covering the state, the audiences being limited generally by the capacity of the largest halls available.

2. Local institutes are held at different dates in different sections of almost every county, conducted by the teachers of the neighborhood, and are attended by teachers and pupils from adjoining sections. There is generally but one local institute a year in each section. It continues for one day. The subjects all relate to work in rural schools.

Pennsylvania.

D. J. WALLER, JR.

APPENDIX Q.

THOMAS ARNOLD (1795-1842).

A STUDY FOR RURAL TEACHERS.

We are to study this month the contributions of Thomas Arnold to educational doctrine and practice. One of the great biographies in English literature is Dean Stanley's "Life of Thomas Arnold." An American educator says that to become familiar with this biography marks an era in the life of a teacher. For material concerning Dr. Arnold's pedagogical work consult Oscar Browning's "Arnold and Arnoldism" (*Foundations*, of February, 1897), Payne's "Lectures on Arnold" (pp. 129 and 261, Vol. IV., *Foundations*), "Tom Brown at Rugby," and Carlisle's abridgment of Stanley's "Life of Arnold."

The discussions to take place at the institute session, to be held on the 13th proximo, will be founded upon the following questions:

1. Give a brief biographical sketch of Arnold, calling especial attention to events having formative influence upon his character.
2. Describe the school at Rugby.
3. How did Arnold contribute toward dignifying the profession of teaching?
4. What was his theory with respect to teaching morality?
5. Compare Arnold's views concerning school management with the views advocated respectively by Locke and Herbert Spencer.
6. Prove: Arnold hated shams.
7. Discuss two excellent characteristics of his instruction.
8. What practical lesson with respect to self-government should the teacher learn from the study of Arnold?
9. Of what feature of the modern English school would Arnold have entirely disapproved, and upon what grounds?
10. To what one thing, above everything else, do you attribute Arnold's success?
11. Give in parallel columns a comparative view of the contributions made to educational history by Ascham, Locke, Spencer, and Arnold.

Each of the following paragraphs has bearing, direct or indirect, upon this month's lesson:

1. "A schoolmaster's influence is with the young, the strong, and the happy; and he cannot get on with them unless in animal spirits he can sympathize with them, and show them that his thoughtfulness is not connected with selfishness and weakness."—Arnold.

2. "What I want is a man who is a Christian and a gentleman, and one who has common sense and understands boys. I do not so much care about scholarship, as he will have immediately under him the lowest forms in the school; but yet, on second thought, I do care about it very much, because his pupils may be in the highest forms; and, besides, I think that even the elements are best taught by a man who has a thorough knowledge of the matter. However, if one must give way, I prefer activity of mind and an interest in his work to high scholarship; for the one may be acquired far more easily than the other."—From one of Arnold's inquiries for a master.

3. "A master should have sufficient vigor of mind and thirst for knowledge to persist in adding to his own stores without neglecting the full improvement of those he is teaching."—From a letter of Arnold to a newly appointed master.

4. "The lapse of years has only served to deepen me in the conviction that no gift can be more valuable than the recollection and inspiration of a great character working on our own."—Dean Stanley, referring to Arnold.

5. "There is no short or royal road to good teaching other than the king's highway of good living. He who wishes to teach well must, first of all, try to live well. He who wishes to do something in his chosen life-work, must aim to be something. He who wishes to have a good influence, must first be a good influence."—James H. Carlisle, of South Carolina.

6. "Not the most eloquent exhortations to the erring and disobedient, though they be in the tongues of men or angels, can move mightily upon your scholars' resolutions till the nameless, unconscious, but infallible presence of a consecrated, earnest heart lifts its holy light into your eyes, hallows your temper, breathes its pleading benedictions into your tones, and authenticates your entire being with its open seal."—From Huntington's "Unconscious Tuition."

7. "The glory of the children is unity with nature; the glory of the teacher is unity with childhood."—G. Stanley Hall.

W. S. SUTTON.

Houston, Tex.

APPENDIX R.

INTELLECTUAL AND MORAL EDUCATION.

[From Les Nouveaux Programmes des Écoles Primaires, a handbook containing the course of study, time tables, directions and explanations for the guidance of the teacher.]

INTELLECTUAL EDUCATION.

