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REPORT

OF THE

Survey of the Public School System

OF

School District No. 1, Multnomah County, Oregon

Report of Committee
Appointed at the Taxpayers' Meeting,
held on December 27, 1912

*First Law School District, Survey com-
pleted.*

Submitted, November 1, 1913

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MRS. MILLIE R. TRUMBULL.

MR. L. A. LEWIS.

MR. J. A. MADSEN.

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Report of Survey Committee

The survey covered by this report had its beginning in a resolution introduced by Mr. W. B. Ayer and passed at the regular annual meeting of the voters of School District No. 1, Multnomah County, Oregon, held on December 27, 1912, in the following terms:

"Whereas, the average daily attendance at the public schools of this district has increased from 10,387 in 1902, to 23,712 in 1912, and the annual disbursements have increased during the same period from \$420,879.61 to \$2,490,477.28; and

"Whereas, it is of the utmost importance that the public schools should be kept at the highest point of efficiency, it is hereby declared to be the sense of this meeting that a full and complete survey be made of the public school system of this district, comprising:—

1. The location, type, character, and condition of existing school houses, and the estimated cost and type of future buildings;
2. Of the organization and methods of administration;
3. Of the form and manner of instruction;
4. The courses of study and the quality of the text-books;
5. The extent and need of playgrounds and gymnasiums;
6. The development of domestic science, manual training, trade, agricultural and horticultural schools;
7. The salaries of teachers and other employees;
8. The method and system of accounting;
9. The form of organization, and the examination of the school laws of the state, as applied to this district;
10. Of the average cost per pupil in comparison with other cities; and,
11. Of the scientific method of raising the required revenue, either by direct taxation or the issuance of bonds, or both;

Therefore, be it resolved, that a committee consisting of

Mr. Richard W. Montague,
Mrs. Millie R. Trumbull,
Mr. L. A. Lewis,
Mr. J. A. Madsen,
Mr. L. J. Goldsmith,

is hereby appointed to make a full and complete survey of every phase of the public school system of this district, said committee to serve without pay, but they are authorized and empowered to employ such expert investigators as may in their judgment seem necessary; and the directors of this district are hereby authorized and directed to apportion to the expense of said committee a sum not in excess of \$7,500.00, which sum shall be paid to the treasurer of said committee on the written order of the chairman and secretary thereof. Said committee shall have power to fill any vacancies that may occur in their membership, and shall report to the directors and taxpayers of this district their recommendations, together with all reports received and expenditures made by them."

Some question having arisen as to the power of the voters of the District to appropriate moneys to be expended for a spe-

cific purpose, the Board of Directors of the District at its meeting of January 22, 1913, set the question at rest by passing the following resolution:

"Resolved, that the Board of School Directors does hereby appoint Richard W. Montague, Mrs. Millie R. Trumbull, L. A. Lewis, J. A. Madsen, and L. J. Goldsmith to make a survey of the public schools of this district, in conformity with a resolution adopted at the annual school meeting held in the Lincoln High School, December 27, 1912, as follows: (Here follows the resolution then adopted), and that the committee present to the Board for payment all vouchers of the expense incurred in carrying into effect the terms of the resolution."

Under this grant of authority the task was undertaken. The Committee was clear from the outset that a survey, to be of any value, must be made by professional school men, and that the functions of the committee ought to be confined to the selection and employment of qualified experts to do the required work as thoroughly as possible within the limits of the appropriation. From all accessible sources the names of the educators in the United States best informed and of the best judgment in the matter of school surveys were sought, and letters were addressed to a large number asking for their views as to the proper scope and method of the proposed survey and for recommendations as to the persons best qualified to do the work. It may be remarked in passing that there was remarkable agreement among all those consulted on the latter point, and the work of the committee was thereby much simplified. At this stage of its inquiries the committee had and profited by personal interviews with George D. Strayer, professor of educational administration at Columbia University, who happened to be in the West on work of this character, and with President Foster and Professor Sisson of Reed College, from all of whom the committee received very valuable advice and suggestions. Not only to these, but to the many who replied to our letters the committee has to express cordial thanks. The disinterested spirit of public service shown by these men in giving freely to the committee of their valuable time and invaluable knowledge and experience, without thought of recompense, is beyond praise. The letters we received, taken together, constitute a discussion of the problems of school surveys and the related questions of highest value.

Among a considerable number of educators of high qualifications considered, the choice of the committee finally fell upon the authors of the accompanying report, whose names and professional occupations are set forth on a preceding page. Their report must speak for itself. The opinion, favorable or otherwise, of a committee of laymen as to its quality would have no weight with the judicious, but we cannot refrain from a word

of commendation for the capable, fearless and energetic way in which the work was prosecuted, nor from recording the conviction that our choice was singularly fortunate.

The report is presented precisely as it came from the authors, the understanding from the first having been that it would be submitted without editing, adding or suppressing. The original resolution requires the committee to present its recommendations, but the same reasons which obtain for the making of the report by experts have equal weight against the offering of detailed recommendations by the committee.

One recommendation, however, we have to make with all possible earnestness, and that is that the report receive the considerate attention of all officers, parents and thoughtful citizens of the district. In view of the prime importance and unquestionable wisdom of many of the suggestions of the report we believe that their execution ought not to be lost sight of, and we take the liberty to recommend further that a committee be appointed by the coming taxpayers' meeting to consider how far the recommendations of the report have been, are being, or can be carried into effect. The effort to bring our schools up to the highest pitch of efficiency, with the means available, should never be allowed to fail nor falter. We submit this report in the hope that it may bring home to all of us that the schools are maintained to fit the children for life, and are only successful insofar as that end is kept steadily in view, and that it may bear fruit in increased devotion by all of us to our supreme duty to give our children the means and opportunity of being wiser and better men and women.

Respectfully submitted,

RICHARD W. MONTAGUE,

MILLIE R. TRUMBULL,

L. A. LEWIS,

J. A. MADSEN,

L. J. GOLDSMITH,

Survey Committee.

Director's Letter of Transmittal

Mr. Richard W. Montague, Chairman of the Taxpayers' Committee, Portland, Oregon.

Dear Sir:

I have the honor to submit herewith to you, for your committee, the final report of the Survey of the public school system of School District No. 1, Multnomah County, Oregon, the same being what is commonly known as the school system of the City of Portland.

The final report is the work of my associates and myself, and the proper credit for chapters written by my associates is indicated by prefatory notes, or some other designation at the beginning of each chapter. When no such credit is indicated, the writing of the chapter was done by myself.

While individual members of the Survey thus took particular charge of certain aspects of the work and drafted certain chapters, I think that I may safely say for the other members, and certainly can for myself, that the report, as submitted, represents the combined judgment of all of those who worked on the survey. I was in Portland at the time each of my associates arrived, and started him and for a time worked with him on the survey. Conferences were held daily, and before each group left Portland, final conferences were held at which the main conclusions were agreed upon. In this way the work was under constant discussion, and the results of the daily observations of each man were presented to the other members. Since the chapters were written, those in Parts I and II have been exchanged among those who worked on these two parts, and approved by all. The same is true for all chapters in Part III. The facts and needs of the system were so plain, the system was characterized by such uniformity, and the supervisory conditions and needs were so evident to all, that an agreement on the general criticisms and recommendations to be embodied in the report was easily reached.

Aside from certain preliminary work which I did during the two days I was in Portland in March, the work of the Survey really began with the coming of Superintendent Spaulding and myself on April 6. Other members of the Survey staff came later—Professor Dresslar on May 10, Superintendent Francis on May 17, Professor Terman on May 19, and Professor Elliott on May 25—each remaining long enough to gather the necessary data and to complete his part of the local work. The time spent by each varied from one to three weeks. I was in Portland during the time each of the men was there, and worked with them. The statistical clerk for the survey, Mr. Tanner, spent a month in Portland, making tests in the schools and tabulating statisti-

cal information for the use of the Survey staff. The field work in Portland was completed the first week in June, and the months of June and July were spent in formulating the report.

Naturally, in such a short time, not every one of the sixty schools could be visited, and but a relatively small number of the over eight hundred teachers could be seen at work. Professor Dresslar, in his survey of the school buildings, visited all but two or three of the schools of the district; and almost every school principal was seen and questioned by some one of the Survey, as to the organization and administration of the school system. Beyond this either selected schools, typical of the different educational conditions found, were visited and studied in some detail (Spaulding), or studies of type forms of instruction were made (Francis, Terman). It was the common judgment of the different members of the Survey, and is so stated by three in their written reports, that the school system was characterized by so great a uniformity that no detailed study of many of the schools was necessary. What was attempted was to make such a survey as would enable us to state the nature of the work done, the actuating motives and spirit of the work, and the present and future needs of the system.

While of necessity this report must at times be critical, such has not been our main purpose. Had we desired to offer merely a critical report, or to summarize the merits and defects and cast up a balance, and stop with such, the task would have been much easier, and the report would have been much shorter. On the contrary, we have tried, instead, to outline a constructive program for the improvement and development of your school system, and have used criticisms only as a basis upon which to build. Such criticisms as are made, too, it is hoped will not be taken as personal by anyone, as they describe a condition rather than individuals. In particular we do not wish the report to be taken, in any sense, as a personal criticism of the outgoing superintendent or of the board of school directors, as we feel that the city owes much to the very faithful services of both. Your school system, despite its defects, is still above the average in worth.

Your city, though, is not an average city, your people are not average people, in particular your present and future educational needs are not average needs, and your educational possibilities are not average possibilities, and the time is now at hand when your school department ought to be transformed from a somewhat passive organization into an active, energetic institution, working for the improvement of all the conditions surrounding the life and work of your people. Some of the means for accomplishing this we have tried to point out in this report.

My associates on the Survey wish me to express for them, and I do also for myself, our appreciation of the courteous and

helpful assistance rendered us by the members of the Board of School Directors, the entire office force at the administration offices, the principals and the teachers. Mr. Sabin, Mr. Rigler, Mr. Thomas and yourself should be singled out for special mention. Mr. L. H. Weir, field secretary of the Playground and Recreation Association of America, was also very kind in allowing me to read and to make some extracts for my notes from his unpublished survey of the play and recreation activities and facilities of your city.

Respectfully submitted,

ELLWOOD P. CUBBERLEY,
Director of the Survey.

Stanford University, Cal., August 20, 1913.

Report *of the* Survey Staff



PART I

Organization and Administration

Chapter I

THE LEGAL ORGANIZATION OF THE PORTLAND SCHOOL DISTRICT.

State Origin of Schools

What is known as School District No. 1, of Multnomah County, Oregon, and commonly known as the Portland school district, is a state, and not a city creation and organization. Unlike the street or fire departments, or the park board, which are provided for in the city charter and are distinctively city institutions, the school department owes its origin to the state constitutional mandate and to the state's laws relating to education. The first provisional government for the Oregon country (1845) declared that "schools and means of education should be encouraged," and the constitution on which the territory entered the Union, framed in 1857, directed that "the Legislative Assembly shall provide by law for the establishment of a uniform and general system of common schools" for the state. To assist in the maintenance of such a state school system a state school fund was also created, and its use and method of distribution were provided for in the new constitution.

Under this authority the Legislature has since created a state school system. A State Superintendent of Public Instruction and a State Board of Education have been provided for, to look after the interests of the state in the matter of education; a body of School Law, controlling the school system in detail, has since been gradually evolved; and County School Superintendents and District School Directors have been created, to see that the state purpose is carried out locally.

The School District and the Municipality

The school district has been made the unit of educational organization by the state, and the districts have been declared by law to be "bodies corporate, competent to transact all business coming under their jurisdiction." The boundaries of the school districts are controlled by a county board, known as the district boundary board, and the distinct organization of a school district is shown by the provision that its boundaries may be different from those of a municipality of which it forms a part, and that it may even lie in two counties. This difference for Portland is well shown by Figure 1, to be found on the next page, which shows the city and school-district boundary lines as they were early in 1913. Even when the boundaries of a school district are one and the same as those of a municipal corporation, the intent of the law, and the decisions of the courts in a number of states, are that the school district is a separate

and distinct corporation from the municipality, and created for a different purpose. The municipality exists largely for local

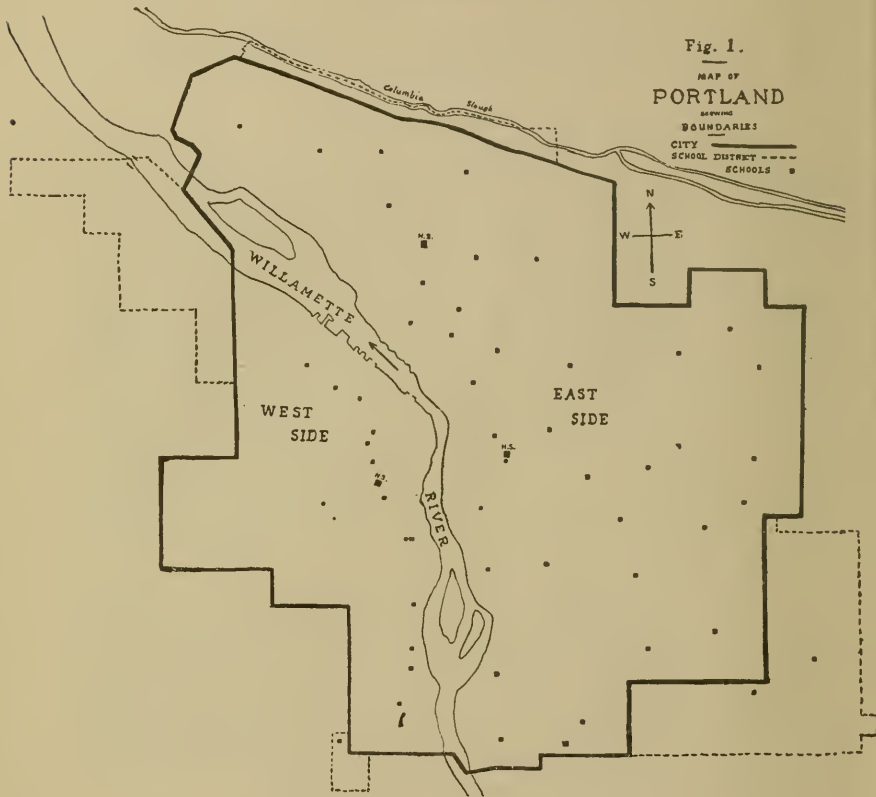


FIG 1. CITY AND SCHOOL DISTRICT BOUNDARIES COMPARED

ends; the school district exists largely for the carrying out of a state purpose.

Portland a First-Class District

In carrying out this state purpose the State of Oregon, for convenience in granting powers, has classified the different school districts of the state into three classes. The first class, to which Portland belongs, comprises all school districts in the state having 1000 or more children of school-census (4 to 20 years) age. Such districts, largely because of their size and the larger volume of their business, are allowed to elect five School Directors, instead of the three provided for other districts; may appoint a Clerk, outside of their own membership; may employ a superintendent of schools; may prescribe their own courses of study; may examine their own teachers; may provide evening

schools; and may create an indebtedness. In 1911 all school districts having 10,000 or more school children were permitted to create a Teachers' Retirement Fund, and in 1913 all school districts having 20,000 or more school children were permitted to establish and maintain many types of special schools, and to adopt their own text-books.

All of these powers, though, come from the state and not from the city, and all of these powers would apply to any school district in the state of the same class or size. The district is numbered and takes its legal name from the county and state organization; its powers all come from the state; it could be changed in form or purpose at any time by the state; and it exists primarily for the carrying out of a purpose which our American states long ago decided to be in the interests of the state. Whatever the state decides to be wise, in the matter of public education, it can thus order the Portland school district to do or to provide. The provision of education for its children is thus not left to local desire or local initiative, as is the case with street lights or sidewalks, but is required by the state in the exercise of its inherent right of preservation and improvement.

Advantages and Disadvantages of State Control

This fact has its disadvantages, as well as its advantages. It is much more likely that Portland will desire to advance more rapidly than the state, in extending its educational system, than that the state will outstrip Portland. This will mean that Portland will be compelled, from time to time, to secure the permission of the legislature of the state before it can make much-needed educational advancement. For example, until the present time the Portland school district has been compelled to use the uniform state series of text-books in its elementary schools, though these were adopted with the needs of the rural schools in view and were, in the judgment of the members of the Survey staff, in a number of cases wholly unsuited to the needs of any modern educational system. It would be hard to conceive of any city, with a modern educational organization, using such books as were forced on the city by the state. Another illustration is the retention, in a city of 250,000 inhabitants, of the old, outgrown and in many states entirely abandoned system of holding an annual meeting of taxpayers of the school district to levy the annual school tax and to make needed appropriations for the schools. The only thing the meeting could do with any safety would be to follow the judgment of the Directors, and if this is to be done there is no wisdom in holding the meeting. We were told that the tax is frequently voted by a mere handful of citizens. Such a situation is fraught with constant danger. If, for any cause, antagonisms should arise, it would be easily possible for a very few people to quietly appear and defeat the tax, and

thus imperil the work of the schools for a year to come. A city the size of Portland should be given legislative permission to abandon this outgrown country-school provision, and to substitute instead a modern method for levying the school taxes.

The state oversight and control has its advantages and disadvantages, also, in that it permits interested parties to appeal from the decision of the elected representatives of the school district and secure legislation of a kind which suits them. An illustration on the good side would be laws compelling the Board of School Directors of the district to establish vacation schools, to introduce instruction in domestic science, to provide proper playground facilities, or to establish proper sanitary conditions and health supervision. A good illustration on the other side is the 1913 life-tenure-of-teachers bill, which is considered more in detail in Chapter IV, and which was secured from an unthinking legislature by representatives of the elementary teachers of the city. Probably no legislation has ever been enacted in the history of the Portland school district which is more calculated ultimately to destroy the efficiency of the school system.

Need of a New City Law

The legal organization surrounding the Portland school district is in part a village organization, and the district needs a new educational charter. This could be secured in the form of a general law, applicable to any city in the state having 20,000 or more school children. The method of election, size, and organization of the Board of School Directors are along good lines, in that such provide for a continuing body and permit of a continuing educational policy, and would best remain as they are. The law should in addition provide for a good modern educational organization for such a city, and should specify the main powers of the Board, the Superintendent of Schools, the Superintendent of Properties and the Clerk or Secretary. Certain powers and duties should be guaranteed to each, and they should be safeguarded in the exercise of them by law. The right of the district to make its own courses of study, to adopt its own textbooks, to set its own requirements for entering the teaching service, to contract with its own teachers, and to establish such schools and such types of educational activity as seem needed, should be included in the law as a matter of course. The right to determine the rate or the amount of school taxes to be levied, up to certain maxima, for buildings, equipment and annual maintenance, ought to be given to the Board of School Directors alone, and with the further right to submit the question to a vote of the people if, in their judgment, still larger sums are needed to meet emergencies or special educational needs.

In the Appendix to this Report (Appendix A), a suggested state law for the reorganization of the Portland school district,

along good administrative lines, is given. This proposed law is based in part on the present laws now in force, and in part on the best experience of those American cities which have recently secured a good administrative law for the management of their schools.

A City System, Nevertheless

While the Portland school district thus has a distinct legal organization, separate from the municipality of which it forms a part, and derives its powers from the state rather than from the city, the schools are nevertheless city schools, and should primarily answer the city's needs. That education which is best suited to the needs of such a city will best answer the state purpose in requiring the maintenance of schools. The character of the population of Portland, the social and educational demands of its people, its actual and per-capita wealth, and the industrial and commercial needs of the present and future city, all serve to modify the character of the school system which should be maintained and the type or types of education which should be provided. As the city grows in size, and its social and educational problems increase in complexity, the state should grant increasing liberty to the city to enable it to meet its peculiar educational needs. What the state should be primarily interested in is that certain minimum standards should be met, and not in limiting new efforts of communities. A too-rigid interpretation of the old constitutional clause providing for "a uniform and general system of schools" for the state, or a too great interference by the legislature in matters largely local by nature, can in part defeat the very object for which the educational system was established. In the case of Portland the legislature should provide the city with a legal organization suited to modern needs, after some such a plan as is suggested in Appendix A, and then refuse to interfere except in matters of fundamental importance.

Chapter II

THE ADMINISTRATIVE ORGANIZATION OF THE PORTLAND SCHOOL DISTRICT.

Co-ordination of Authorities

The Portland school district thus exists in obedience to state law, and its form and its powers are alike derived from the state. To carry out this state purpose of education, for such children as live within the boundaries of the Portland school district, the state has provided for the election, by the property holders of the school district, of a board of five School Directors. One new member is elected each year, for a five-year term, and on a day set by law for the annual school meeting of the district. The main powers of the Board so elected come from the Legislature, and have been formulated in the school law of the state. The State Superintendent of Public Instruction and the County Superintendent of Schools interpret this law, and apportion to the district its proportionate share of the income from the state permanent school fund, and from the county school tax. The County Boundary Board regulates the boundaries of the school district, as for all other districts within the county. The County Superintendent of Schools sits as a member of the district (city) Board of Examiners, for the examination and certification of all teachers for the school district.

The Board Organization

The Board of School Directors so elected is charged with the maintenance of the schools required by law within the district. In carrying out this purpose they not only meet as a body, but have also subdivided themselves into eight committees for further work. The work of maintaining the schools is also further organized under two main departments, practically independent of one another—one for the business work, under the School Clerk; and one for the educational work, under the Superintendent of Schools. These relationships are well shown in the diagram, given on the opposite page.

An examination of this diagram, and a comparison of this diagram with the one given on page 22, showing a desirable re-organization, will prove both interesting and instructive. In Figure 2 the independence of the two main administrative departments, as well as the lack of co-ordination of the different city departments working at the educational problem, is seen; in Figure 3, on page 22, the unified educational organization is the prominent feature.

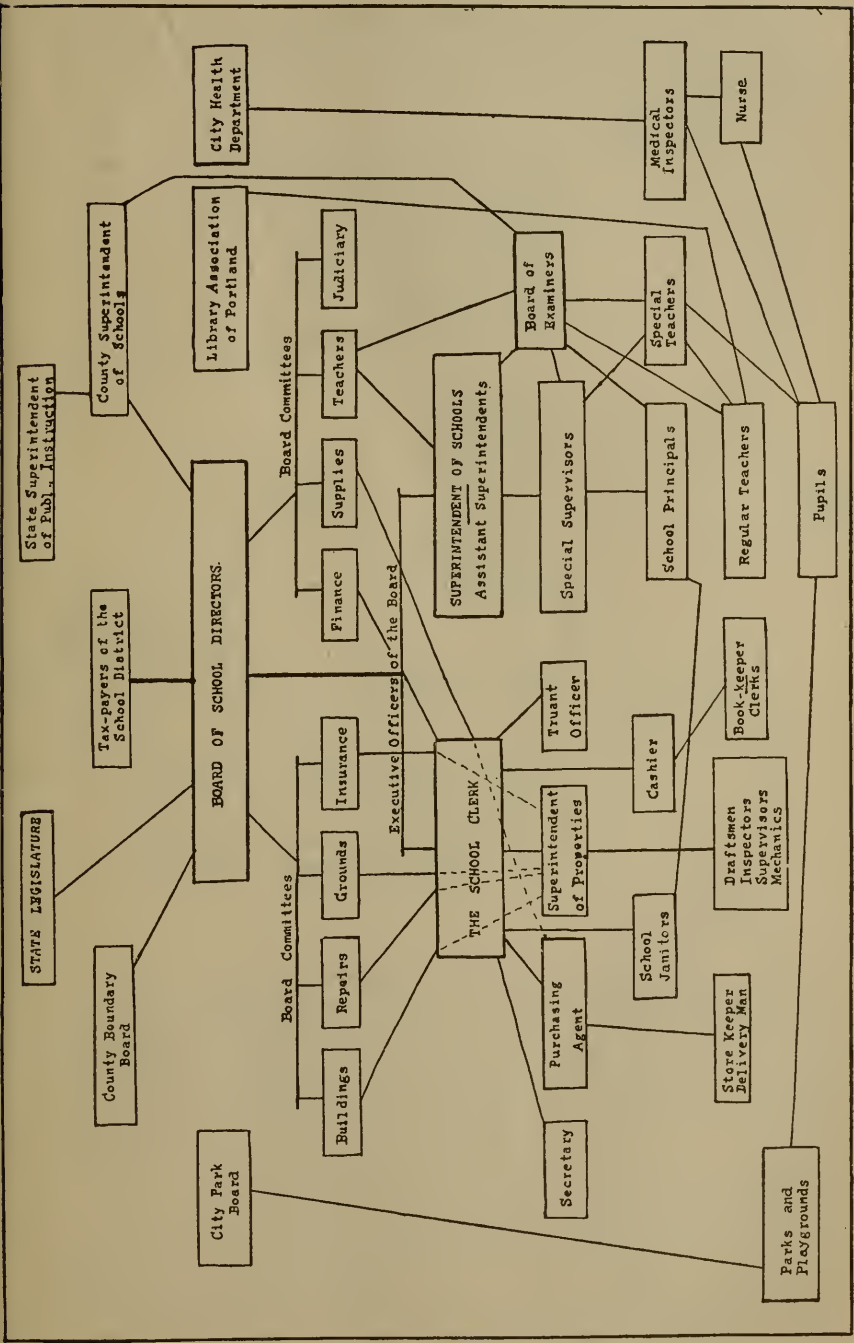


FIG. 2. PRESENT ADMINISTRATIVE ORGANIZATION

Business Department Organization

The business department, as organized under the School Clerk, is further subdivided, as follows:

SCHOOL CLERK.	Secretary. Truant Officer	Cashier.	Purchasing Agent.	Superintend- ent of Properties.	Janitors.		