The aim of intellectual education in the common school is not to give an exhaustive course of instruction, but to secure to the child the practical knowledge along many lines which he will need in life, so taught as to exercise his faculties, cultivate and enlarge his mind, and thus constitute a true education.

To attain the end of true education it is demanded that there be a continual interaction of the minds of teacher and pupil. The teacher must lead the pupil from the known to the unknown, from the easy to the difficult, from the study of concrete realities to the abstract idea, thus developing the power to compare, to generalize, to reason, without the aid of material examples. The teacher must respect the pupil's intuitive power of grasping, not all truths, but the simplest and most fundamental, and must take care not to waste time in idle discussion, nor in the acquisition of useless knowledge. He must follow the guidance of nature, developing the judgment of the pupil by leading him to judge, the power of observation by making him observe much, the power of reasoning by aiding him to reason for himself.

MORAL EDUCATION.

Moral education is designed to complete, to elevate, and ennoble all the other instruction of the school. While the other studies develop skill and cultivate intelligence in certain special lines, moral instruction tends to develop the essential character of man himself. The power of moral education depends less on the precision and the logical connection of the truths taught than on strength of feeling, liveliness of impression, warmth of conviction. It moves the will. It does not undertake to analyze all the reasons for moral action, but it aims, before all else, to produce and to repeat the act; to form a habit of thought which will govern the life. It is not to be considered a science so much as the art of inclining the will toward the good.

In moral instruction the teacher represents society. He is to organize, and to make clear and definite, the fundamental moral ideas which the child brings to school; to strengthen these ideas; to make them a motive power in the habitual conduct of life, and thereby to train the child for the varied duties of citizenship.

The moral lesson must be kept distinct in character and form from other lessons. It is not enough to give the pupil correct ideas and to furnish him with wise maxims: he must be led to feel the majesty of the moral law. The teacher must keep clearly in mind that it is for him to develop, to render acute, to correct, to strengthen the moral sense by exercising often, but with extreme care, the conscience of the child. The instruction should be limited, especially in the earlier years, to the essential elementary points, to those which are clear, simple, yet imperative; avoiding the finer developments of ethics which are appropriate only at a more advanced age, it should aim to lead the child to a moral life by such an accumulation of beautiful examples, of good impressions, of wholesome ideas, of salutary habits, and of noble aspirations, that he may carry from school with his acquisitions of elementary knowledge that which is far more precious—a good conscience.

Success in this instruction demands that the teacher be an example of what is taught; that he avoid a mechanical method; that he feel, himself, the true character or force of every lesson, and that he watch the moral development of his pupils with the same solicitude as he watches their progress in scholarship; that he have as much care for the development of character as for that of intellect. This alone can give to the teacher the title of educator, and to elementary instruction the name of liberal education.

APPENDIX S.

CONTINUOUS SESSIONS IN NORMAL SCHOOLS.

[Inserted at the request of the Chairman of the Subcommittee on Supply of Teachers, as a suggestion worthy of careful consideration.]

A plan for continuous sessions in normal schools has been devised by President Shepard of the State Normal School at Winona, Minn., which, by virtue of a recent act of the legislature, will be entered upon July 1, 1897. It provides for continuous sessions in the schools at Winona and Mankato of four quarters annually of twelve weeks each. The quarters will open respectively July 1, October 1, January 1, and April 1. This arrangement of quarters is designedly in the interest of the rural school-teachers. New classes in all subjects will be commenced each quarter, and classes will graduate each quarter. Any rural school-teacher will be able to attend at least one full quarter each year. The work of each quarter will constitute a unit of credit on the regular courses of the school. The subjects and methods of introduction in the earlier quarters of the several courses will be those which are especially suited to the needs of teachers of rural schools.

A special summer-term course of six weeks, from July 1 to August 15, is provided for those whose schools begin before the close of the regular summer quarter (October 1). The work of this term will also apply on the regular courses as a minor unit of credit.

The advantages of this plan are apparent. The valuable and extensive equipments of the state normal schools will be made available throughout the year instead of standing idle, as now, many weeks during that part of the year when teachers, especially rural school-teachers, are most at liberty to attend school.

Teachers in rural school service may take up and pursue regular normal-school courses without withdrawing from teaching service. This will be a distinct gain, both to the teaching supply and to the self-supporting teacher who must alternately teach and attend school. It is well known that this constitutes the most valuable and most progressive class of rural school-teachers.