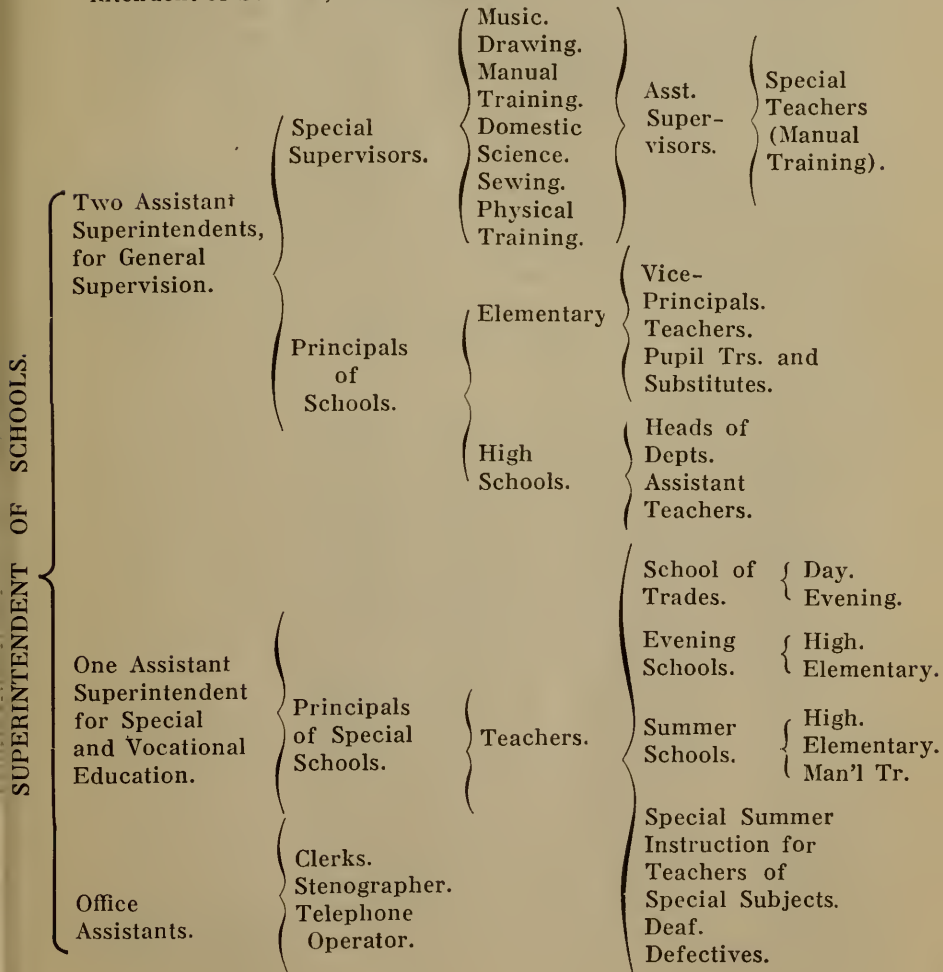
This department seemed well organized, and quite efficiently managed throughout. The work seemed to be handled both expeditiously and economically, and an examination of the methods and forms used seemed to indicate that fairly good business methods were employed. (See criticism of reports and forms in Chapter XVI.) In the judgment of the different members of the Survey staff, this department seemed to be the better organized and more efficiently managed of the two. This is perhaps only natural, as its work is perfectly definite, the principles of good business organization are well known, the personal element plays a much less important part, and efficiency in service is much easier to obtain and to maintain. It is the part, too, which the Board of School Directors are most capable of properly organizing and supervising; it is the part that, both

by training and experience, they are best able to understand; and there is a constant tendency on the part of Boards to over-emphasize the importance of this side of the school organization.

As the books of the School Clerk are carefully audited each year, the honesty of the business office was assumed, and no attempt was made to check up the finances or expenditures of the district. The annual financial reports are made according to the forms recommended for use by the United States Census Bureau and the United States Bureau of Education, which is commendable.

Educational Department Organization

The educational department, as organized under the Superintendent of Schools, is as follows:



The organization of the educational department is much the same as that found in many other cities. Unlike the business department, where a proper form of organization is well established, in the educational department the form of organization is less important than the spirit which pervades the organization. Personality, insight and breadth of view count for much more here than in the business department. The work is far less mechanical and less of a routine nature, is much more difficult to organize by means of rules and regulations, and depends much more on the quality of the leadership at the top, and the freedom given the leader or leaders to work things out in their own way, than upon any scheme of organization which can be devised. It is in this department that boards of school directors too frequently make the mistake of trying to over-organize, and of trying to oversee its affairs too minutely. A living and growing school system, insofar as it relates to the educational organization, cannot be a product of organization and routine.

Board Meetings

Two meetings of the Board of Directors were visited, and different members of the Survey staff examined the proceedings of a number of meetings. The work of the Board was a matter of much consideration at the conferences of the Survey staff, as it was felt that the work and the attitude of the Board was, in a way, the key to the whole situation. In addition, the writer of this chapter has carefully examined the minutes of proceedings of all meetings held during three months of the present year. These were as follows:

February	20—4:00	P. M.—Regular Meeting.
February	24—8:00	P. M.—Special Meeting.
February	28—4:30	P. M.—Special Meeting.
March	6—4:00	P. M.—Regular Meeting.
March	12—8:00	P. M.—Special Meeting.
March	14—8:00	P. M.—Special Meeting.
March	17—8:00	P. M.—Special Meeting.
March	20—4:00	P. M.—Regular Meeting.
March	25—4:00	P. M.—Special Meeting.
April	3—4:00	P. M.—Regular Meeting.
April	8—4:30	P. M.—Special Meeting.
April	10—8:00	P. M.—Special Meeting.
April	12—8:00	P. M.—Special Meeting.
April	17—4:00	P. M.—Regular Meeting.
April	21—8:00	P. M.—Special Meeting.
April	28—8:00	P. M.—Special Meeting.
May	1—4:00	P. M.—Regular Meeting.
May	6—5:00	P. M.—Special Meeting.
May	12—5:00	P. M.—Special Meeting.
May	15—8:00	P. M.—Regular Meeting.
May	19—8:00	P. M.—Special Meeting.
May	21—8:00	P. M.—Special Meeting.
May	23—8:00	P. M.—Special Meeting.

From a mere reading of the above list one must be struck with the tremendous number of meetings held. When one re-

members that the Board also has eight different committees; that each Director is a member of four of the eight, and that the Chairman of the Board is *ex-officio* a member of all of the eight; and that meetings of these committees, to consider matters referred to them by the Board and to formulate reports on the same, must also have been frequent; one is led to wonder how anyone other than a man of wealth and leisure, or a young man of no particular business, could afford to accept membership on the Board of School Directors for the Portland school district. It must require a very deep sense of public duty for a man who must earn his living to do the work of a school director under the present methods of handling the public's educational business, and many a good man must be discouraged from serving on the board because he cannot afford the time necessary to attend to the business. Such conditions offer a constant temptation to the young budding politician, or the busy-body with no business, to seek membership on the board for personal rather than public ends. The different members of the Survey staff were much impressed with the devotion to the public interest of the different members of the Board of School Directors, and in particular with the time spent on the work and the interest taken in it by the President of the Board, and they consider it all the more remarkable that the district is able to retain the services of such men, under the present plan of doing business.

The Board Does Too Much

A reading of the minutes of the meetings is sufficient to show that the Board of School Directors attempts to handle in person far too many things, and to transact, through its committees, and then by the Board as a whole, many pieces of business which ought to be delegated to the heads of departments and other subordinates. The minutes show clearly that the Board spends a large proportion of its time trying to handle technical and professional matters, largely relating to teachers and instruction, which no Board is competent alone to handle, and which ought to be referred to the educational department for attention. A reading of the minutes further shows that the Board also spends another large proportion of its time in receiving communications, referring them to committees, considering them there, reporting them back to the Board with recommendations, and then formally taking action, when the matters considered are of such a special or routine nature that the communications should have been referred at once to the heads of departments for action. Many of the communications, too, should not have gone to the Board at all, and would not if it were generally understood by the people that the proper heads of departments were in possession of power to act on such matters. Many other communications are referred to committees, considered there, and reported

back with the recommendation that they "be received and filed." In most of the cases the very nature of the communication made such action the perfectly obvious course, and much time could have been saved if the Chairman had so directed the Clerk, on his merely reading the title. By a proper organization of the educational business, it ought to be possible to transact all of the school business of the district by a meeting of an hour and a half once in two weeks. All such means of saving time are important, if citizens of ability and mature judgment are to be attracted to positions on the Board.

Types of Business

The following tabulation, taken from the minutes above referred to, will give some idea as to possible ways of saving time, expediting business, and at the same time improving the service, all of which might easily be put into effect by the Board. Practically all of the following matters were referred to some committee for investigation and report, and then were acted on by the Board as a whole at a subsequent meeting.

1. Numerous requests from principals, teachers, parents' organizations, citizens, clubs of various kinds, and one from the parochial school authorities, asking permission to use school buildings or grounds for some purpose, usually of an educational nature.

The action on all of these was so nearly uniform that certain general rules for the use of school buildings and grounds could easily be formulated, and all such requests could then be turned over to the School Clerk or the Superintendent of Properties for consideration and action, the Board delegating to them their authority to act. In many cases the Superintendent of Schools would need to be consulted; seldom would it be necessary to appeal to the Board for specific instructions.

2. A number of requests from principals of schools for permission to hold entertainments in their buildings, usually to raise money for the purchase of books or apparatus for the school.

3. The trade school asked permission to hold an annual exhibit of its work and to send invitations to parents.

4. The trade school asked permission to send an exhibit of its work to the Eliot school.

5. A teacher of a 9B class asked permission to hold a little entertainment in her school room, after 2:30 P. M., for the purposes of a class memorial.

These requests are all much of a class, all are educational in their nature, and full authority in such matters should be given to the Superintendent of Schools. In cases 3 and 5, the principal of the school should feel that he had full authority himself. If the Superintendent cannot handle such matters, the sooner the Board gets a Superintendent who can, the better, and if the

principals cannot take and wisely use such responsibility, they ought either to be replaced by principals who can, or have their salaries reduced to that of mere clerks. It is a waste of money to pay salaries large enough to buy judgment and discretion, and then not permit judgment and discretion to be used.