The beginning of new classes each quarter enables teachers to attend school with equal advantage any quarter when at liberty. The present practice of normal schools in graduating classes but once a year and at the close of the graded school year is greatly to the disadvantage of the rural schools. These graduates are largely absorbed by the graded schools, which just at that time of the year are organizing their teaching corps for the following year. When the rural school officers later in the year apply for graduate teachers there are usually none to be had. Under the "Winona" plan at least three classes will be graduated at times during the year when the graded-school situations are not open and just when the rural-school situations are open. This will tend to direct a large and valuable supply of normal-school graduates into rural-school service.

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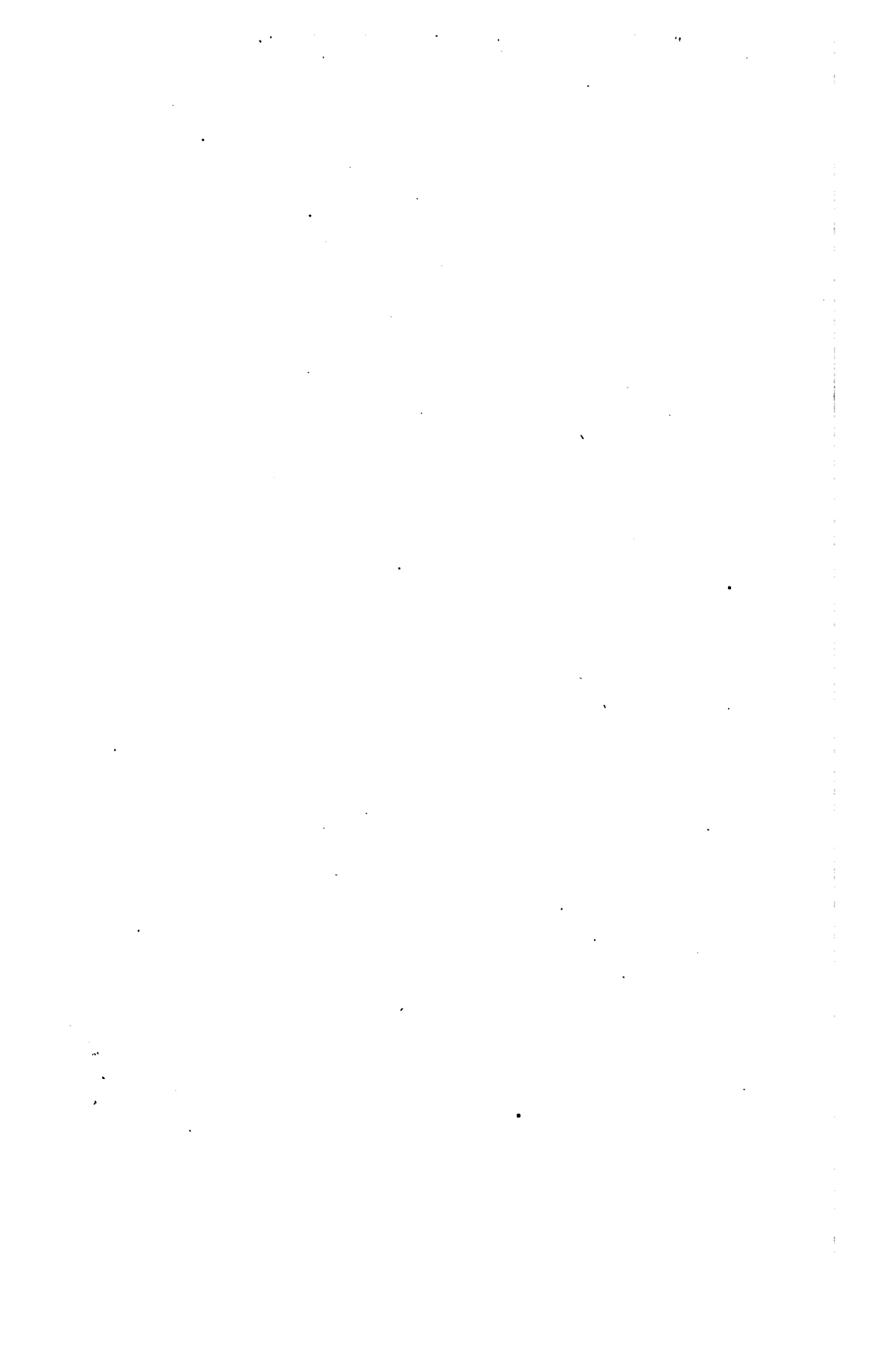
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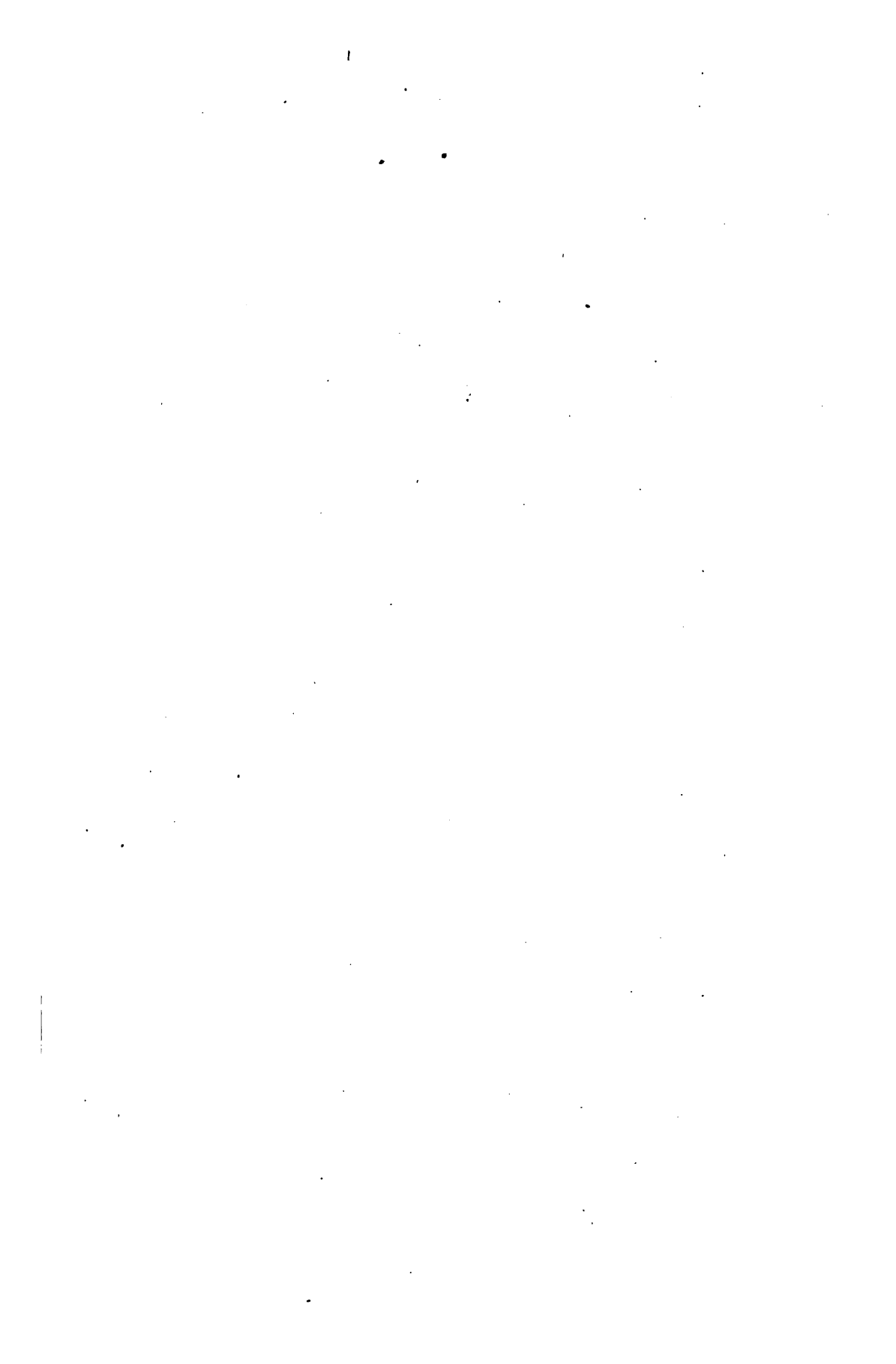
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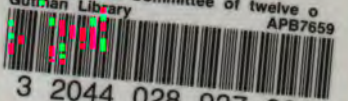




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