6. A principal asked permission to hold a meeting of a mothers' club in his school building.

7. A principal asked permission to hold a meeting in his building at which could be reported to his neighborhood the results of the Human Welfare Congress, held at Reed College.

8. Two principals asked permission to hold school-garden meetings in their buildings, and to make such an announcement to their schools.

9. Two requests from a high school principal for permission to invite distinguished men to speak to the students of his school.

Full authority in all these cases should rest with the school principal, with perhaps advance notification of the Superintendent of Properties as to the use of school buildings at irregular hours. The schools are public property, and the Board should encourage their use as neighborhood centers, and for any legitimate public purpose. If a school principal is to be much of a neighborhood leader, he must feel free to invite his neighbors to meet with him at his school for any legitimate end. If the principal cannot use such authority wisely, his successor ought to be selected soon. In the case of the high school principal, it is foolish to pay \$3000 a year to a man who isn't competent to invite proper persons to address his students.

10. Certain teachers requested permission to use a manual training center, for their own instruction.

Authority to grant such a request should rest with the principal of the school, or the supervisor of manual training; such requests should be encouraged; and such requests should be granted without question.

11. The teachers' committee of the Board brought in a report directing the Superintendent of Schools to instruct the schools to observe Peace Day.

The Superintendent, principals or teachers should feel that they had such authority, without being directed. Matters relating to instruction in the schools should be left entirely in the hands of the Superintendent of Instruction.

12. The students of the trade school present a petition, asking for the removal of an instructor in the school.

13. Groups of teachers present recommendations in favor of their principal, for selection as an Assistant Superintendent.

14. Groups of teachers recommend the selection of certain other teachers in the system, as a school principal.

Such a petition as 12 should not be received, except through the Superintendent of Schools; such as 13 and 14 are complimentary and meaningless, and not good for the system. In any case the Superintendent of Schools and not the Board should receive them.

15. The Superintendent of Schools asks permission to have a small eight-page folder printed, relating to the adoption of text-books.

Evidently the Superintendent of Schools has no authority to take the initiative in such matters. The same is evident, from other minutes, with reference to the Superintendent of Properties. In a school system the size of that of Portland some freedom of action in the matter of expenditures should be granted heads of departments. The Superintendent of Schools and the School Clerk each ought to be able, on their own authority, to incur an indebtedness up to \$100 a month, and the Superintendent of Properties a still larger sum. A school principal ought also to have some limited authority in this direction. Probably no more money would be spent, as these officers are as interested as the Board in using the school money wisely, but the trust and confidence reposed would lead to better service, and the Board as a body and the members as individuals would be relieved of much unnecessary detail work.

16. The principals' monthly property reports are presented to the Board each month, and then referred to the Buildings, Grounds, Supplies, and Repairs committees for consideration.

The wisdom of requiring such reports oftener than once a year may be seriously questioned, though reports as to special needs should be proper at any time. In any case, such reports should be received, tabulated and filed by the Superintendent of Properties, and the attention of the Board called only to such matters as involve important expenditures or the authorization of new work. The details as to the physical condition of the school property should be carried in the head of the Superintendent of Properties, and the Board and its committees should not spend their time in going over a lot of minor details, of little relative value.

17. The Board spent two entire sessions, and parts of two others, in interviewing principals and special supervisors as to the efficiency of their teachers.

18. A communication is read and referred, from a man who desired to interview the Board with reference to his employment as a supervisor of music.

19. One member of the Board stated to a member of the Survey staff that as many as one hundred applicants had seen him this spring, with reference to their employment as teachers in the schools, and that it had been a great drain on his time.

20. Another member stated that a number of persons had visited him with reference to employment as janitors.

These are all good examples of waste energy and effort, for the recommendation of teachers for employment should rest entirely with the Superintendent of Schools. This is perhaps one of his most important functions, and if he cannot handle this, the sooner someone who can is selected in his place the better. It is the one thing which the Board is least capable of handling, the one which wastes most of their time, and the one where they make the most mistakes and create the most bitter antagonisms. It is a wise Board of School Directors which knows enough to let this whole matter alone, and to place the responsibility for selections and dismissals squarely on the shoulders of the Superintendent of Schools. The selection of janitors, similarly, should be placed with the Superintendent of Properties, subject to the approval of the Superintendent of Schools.

This Condition an Inheritance

The numerous board meetings and the handling of many details of administration which ought to be passed over to the Board's executive officers, are symptoms of a condition which is not uncommon in school systems at the present time, and for which, in the case at hand, no one in particular is to blame. The plan of doing business in that way has descended from the days when Portland was a village, and the methods for handling the business are still in part village methods. The Board, no doubt, groans under the heavy burden, but, not seeing any better way, goes through it from a deep sense of public duty. They are not themselves to be blamed for the condition which they have inherited, and are, in fact, victims of their own system. They owe it to themselves, though, as well as to the best interests of the schools under their charge, to break through the system and evolve a better plan of work.

Bad Effects on the System

The present method of conducting the educational work of the district is not only wasteful of the time of the Directors, and wholly unnecessary from an educational or a business point of view, but it has a depressing effect on the school system as a whole. It was the common conviction of every member of the Survey staff that the Board of Directors, while thoroughly honest, deeply interested, and extremely self-sacrificing of their time and business interests, were nevertheless doing entirely too much in the handling of the details of school administration, and that the results on the school system of such activity were bad. The Board of School Directors is too prominent in the administration; the executive officers have too little authority and too

little initiative; and the effect of such a condition is felt down through the whole school system.

Whether the Superintendent of Schools has continually shirked responsibility by passing it on to his Board, or whether the Board has assumed authority and taught the Superintendent that he must act cautiously, and must not assume too much authority, we do not know. With the change in Superintendent the point is not important, except for the future. Whatever may be the origin or the cause, the Superintendent of Schools is given at present too little authority, and the one-year term of office tends to hold him in subjection. As a result he comes to act cautiously, and to defer continually to his Board. He comes to the meetings, but his opinion is seldom asked, and seldom offered. Matters which are clearly within his province are referred to Board committees, and not to him. He is entirely too little of a leader; entirely too much of an office clerk. Having little authority himself, he can in turn give but little to his principals. They, too, must be cautious, and must not assume much personal authority. They in turn pass on the same spirit to their teachers, with the result that all who really think come to feel themselves part of a system, in the devising of which they were not consulted, and in the conduct of which they have but little to say.

The result on the school system is about the same as where a strong and capable mother assumes all authority over her boy, forms his judgments for him, decides what he shall wear, tells him what to do and how he shall do it, and directs all of his important actions. Her judgments may be, in most cases, better than his, but the result of the long training is that the boy grows up dependent on his mother, weak and indecisive, lacking in resolution or will power, and lacking in force and manhood. A Board of School Directors may, similarly, prevent the proper and healthy development of a school system by too minute an attention to the details of administration.

It was the judgment of the different members of the Survey staff that something of such a condition exists in Portland at the present time, and that the fundamental weakness which seems to pervade the whole system goes back largely to this source. If the Board of Directors in the past had been less efficient, if they had put less time and less devotion into the service, if they had forced their Superintendent of Schools to assume more authority and to pass more authority down to his principals and teachers, the system would be stronger and more capable of swimming alone than it is today. The strength of the system as it is is due more to the excellent character of the children in the schools and to the good training, youth and good sense of the teachers, than to the system of supervision which ought to guide and direct it.

The Way Out

The present time offers a good opportunity for a change and a reorganization which will mean the remaking of the school system, and a change which will introduce right principles of organization and relieve the Board members of many of their onerous duties.

The present independence of the departments ought to be replaced by the centralization of these into one department, the educational, with subdepartments, under proper executive heads. The present independence of the School Clerk, though it works very well with the present appointee, is fundamentally wrong in principle. Schools are maintained for the sake of the educational side, and the success of affairs on the purely educational side is dependent, in no small measure, on the hearty co-operation of both the School Clerk and the Superintendent of Properties. While exercising large independent jurisdiction in many matters, both should be subject to the jurisdiction of the Superintendent of Schools. He cannot, properly, be held accountable for the successful conduct of the educational affairs entrusted to him unless, in the final analysis, he has such final control. Under the present plan there are two departments, clear and distinct, when there should be but one, and that one the educational, properly subdivided for efficient administration. The diagram on the following page shows the relationships which ought to exist.

The Supervision of Instruction

At the head of the school department is the Superintendent of Schools. His chief function will be the supervision of instruction, but with final jurisdiction, subject only to the Board of School Directors, in the case of other matters than instruction. He should be made the real head and leader of the school system in fact, as well as in name, and full responsibility for the successful conduct of all departments of the educational service should be placed squarely on his shoulders. He should, accordingly, be given tenure, salary, jurisdiction, and authority commensurate with the responsibility placed upon him. He should be elected for three or four-year terms, so as to give him independence in action. The choice of his immediate subordinates, his cabinet as it were, should rest almost entirely with him, and those who cannot do the work he wants done should be relieved of their duties. So long as he can stand up under such responsibility, and handle the affairs of the department with wisdom and good sense, the Board should stand by him and his recommendations; whenever the Board comes to feel that he does not come up to the position which has been created, or does not fill the position as it should be filled, they should call for his resignation and select someone else who has

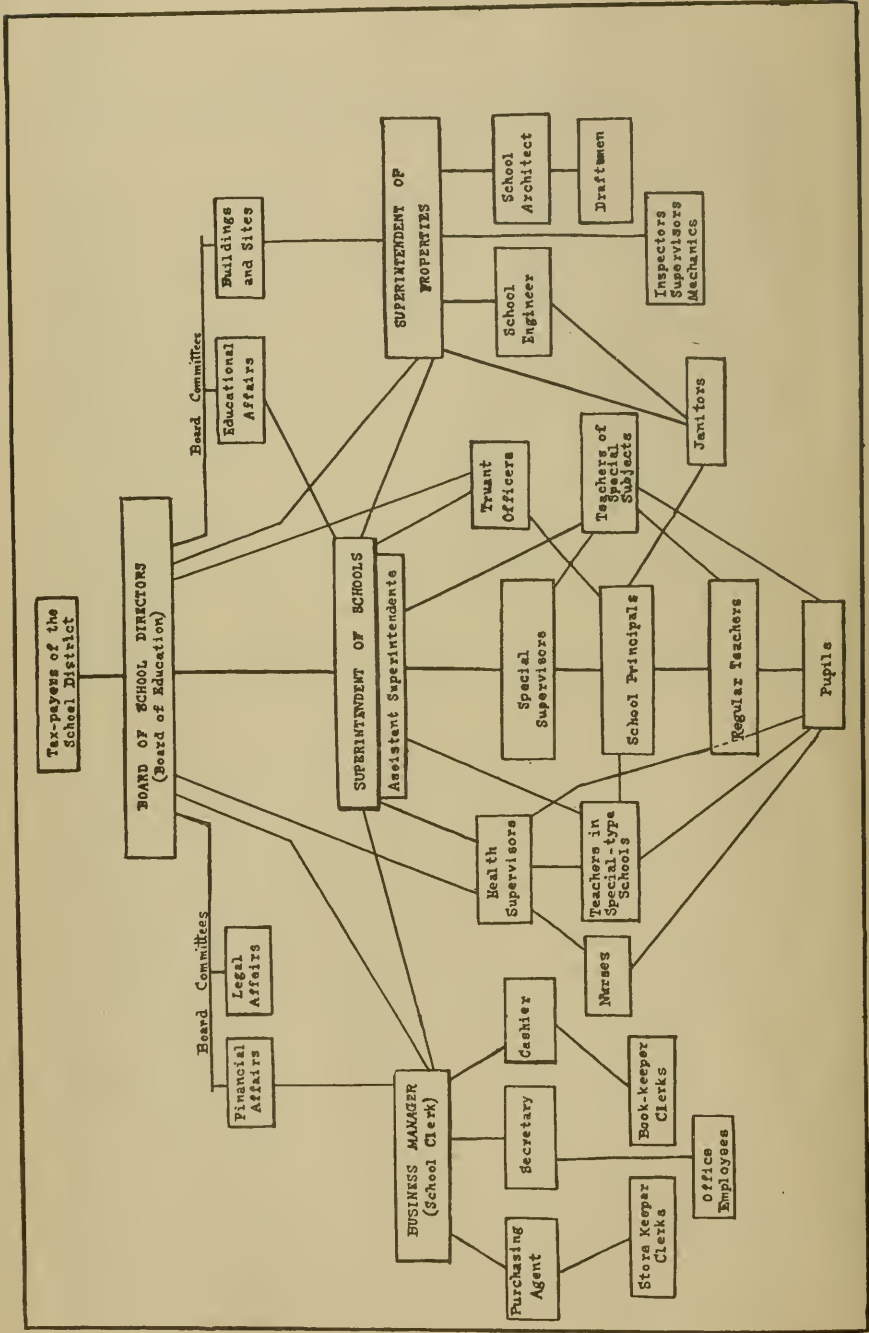


FIG. 3. PROPER RELATIONSHIPS IN ORGANIZATION

the proper personality, courage, knowledge and insight. In our large city school systems today it is the Superintendent of Schools who gives character and tone to the whole system. What a school system is it is largely because of the insight, personality, and force of the Superintendent of Schools.

To the Superintendent of Schools also should be given final control of the courses of study in the schools; the selection of text-books and supplementary books to carry out the courses of study; the selection, promotion, and dismissal of teachers; the assignment of teachers and principals to their duties; the making of rules and regulations relating to the conduct of the schools; and the general control of the educational work of the school system. In many of these matters, in nearly all of them in fact, he will act only after consultation with subordinates, particularly the assistant superintendents and the principals. As an advisory body the assistant superintendents should form for him a kind of educational cabinet; this cannot be, though, unless they are of his choosing, and fully in sympathy with him in what he is trying to do.

As long as the Board has confidence in the judgment and ability of the Superintendent he should be supported in his acts; when they cease to have such, they should call for his resignation. They should not assume authority in educational matters themselves, nor permit him to evade his proper responsibility by putting it off onto them. Book agents, applicants for teachers' positions, disgruntled teachers and principals, and others seeking favors in the educational branch of the school department should, at once, be referred to the Superintendent of Schools, with the statement that the Board makes it a rule to take no action except upon his recommendation. When once this is understood the time of the Board members will not be consumed with unnecessary interviews, and the service in the schools will be very materially improved. The Superintendent of Schools will make some mistakes, of course, but far fewer in such matters than will the Board of School Directors. The Superintendent exercises his best judgment in the light of his long experience, and according to certain well-established educational principles; a Board of School Directors, in most educational matters, simply guesses.

Business Department

The present organization of this department is good, and should be continued as it is with few if any changes. The Clerk holds a position analogous to that of Business Manager in other school systems, and in Appendix A this term has been substituted. The Board followed good principles in appointing to this position one who had been a school principal, for by the very nature of the work to be done it is easier to develop business sense in a good school man than educational sense in a

business man. The Clerk, or Business Manager, should be kept close to the educational management, and made to feel that he is a part of the educational organization. The present isolation, with the Clerk having his dealings chiefly with the Board, is fundamentally wrong, and certain to lead some day to conflict and wasted energy. His duties are at present well assigned, though his independence in certain business matters ought to be enlarged.

Building Department

The Superintendent of Properties should be given rather large independent powers and duties, and the position should be evolved into one of much importance. The present subordination to the School Clerk should be changed to that of the Superintendent of Schools, but with the Superintendent of Properties the head of an otherwise independent department. Many of the duties now cared for by the Buildings, Repairs, and Insurance Committees should be placed under his control. The janitors for the schools should be put under his department, and under his supervision and instruction, rather than that of the School Clerk, and no janitor or workman should be employed by the Board for his department, or dismissed from his service, except on his specific recommendation. In the selection of janitors the Superintendent of Schools should have the right of approval, and he should also have the right of taking the initiative in the dismissal of a janitor for cause. The Board should create certain standards for the position of school janitor, which is next to the principal in importance in the proper administration of a school, and all applicants for such positions should be referred at once to the Superintendent of Properties. Certain instruction for the janitors in service, as is recommended by Dr. Dresslar in Chapter XIII, ought also to be provided for by the Board or the Superintendent of Properties.

Under this department there should be a School Architect and a School Engineer. School architecture cannot be satisfactorily handled by a general architect. Buildings are so integral a part of education that they should become a special study of some capable architect who is willing to give several years of his best thought to the problem. Preferably he should be a man who has not reached middle age. There are many advantages in taking a young man, and giving him pay and opportunity for travel and study of the best that has been done elsewhere. He should develop the art side of the building problem. Our public school buildings should be the most artistic buildings in our cities. This does not mean that they should be expensive. From an art standpoint school architecture should not be uniform in cities. The present plan, so commonly followed in our cities, of building forty or fifty school buildings throughout the city all alike, is not good art. Every district, if thor-

oughly studied by one with an art instinct, is sufficiently individualistic to justify recognition in the character of the building. In a city such as Portland, where much building will have to be done in the near future, and where the present school plant will have to be largely reconstructed within the next twenty-five years, this is a matter of importance. The school engineer should be responsible for the more technical phases of the problem, such as heating, ventilation, lighting, strength of materials, stresses, plumbing, and the supervision of such construction. Just how far these duties, or part of them, can be covered for the present by the Superintendent of Properties we do not know, as we are not familiar with his technical training.

The Board's Proper Functions

This does not mean that a Board of School Directors will have nothing left to do. On the contrary there will still be plenty left. It simply means that in those matters which are matters of expert judgment, and which no Board of laymen is competent wisely to decide, they ought to act only on the recommendation of the experts whom they employ, and should trust. The matters which Boards of laymen are not competent to handle are matters relating to the engineering and hygienic problems of school house construction; the outlining of the courses of study; the selection of text-books; the competency of instruction; and the selection, assignment, promotion, and dismissal of teachers and janitors. These matters are matters of expert judgment, and should be left to the experts employed by the Board. It is foolish for laymen to pay a good salary to professional experts and then ignore their judgment and advice.

This leaves the Board free alike from the strong personal pulls and influences and the petty details of school administration, with time to devote to the larger problems of its work. These relate to the selection of its expert advisers, upon which much time and care should be spent; the larger problems of finance, present and future; the selection of school sites, always with future needs and growth in mind; the approval of building plans; the determination of the budget of expenses; the final decision as to proposed expansions and enlargements of the educational system; the prevention of unwise legislation by the city or by the legislature; and the representation of the needs and policies of the school system before the people of the city and of the state. These larger needs are far more important, but are almost sure to be neglected if a Board of School Directors attempts to manage too minutely the details of school administration.

Perhaps no better illustration of this statement can be found than in the case of the enactment of the teachers' permanent tenure law, which applies only to the Portland school district,

by the Oregon legislature of last winter. To prevent the passage of such an unwise law by studying the causes which gave rise to it, meeting with the leaders of the movement, making the necessary concessions (see Chapter IV), and, if necessary, appearing as a body before the state legislature in opposition to the measure, was perhaps the most important duty of the Board of School Directors of the Portland school district during the past year. So far as can be learned, however, practically nothing was done in the matter, and, as a result, an unthinking legislature passed a thoroughly bad law to oblige a few score of the new electors who appeared before it and made its passage a personal matter.

Good Corporation Management

The principles of good corporation organization need to be applied to educational affairs, and Boards of School Directors need to assume more the position of a Board of Directors for a large corporation, giving to their executive officers the authority which corporation Directors give to their Presidents and Superintendents. The proper functions of the Board of Directors are to supply funds, to supervise expenditure, and to determine what additions to the plant or extensions of the business are to be undertaken. So long as the business prospers the Board should leave the details of employment and management to the President and heads of departments; when the business ceases to prosper they should either change their business methods or change their executive heads. The school corporation of the Portland school district does a three million dollar business each year. Its business management seems to be along good corporate lines, but its professional management does not. There is too little authority given to its chief executive officer and those who should be his chiefs of staff, and too much unintentional interference with these officers in the exercise of their proper functions.

Chapter III

THE SYSTEM OF SUPERVISION

Sources and Methods of Work

The system of supervision employed in the Portland school district was a matter of deep interest to all who worked on the Survey. While the attitude of the Board of School Directors toward the administrative problem was felt to be, in a way, the key to the whole situation, the system of educational supervision set up and maintained by the Board and the supervisory force—Superintendent, Assistant Superintendents, Special Supervisors, and Principals—was also felt to be of prime importance in determining the aims and purpose of the educational work and the working spirit of the educational organization. Accordingly much attention was given by every member of the Survey staff who worked on Parts I, II, or IV of this report, to the supervisory organization and to the nature and spirit of the supervision. A number of conferences were held with the Superintendent of Schools and with the Assistant Superintendents, and every Principal visited was questioned, somewhat at length, as to his own work, his part in the system of supervision, and the relation of the supervisory authorities and the Board of School Directors to what he was doing. An effort was made to ascertain the exact nature of the system, the character of the work of each member of the supervisory organization, and the real supervisory needs of the district. The nature and needs of the supervisory organization formed a topic for frequent discussions at the conferences held, and all were agreed as to the general diagnosis which was finally reached. The "Rules and Regulations of the School District" were also examined and discussed, and, near the close of the field work, an inquiry form was sent to each principal in the district, asking for information as to his teaching and supervisory experience, special preparation for his particular piece of work, chief supervisory services, and the important problems of his school. The replies to the inquiry sent out, while affording some useful information, were perhaps more noteworthy for what they omitted than for what they contained.

That the system of supervision in use in Portland was not what it ought to be, to meet the educational needs of such a city, was early apparent, and the different members of the Survey staff gave much time and attention to trying to find out just what was the matter. We desired to locate the trouble so as to be able to point out means whereby the existing conditions might be improved. After careful consideration of the problem,

the members of the Survey staff arrived at certain rather definite conclusions relating to the matter, which are embodied in this chapter.

Weakness of the System Found

That the system of supervision had not been developed along good strong lines was evident almost at once. Looking at the system from the outside, and in the light of good administrative principles, it at once gave the impression of lacking self-reliance, and of being weak from over-direction from above. This fundamental weakness seemed to pervade the whole supervisory system, and to extend from the top downward. The system seemed to lack character and strength, and seemed to be more of a system of inspection and reporting than a system of helpful educational leadership. The system seemed to be suffering from too many rules and too little personal initiative, and, as a result, to be realizing but a low percentage of its possible efficiency. The over-direction seemed, in a way, to be stifling the growth of those in it, and in part paralyzing their impulses to individual action.

Relatively few members of the supervisory force impressed the members of the Survey staff as being thoroughly alive educationally, or as fully measuring up to the possibilities of the task before them. We found six or seven of the elementary school principals, and some of the supervisors of special subjects, who seemed thoroughly conscious of what ought to be demanded of them, and anxious to make personal and professional progress. On the other hand, we found very few in the supervisory force who seemed to be really poor material. The great majority impressed us rather as being well selected and of good material, but dormant rather than active. They impressed us as doing very little real educational thinking, and as in a way fitting into the system and drifting along, doing reasonably well what they were directed to do, but showing little or no personal initiative, and but little consciousness of the large educational possibilities of their positions. As a class, they impressed us as relying largely on their past experience, and as doing but little reading and studying.

Such Conditions Not Inherent

Such a condition, however, ought not, of all places, to be found in such a city as Portland. The conditions there are such that the city ought to have one of the most progressive and aggressive school systems in the land, with a thoroughly alive and thoroughly well-informed supervisory organization.

After seeing the different members of the supervisory force we were convinced that such conditions ought not to exist in Portland. Personally, the sixty supervisory officers employed

measure up well,—better in fact than those of the average middle-sized or large city. An examination of their education and experience records would indicate that they are a rather superior lot of men and women, and an examination of their age records shows that most of them still belong to the active fruitful years between thirty and fifty,—years when they ought to be growing and rendering the largest possible service to the city. In clerical work, in supervising fire drills and marching, in giving out supplies, in keeping records, in looking after the material equipment, and in handling the mechanical side of their work, nearly all of them seemed to be quite efficient. On the other hand, many did not seem to know what ought to be done in the classrooms, or why, or how to extend helpful personal supervision to their teachers. Most of them seemed to accept the whole system as it was, and without much of a question why. This seemed true also of at least one of the high school principals, of some of the heads of departments within the high schools, and of some of the teachers in the elementary schools with whom we talked.

Full Efficiency Not Realized

Gradually we were led to feel that, under the system of supervision in use, the Board of School Directors was not realizing one-half of the possible efficiency of their principals and superintendents. Many of the teachers, too, were not working with full steam ahead. A Board of School Directors ought, theoretically, to so set conditions as to get all or more from its superintendents and principals than it pays them for; under the present supervisory conditions it seemed to us that the Board was, in most cases, paying for more than it received. The present salaries for supervisory officers in Portland are low, if the highest grade of supervisory service is to be obtained; they are high, in most cases, for the kind of service now rendered. Salaries of \$7,000 to \$8,000 for a Superintendent of Schools, \$3,500 to \$4,500 for Assistant Superintendents, \$3,600 for high school principals, \$2,400 to \$2,800 for the principals of intermediate schools, and \$2,200 to \$2,400 for the larger elementary school principalships, are not too large salaries for Portland to pay for such positions to men or women of distinctly first-rate ability. Such salaries, though, ought not to be paid except to those of demonstrated executive capacity, and as a proper return for the wise and judicious exercise of large authority and responsibility. To pay salaries which ought to buy the ability to exercise large authority and responsibility, and then not encourage or allow its use, is a waste of both money and of executive efficiency. The best men tend to get out from under such a system; average men fall into the ruts and rapidly lose the ability to exercise such authority as they once possessed.

Ultimate Reasons for the Condition

The more the situation was examined into the more we were convinced that the ultimate reason for this condition, disregarding for the present other matters, went back to the same causes which were pointed out in the preceding chapter. In the supervision of the schools, as well as in many other matters, the Board of School Directors is too prominent; the Superintendent of Schools, the Assistant Superintendents, and the Principals occupy entirely too subordinate a position. The Board tries to manage too much and to control too many details. Many matters now handled in large part by it ought to be passed on down to subordinates for action. The supervisory force, on the other hand, leave and refer many matters to the Board for decision which ought to be assumed as lying within their own spheres of authority and action. It would be a hopeful sign of educational consciousness if the superintendents, supervisors, and principals, while admitting the legal right of the Board to decide such matters, were, at times, to seriously contest their educational right to do so.

The result, as was pointed out in the preceding chapter, has been that the school system has not developed along the strong executive lines it ought to have followed. What real strength the system has today it has more by reason of the youth, good education, and character of its teachers than by reason of the system of supervision under which the system is guided. Of real educational leadership there is altogether too little; of stimuli to independent action and thinking there are altogether too few. As a result, a certain timidity and lack of character, indicating a fundamental weakness somewhere, seems to pervade the supervisory organization. In most matters the supervisory officers keep close to the well established paths, and do not assume much independence in action. The school system, as a natural result, is strong chiefly along the old traditional lines, and a uniformity so marked that it impedes progress characterizes the educational system.

A few of the stronger and more progressive principals have departed a little, it is true, from this uniformity, generally in matters other than instruction, and have been allowed to do so. This has been due rather to personal strength and energy, and has merely been permitted, rather than because of any pressure from above exerted to produce such activity. To a somewhat constant question asked of the principals, "Do you feel any pressure put on you from above to become more efficient, and to be a stronger and more useful principal, or lose your position?" the answer was almost uniformly "No." A number added that, on the contrary, the pressure was in the other direction, and that they felt hampered by the inspection, the uniformity,

and the lack of independence in action. Those principals who had recently come to the system from elsewhere were, in general, the ones who recognized the condition most clearly; while those who had grown up under the system frequently could see little the matter with it.

Characteristics of a Good Supervisory Organization

Such a condition is not conducive to healthy growth, and is not good for the schools. Just as a superintendent of schools, by his educational insight, personality, and force gives tone and character to a whole school system, so do principals or special supervisors give tone to the school or to the work under their immediate supervision. A good supervisory organization always places a positive premium on the development of those personal and professional qualities which give tone and character to a school. It encourages a judicious use of personal liberty in action, and stimulates thinking and personal growth by placing responsibility and encouraging initiative. It places a premium on personal efficiency, and on being and keeping stronger than the average of the mass. Especially in the high school does it place a premium on intelligent departures from uniform procedure. The man or woman who merely drifts along, handling the mechanical details, doing only what is required, taking few chances, and putting but little thought and intelligence into the work, is not really worth much in salary, and administrative conditions ought to be so shaped as rapidly to eliminate such supervisory officers from the system.

It was soon evident that Portland was failing to get the best results from its principals. This is due to lack of responsibility placed upon them. Because of lack of opportunity to exercise initiative, they are expending their efforts in carrying out a system in whose creation they had little or no part. The result is a uniformity in the schools that is almost appalling. Every school and each classroom in it has problems peculiar to itself. The waste of time, effort and life is deplorable. No system of education can be highly efficient without drawing upon its corps of teachers and principals to work out its educational problems. Nor will committees and counsellors suffice. Every principal must be given to understand clearly that he is responsible not only for the problems common to the system, but for those peculiar to his individual school. Fortunate is the school if the principal realizes that he can successfully solve these only by appealing to the same individuality of the teacher, in working out her room problems, and in assisting in developing his school.

Rules and Regulations and the System

An examination of the "Rules and Regulations" for the

schools of the district is enough to reveal most of the causes of the existing conditions, and an examination of the administrative practices only confirms the impression created by a reading of the rules and regulations. The Board of School Directors tries to handle far too many things by rule; the Superintendent and his staff are given entirely too little authority, and are held responsible to the Board for far too few things; the rules and regulations cover too many matters which ought to be left to someone's good judgment and good sense; the principals and teachers are not dealt with in quite the manner calculated to secure any large degree of confidence or friendly co-operation; and a series of checkings up and petty fines enforce the regulations of the Board. The effect of such a method extends into the Superintendent's office, and from there down to the principals and teachers in the schools.

Whether these conditions have come as a result of inaction on the part of the Superintendent, the Board feeling themselves forced to assume authority because he did not, and to govern by rules because he did not by personal direction; or whether the Board has assumed the authority because they had the legal right to do so, and have kept the Superintendent in the background, we do not know and do not attempt to say. The point is not important either, except for the future. Whatever the origin of the condition, however, the Board does too much, and has too many mandatory rules; it puts too little responsibility on the Superintendent, and gives him too little authority; an unnecessary uniformity, often deadening in its effects, seems to pervade the system; and a series of examinations, inspections, and reports replaces the leadership and helpful relationships found in many other cities. The system, as has been stated before, is doubtless one of long evolution, for which no one in particular is responsible, but one which the present opportunity offers a good chance to change.

Concrete Illustrations; Board Control

The rules and regulations of Boards of Education usually devote much space to a statement of the powers, duties, and responsibilities of the Superintendent of Instruction. He is usually made the real head of the whole school system; rather large responsibilities are usually placed on his shoulders; much liberty of action is given to him, in educational matters; and his rights are often rather carefully stated. After reading the "Rules and Regulations" of the Board of School Directors of the Portland district, one is impressed with how few real responsibilities are placed with the Superintendent, and how largely clerical his duties really are. Instead of being the head of the school system, there are two heads,—the School Clerk and the Superintendent of Schools. Of these two the School Clerk has

the larger authority and liberty of action. Doubtless, under the present rules, the Superintendent of Schools could assume larger authority than he seems to possess, but if he did it would be because he did assume it, and not because the Board put such responsibility upon him, as they should.

According to the rules every teacher and every janitor in the system must make a formal written application to the Board of School Directors each year, as a prerequisite to the retention of their positions. Such a requirement, once common, has been abandoned almost everywhere today, and no doubt this rule contributed somewhat to the desire of the teachers for the enactment of the recent teachers'-tenure law. The Board selects all teachers and designates their employment by schools. The rules do not indicate that the Superintendent has anything to say in the matter, though the selection of teachers ought to be one of his most important functions. In practice, though, we find that all applicants are interviewed by the Superintendent, or one of his assistants; file their applications in regular order; and that their records are looked up, and a graded list of all applicants is made up, in his office. The members of the Board also see applicants, and naturally form mental or written lists of their own, for use in connection with the one prepared by the Superintendent of Schools.

After employment, the Board in a way supervises the teaching force. All high school principals must report their assignments of teachers to the Superintendent, and he forthwith to the Board. All elementary school principals must report, in writing, to the Board twice a year "concerning the efficiency or inefficiency of their teachers," and toward the close of each year each principal is required to come before the Board as a body, and is interviewed further, to the same end. Special teachers must also report, in writing, to the Board, before the close of each term, as to the efficiency of the teachers under them.

In dealing with pupils, the principals must report all cases of corporal punishment to the Board. The principal may suspend a pupil for cause, but only the Board or the Superintendent can restore the pupil to school. Such rules of the Board as are pertinent must be read and explained to all pupils the first week of each school month, and, to ensure obedience to this rule, the principals must report monthly whether or not they have obeyed this rule. Fire drills are required to be held each week, and these must be reported at once. For failure to hold a fire drill, or to report the same, a fine of \$5.00 is imposed on the principal. Each school principal must hold a general meeting of his teachers every week, and for failure to do so is fined \$1.00. If a principal fails to attend any meeting called by the Superintendent of Schools, or a teacher any meeting called by the Superintendent or a principal, or if late in arriving, a

fine of \$1.00 for absence and 50 cents for tardiness is imposed. All teachers must sign a register on arriving in the morning and at noon, and if at all tardy a fine of \$1.00 is imposed for each offence. The Board, by vote, may remit such fines, for good cause, if an excuse is filed in writing with the School Clerk, within one week. Special supervisors, in visiting buildings, must have their time of arrival and departure certified to on a blank form, by the principal, and these certified blanks must be forwarded to the office of the Superintendent of Schools. Teachers, when not on monitorial duty at intermissions, are directed by rule to "remain in their rooms and devote themselves to the discharge of their own duties." Visiting the room of another teacher at an intermission, except on school business, is strictly forbidden. If a teacher requests a leave of absence to the end of a school year, the rules provide that such request shall be considered as equivalent to a resignation.

Concrete Illustrations; Supervisory Control

In passing from the administration of the Board to that of the Superintendent's office, a somewhat similar spirit seems to pervade the work. Perhaps this is but a natural reflection of the attitude of the Board. The uniform course of study, presumably drawn up by the Superintendent and formally adopted by the Board, is laid down, for each of the fifty-four parts, by pages in certain adopted text-books. The work of these books is supposed to be covered by all teachers, and in all classes of schools. Instead of allowing alternatives and options, and permitting some adjustment to individual abilities and needs, the course is the same for all. Uniformity is further obtained by final term examinations, made out in the office of the Superintendent of Schools, and which are required of all grades from the third to the ninth inclusive. Four pages of the "Rules and Regulations" of the Board are devoted to details relating to these term examinations. Regardless of the differences in the educational needs of the classes of pupils attending such schools as the Irvington and the Failing, or the Couch and the Lents, for example, the course of instruction for the entire nine years is identical for all schools. Even in the day school for the deaf an unsuccessful attempt is made to require the same technical instruction for these special-type children. In the trade school, too, a class of mature girls, who had entered the school for work in the homekeeping arts, was seen laboriously trying to make up the technical grammar of the grades, which they happened to have missed. Of what use it would be to them when made up the principal of the school could not tell us, and it would be hard for anyone else to say. In the high schools, each school must do the same work in each subject, and the only

chance for change seemed to lie in the unanimous agreement of all three schools, and the approval of the Superintendent and Board. Such a plan enables the poorest and least progressive teachers, or schools, or principals, to set the pace for the entire system; makes no allowance for differences in aptitude and needs; and is educationally indefensible.

In the supervision of the work of instruction, so far as we could find out, but little of a really helpful nature is provided. The two Assistant Superintendents, who divide the classroom supervision between them, seemed seldom to put themselves in the attitude of a fellow teacher, willing to take criticism as well as give it, but rather to work as inspectors, whose chief purpose was to check up and grade both teachers and principals, and to see how fully the course of study was being carried out and the rules and regulations obeyed. This may seem very unjust, to these Superintendents, but this certainly was the firm impression of their work obtained from questioning both principals and teachers as to what they did when they visited the schools. The present type of inspection is wasteful of time, energy, and money, and is of little value to the schools.

Coming still further down, the majority of the principals seemed lacking in the essentials of a good and helpful leader. By this we mean the ability to improve and develop teachers as teachers; to encourage and aid them in their particular work; to advise them as to better ways and methods; and to inspire them with confidence, and enthuse them for the work of instruction. To be such a leader a principal must know the details of all phases of the school work as well or better than do his teachers; he ought to be able to take their classes from them, and teach them as well or better than they can; and in methods of work and reasons for doing things, he ought to be distinctively their leader.

This impression was further confirmed by a reading of the "Report of the Committee on Hearings," held in April of this year, relating to the cases of seventeen teachers, against whom charges of incompetency had been made by principals. Some of these charges seemed almost trivial, and a number seemed to indicate that the principal had not been in close and helpful personal relations with his teachers during the year. For such conditions the principals are perhaps not so much to blame as is the system under which they work. The pressure to become helpful personal and educational leaders, rather than inspectors and custodians, has never been put seriously on them from above. The most efficient supervision, taken as a whole, seemed to be in the special subjects, where special supervisors are employed. Largely freed from rules, regulations, uniformity, and inspection, the work in most of the special subjects seemed to possess life and spirit.

Responsibility for the Condition

This, we realize, is rather a severe criticism, but it is meant as a criticism of a system which ought to be changed, and not of individuals. For the system of supervision, as we found it, perhaps no one in particular is responsible. It is doubtless a condition which has gradually grown up, rather than the product of the work of any one individual or individuals. The condition, probably, in its origin, antedates the service of any one now in control, and goes back to the days when Portland was a small town. Methods once employed have tended to become established, and the present system of supervision has been gradually evolved. The Survey staff is not interested in trying to fix responsibility for the condition, and it would probably serve no useful purpose even if this could be done. Our only purpose in explaining the system in such detail has been to make clear the need of certain fundamental changes in the system itself.

Needed Changes

The changes we would recommend are:

1. That the powers and responsibilities of the Superintendent of Schools, in the supervision of the educational work, be greatly enlarged by the withdrawal of the Board of School Directors from such work; and that he be made much more responsible than heretofore for the character of the instruction in the schools, for the work of his subordinates, and for the harmonious and successful co-operation of all departments. To this end he should be given a longer term of office, and the selection of his immediate subordinates should rest very largely with him. (See Appendix A.)
2. That the Superintendent, after such consultation with his assistants, the principals and teachers as to him seems best, be given full recommending authority in the matter of the selection, promotion, and dismissal of teachers; the outlining of the course of study; and the selection of text-books and supplementary books for the schools. These are functions which the Board itself ought not to attempt to exercise.
3. That the Superintendent be made to become the real educational leader for the school system, or to give place to some one who can. To this end, he should be freed from as much detail and clerical work as is possible, and be expected to spend his time in studying the educational problem and in visiting the schools, rather than in remaining in his office. To this end he should be provided with an automobile, to facilitate his movements and to save his time in traveling about over a city of such size.
4. To enable him to spend much of his time in the schools, the position of Assistant to the Superintendent, for office work,

should be created. The person for this position should be possessed of good training and experience, have good executive ability, and be paid a salary of at least \$2,500. The position would be somewhat analogous to that of a private secretary to the president of a college, or the president of a large corporation. One of the best of the elementary school principals might well be selected for such a position. His (or her) work would be to do, under direction, the greater part of the office and clerical work now done by the Superintendent, and to relieve him from the necessity of wasting time with people of little or no business, so that he may have time to become a real Superintendent of Instruction and a leader of his principals and teachers. It ought to be the Superintendent's chief business to read, study, observe, think, plan, advise, and lead. If he does these things well there is little chance of a city paying him too much. If he does not or can not do them, he ought to be replaced by someone who can. He can not do these things, though, and be much of an office-chair, clerical-type of superintendent. The Board can not legitimately expect him to be both, and so ought to provide him with proper assistance and force him to lead or leave.

With such an office assistant to the Superintendent, to attend to much of the clerical work, neither the Superintendent nor the Assistant Superintendents ought to be expected to keep office hours in the afternoon more than two or three days a week. They could alternate their days, and save much wasting of time. Instead, they should spend the time in meeting and talking with their principals and teachers, and in educating them in the ideas and ideals which ought to dominate the system.

5. That the Superintendent of Schools should organize his elementary school principals and Assistant Superintendents into an educational club, for reading and study on topics tending to improve their efficiency and enlarge their views. The three high school principals, the principal of the trade school, and the principals of any intermediate schools which may be established, ought to be organized into another study and discussion group. It certainly ought not to be too much to expect all principals to unite in a study of good educational conditions elsewhere, to read carefully the half-dozen most important educational books issued each year, and to further direct the reading and study of two or three books by groups of their teachers. A doctor who does not read will soon fall far behind, and teaching is much like medicine in this respect. Under good leadership and direction such work could be made of much interest to the principals and teachers, and of much value to the school system.

6. That the supervisory work of the department should be distributed downward more than is now the case. The Board

should do much less; the Superintendent and principals much more. Administrative conditions should be made such as to encourage the development of executive capacity on the part of many members of the department, instead of relying on the judgment and authority of a few.

7. The supervisory work of the department needs changing in direction and purpose. This will also involve changes in all that tends to produce the present uniformity and rigidity, chief among which are the present course of study, the uniform term examinations, and the attention to supervisory details by the Board itself. The whole supervisory system, too, should largely lose its present inspectional character, and be changed into one of helpful educational leadership. If those in charge of such service,—Assistant Superintendents, special supervisors, and principals,—can not adjust themselves to such new purposes, changes in personnel should be made without unnecessary delay.

8. If the supervisory work of the schools is to be redirected along the lines suggested, the present staff of Assistant Superintendents is too small. The force of Assistant Superintendents ought to be increased by adding a woman, skilled in the supervision of the first four years of school work, to aid both teachers and principals in making the first years of the elementary school course more effective and more valuable. Her training should be broad enough to fit her for a high school position, but her experience and sympathies should be in elementary school work. The majority of pupils in public schools is apt to be girls, and a very large majority of teachers are women. A wise and capable woman as assistant superintendent can not only be of great service constructively in helping to solve the problem of education in our schools for girls, but she can simplify some of the delicate social problems that are troubling us.

9. That the office of principal of both the elementary and the high schools should be increased materially in importance, and the character of the services now rendered by such officers should be in part changed. They should be expected to study the educational side of their work more than they do; they should be expected to become more helpful personal and professional leaders than they now are; they should be given larger authority and larger liberty in the management of their schools than they now possess; a reasonable individuality as between schools should be encouraged, in place of the present evident attempt at uniformity; and the principals and special supervisors should be expected to be responsible to the Superintendent of Schools for the successful conduct of their schools, and not to the Board of School Directors.

10. That the present requirement that the principals teach some particular class one hour a day ought to be changed to a

requirement that they should give instruction somewhere in the school for four or five hours each week, the same to be distributed among the different rooms and subjects. The present requirement does not lead to efficiency. When the principal has taught his present class one hour each day he feels relieved from instruction elsewhere, and the personal growth and helpful service that comes from a general distribution of instruction is lost. A principal ought to be able to teach well anywhere; if he can not, the sooner he learns the better.

11. That the present requirement of a general teachers' meeting each week in each school should be changed. The present meetings, in most of the schools, are purely formal in character, and are of little value. A common time for holding them is during the noon recess; they last but a short time; the program of work lacks aim or purpose; and many of them are a pure waste of time. These meetings ought to be changed into real teachers' meetings, with general school meetings once a month, and grade meetings oftener. A good plan for grade meetings would be to unite three or possibly four neighboring schools. Definite programs of work should be provided; some personal study of school problems should be expected; and the study of one or two books of importance to teachers ought to be made a part of the work. The Superintendent of Schools, and such assistants as he may desire, should attend such meetings as often as is possible, to aid and encourage both teachers and principals. To this end the Superintendent ought not to be expected to keep office hours in the afternoon oftener than two afternoons a week.

12. That an additional Assistant Superintendent of Schools ought to be provided, to assist the Superintendent in the above work, and to act as a critical educational expert for the system. If any serious attempt is made to carry out the recommendations of this Report, such a man will prove of great value in measuring, testing and directing. The man for this position ought to be not only a man of practical experience, but also the best trained man, in psychology and education, in the system, and he ought to occupy something of the position of a consulting psychologist for the schools. It should be his particular function to study the educational problems of the district at first hand, to continually check up the work of the schools, to study the needs of defectives and overaged pupils, and to serve as an educational director and adviser to all in the administration of the work of instruction. A salary of \$4,000 is not too much to pay for such a man, and he should possess such training and experience as would fit him for a professorship of education in a good university. Less money put on a cheaper man is likely to be largely wasted.

13. The present system of fines ought to be abolished, and judgment and common sense be allowed to rule in their stead. The present system is both petty and vexatious; irritating to both principals and teachers; and the having to offer excuses to the Board and through the School Clerk, instead of dealing with the principal or Superintendent concerned, is wrong in principle. It was the unanimous verdict of the members of the Survey that a good system of school administration could not be developed along such lines. Teachers and principals should be given some freedom, and then be expected to use the freedom wisely. In cases of apparent omission the principal of the school or the Superintendent of Instruction should have full power to deal with the case in whatever way seems best.

14. That the rules and regulations of the Board of School Directors should be thoroughly revised, with a view to bringing them into harmony with these recommendations.

Chapter IV

THE SELECTION AND TENURE OF TEACHERS

I. The Selection of Teachers

The recent rapid increase in the number of teachers and supervisory officers employed in the Portland school district may be seen from the following table:

TABLE 1

Number of Teachers and Supervisors Employed, by Years

Year	Teachers in Element- ary Schools	Teachers in High Schools	Supervis- ory Officers	Totals	Yearly Increase
1913	662	155	86	903	73
1912	626	140	64	830	82
1911	574	115	59	748	62
1910	535	97	54	686	61
1909	497	82	46	625	51
1908	474	57	43	574	79
1907	424	40	31	495	67
1906	363	29	26	418	42
1905	327	26	23	376	25
1904	308	22	21	351	21
1903	290	20	20	330	17
1902	258	20	35	313	15
1901	245	20	33	298	4
1900	240	20	34	294	

Counting deaths, resignations, and removals, something over a hundred new teachers are needed by the Portland school district at present each year, and this number will gradually increase.

Recruitment and Training

Exceptionally good conditions for the recruitment of an excellent body of experienced teachers, drawn from all parts of the United States, are before the educational authorities of the city of Portland. The city is growing rapidly, by reason of a large influx of people from elsewhere, and a certain percentage of these will naturally be experienced teachers. One-half of Portland's total population has come to it from other American states, and most of this inter-state migration has been from states of the upper Mississippi Valley,—states in which normal schools exist in large numbers, and in which many excellent school systems are to be found. Portland, too, is a city through which many tourists pass, and the best of teachers travel as

much as their funds will permit. It is easy for them to arrange to stop in Portland in passing, to see and to be seen.

By reason of its advantageous location, by reason of the large addition to the population from the eastern states, and by reason of its good salary schedule for elementary school teachers, Portland ought to be able to draw into its schools each year large numbers of well-trained and experienced Eastern teachers. When this is possible, to accept anything less would be an educational mistake. Portland also, as the largest city in Oregon, ought to be able each year to attract into its schools the best trained and the most capable and energetic teachers to be found in the towns and smaller cities of Oregon and Washington. Any wise educational policy would involve a systematic effort to hunt out, attract, and secure such teachers. What the city of Portland should want is the best service its money will secure; where the teacher comes from is immaterial.

That large numbers of well-trained Eastern teachers do apply for positions in Portland was evident from an examination of the graded list of applicants, compiled each year by the Superintendent of Schools. To see how far the teachers actually employed had been drawn from elsewhere, a tabulation has been made of the records of training of all teachers employed, as printed in the last published report of the Superintendent of Schools. These records show the following condition:

TABLE 2
Education of Teachers Employed in Portland

Teachers Graduates of	Teachers Employed in	
	Elementary Schools	High Schools
Portland High Schools only.....	240	10
Other Portland institutions only.....	33	2
High Schools, Normal Schools or Colleges, elsewhere in Oregon.....	93	15
Same, in California and Washington..	26	10
Same, in the eight Mountain states....	5	2
Same, in the seven west North Central states	104	33
Same, in the five east North Central states	83	27
Same, in the three Middle Atlantic states	21	6
Same, in the six New England states..	11	16
Same, in the sixteen Southern states..	10	0
Training received in foreign countries	10	7
Not graduates of any school	85	14
Totals	720	142
Total teachers listed		862

This table makes a very good showing, except for the large number of elementary school teachers (33 1-3%) who are products of the Portland schools alone, and the other large number (12% for elementary schools, and 10% for high schools) who are not graduates of any school. An examination of the list shows that the latter are either teachers who have been long in the service, or else are teachers of special subjects in the school of trades or in the high schools. The large number of Portland high school graduates is doubtless due to the teachers' training courses maintained in the city high schools, and to the two-year pupil-training system, following the high school course, but recently abolished by the Board of School Directors.

The policy which has been followed of drawing into the school system numbers of good teachers from the outside is one worthy of much commendation, and one which ought to be continued in the future. Due to the teaching courses offered in the high schools and the pupil-teacher system in the past, the percentage of Portland high school graduates has crept up much too high, especially in view of the weakness of the Portland educational system, as is pointed out further on in Chapters VIII, IX, and X. For a few years to come the Board and the Superintendent ought, in the interests of the schools, to be rather reluctant to employ more elementary school teachers who have had only such training as has been provided at home.

The Training-Courses for Teachers

The abolishment of the pupil-teacher training system by the Board of School Directors was undoubtedly a wise thing to have done, and the wisdom of further maintaining the so-called teaching courses in the high schools, even to comply with the optional state law, is very questionable. Such courses as are now offered give but a very meager preparation for teaching, and one wholly inadequate for large city needs. Due, however, to the fact that the graduates from such a course receive a state teacher's certificate, under which they may teach two years, they may easily go out and obtain the required two years of experience in the country, under much poorer supervisory conditions than existed in the city under the old pupil-teacher training system, and then return and become candidates for positions and exert pressure to get them. The district thus runs a constant danger in continuing these courses. It would be very much better if all such prospective teachers first graduated regularly from the high school, and then spent two years in a good normal school, making adequate professional preparation for teaching. Then, after some experience in the towns, many such would make desirable future teachers, and might then be employed with safety by the school authorities. Under present conditions, however,

the present high school teaching courses serve largely to open the way for home girls to enter the schools as teachers on meager and inadequate preparation, and hence do more harm than good.

Common Defects of Such Courses

One great trouble with all such local training schemes is that they are too easy to get through, and inevitably result in an in-breeding process which sooner or later saps the vigor and independence of the school system. Having finished the inadequate course of training provided, the graduates come to expect jobs in the schools, and the schools, unable to offer any good reason why they should not take what they have graduated, gradually fill up their schools with such material to the exclusion of better teachers from the outside. The girls who take the training may be good enough as prospective material, but the course of training usually provided is so absolutely inadequate that it does not give the necessary breadth of view or the proper professional conceptions. The old Portland plan was of this class, in that it prepared its graduates only for the type of instruction which they had gone through and seen in the Portland schools. They obtained from it no adequate educational conceptions, no comparative standards, and no broad outlook on the problems of education, and mechanized the process of teaching rather than reasoned it out.

It is an almost necessary part, too, of a teacher's preparation to go away from home for at least part of her training; to come in contact with other schools, and other methods of work; and to learn to think for herself by rubbing up against the differing opinions of other people. The home girl, to be the equal of the girl from elsewhere, must have experienced a training in an excellent city normal school, and under masters who are unusually broad. This the old Portland system did not provide, and it was the feeling of the members of the Survey staff who inquired at all into the matter, that the poorest teachers seen in the schools were the products of this high-school-training and pupil-teacher system.

Training vs. Attracting Teachers

The city of Portland is at present too small to warrant the expense of maintaining a first-class city normal school, and anything else it would be foolish to maintain. A first-class normal school ought to be as well equipped as a first-class high school, and ought to cost as much to maintain. It ought to be, too, distinctively a leader in the city's educational system, setting standards and giving tone to the whole school system. When Portland comes to have a million people such a school might then prove to be desirable, but at present such an expense is unwarranted. Even then it probably would be wiser and cheaper,

and probably would result in a better output, if a working agreement to give such preparation for the city were made with Reed Institute, after some such plan as is now carried out in Cincinnati and Pittsburg with the universities located in these two cities. For the present it would be much wiser to add another Assistant Superintendent of Schools, as is recommended on page 39, to help look after new teachers and to act as an educational critic and student for the system, as is suggested in the preceding chapter, and apply on his salary the money which is now being spent on high school teaching courses.

Instead of trying to train its own teachers the school district should aim to attract to its schools the best teachers from elsewhere,—near or far. If its own girls can prove themselves to be superior teachers, they should be drawn back to the city by means of better salaries. They should distinctly prove themselves to be such elsewhere, however, before coming into the Portland system. The Portland schools in no way exist for the purpose of providing teaching positions for Portland girls, and Portland girls should enter the work on the same basis as girls from elsewhere. In the same way the best trained teachers from the best eastern normal schools and city school systems ought to be attracted to the Portland schools, and anything which would tend to impede or prevent their entry ought to be discouraged. The best teachers in the system today, taken as a body, are these eastern teachers, and the way ought to be kept open for more of them to enter.

The Superintendent in the Employment of Teachers

A city the size of Portland ought also to give to its Superintendent the power to hunt up good teachers from elsewhere, and to invite them to enter the school system without waiting for a formal application. The cities which handle their schools best give such authority to their Superintendent, putting the selection of teachers for the schools on much the same basis that colleges and universities place the selection of their professors. A university president who did not feel that he had almost full authority to hunt out and invite men to come to his institution would feel himself in a very undesirable predicament, and probably would resign and leave. The strength of the colleges and universities has come largely as the Boards of Trustees have placed the full burden of selecting professors, and fixing their salaries, within certain limits, upon the president of the institution, the Board merely formally ratifying his actions in such matters.

In our best managed city school systems similar conditions today prevail, and superintendents feel authorized to offer promising teachers positions without consulting their Boards of School

Directors first, and having to go over the whole matter with them. As was stated in Chapter III, this is the work which the Board of School Directors knows least how to handle; the work where they make the most serious blunders, and often without knowing that they have blundered; the work where they create the most bitter antagonisms; and the work which they ought to let alone. If there are any expert functions which a Superintendent of Schools ought to handle they are the outlining of the course of study, the selection of the text-books and supplemental books to be used, and the recommendation of teachers for employment, promotion, and dismissal. He may make some mistakes in such matters, but when he does he will try to correct them; a Board in handling such matters will make many blunders, and scarcely know that they have blundered. A Superintendent who knows his work has a definite educational policy in such matters; a Board usually has no policy, and vacillates to and fro in response to popular pressure.

In selecting good teachers for the schools a superintendent of schools who knows his business is rendering one of the most expert services he can render a city. He should be given plenty of opportunity to exercise his judgment, and, in resisting the pressure of the friends of the less competent, he should be uniformly upheld. If he can not do these things wisely and well, he ought to give place to some one who can, but the Board ought not to assume such functions themselves. It would be a most wholesome sign of strength in the Superintendent of Schools, and a good omen for the school system, if, while admitting the legal rights of the Board in the matter, he were to seriously challenge their educational right to select any teachers for the system whom he did not recommend. He, in turn, if he is wise, will confer with his principals, and in the high schools and the needs of the Portland school district by first locating the city, trade school the principal should be entrusted with rather large authority in the recommendation to the Superintendent of teachers for their schools. In cases where there are good heads of departments, the principal and Superintendent should make them feel that their advice is wanted also. While the Superintendent must finally pass on the recommendations, and transmit proper ones to the Board for action, he will be wise if he seeks the advice of his subordinates. All such responsibility tends to develop strength and character in the school system.

The Effect of Board Control

That the Board of School Directors for the Portland school district, past and present, has not handled the selection of teachers in such a manner as to develop such strength and character in the system was evident from the inquiries and examinations which we made. Their deep interest in the management of the

schools has led them astray, and wholly unintentionally they have played too prominent a part. Superintendents, principals, and heads of departments in the high schools alike left the impression with us that they had but little to say as to the selection of their working staffs. The effect of such Board activity will almost inevitably show itself in the schools, and we found plenty of such evidence there.

We saw some most excellent teachers; many very good teachers; some others who, with proper help and under proper pressure, might still be made into good teachers; and a certain number of others who, it seemed to us, ought never to have been employed at all, and certainly ought not now to be retained. They lacked teaching personality, energy, force, and adaptability to the work of instructing children. To a trained eye this was evident after a few moments' observation. In some kinds of schools, and in some places, they might prove fairly satisfactory, but the city of Portland, for the salaries it pays and with the work it has to do, ought to do very much better.

We tried, in many cases, to find out more about such teachers. Sometimes no one seemed to know how they got into the school system. Many times the pupil-teacher system was to blame for their being there. Other times a principal would tell us, in semi-confidence, that she was supposed to be Director X's or Y's protege; or a head of a department in a high school would decline responsibility for the conditions found on the ground that his or her recommendation had been ignored by the Superintendent and Board. The following conversation with an elementary school principal, which is from notes made afterward, is typical of a number of such conversations.

- Q. "Do you consider Miss A, in room No. X, a good teacher?"
 A. "No."
 Q. "Do you consider her a reasonably satisfactory teacher, then?"
 A. "No, I can't say that I do."
 Q. "Can you make her into a satisfactory teacher?"
 A. "I doubt if that can be done."
 Q. "Have you ever called the attention of the Superintendent to her work?"
 A. "I have the Assistant Superintendent."
 Q. "What does he do, or suggest?"
 A. "Nothing."
 Q. "The Board calls you before it each year, for reports on your teachers, does it not?"
 A. "Yes."
 Q. "Have you ever reported the woman as unsatisfactory?"
 A. "Yes, twice."
 Q. "What was done then?"
 A. "Nothing."
 Q. "Did the Superintendent approve or disapprove of your adverse report?"
 A. "I don't know; he said nothing while I was present."
 Q. "Have you reported adversely against any other teacher?"

A. "Yes."

Q. "What happened then?"

A. "Once a teacher was transferred to another building; another time the Board dropped the teacher, and then reinstated her, when she got her friends busy, and put her back in my school; another time I was virtually put on trial to prove my charges, instead of the teacher being dropped; and in two or three other cases the teacher was continued in the school, apparently with no action taken."

Q. "Then the Board doesn't pay much attention to your recommendations?"

A. "I have never felt that it did."

Q. "What is the object in calling you before it each year, for reports as to your teachers?"

A. "I don't know."

Q. "Are you exceptional, in this respect, among the school principals?"

A. "I don't think so; I think I fare as 'well as the average principal."

Q. "Do you have anything to say as to the selection of your teachers?"

A. "Practically nothing."

Q. "Do you report against many teachers each year?"

A. "No, I have practically ceased to report against teachers, unless they are very unsatisfactory."

Q. "Why?"

A. "Because I never know whether or not it will do any good, and I don't want to make enemies, or needlessly put myself on trial."

Q. "Do the principals generally feel that the Superintendent supports them in their adverse recommendations, or not?"

A. "We don't feel that he has much more to say about the matter than we have."

Q. "Would you feel that you could improve the instruction in your school, and make a better school, if the Board and the Superintendent placed more authority and responsibility on you, and held you responsible for the successful conduct of your school?"

A. "There is no doubt as to that."

Good Rules of Action

The following principles and rules of action, principles and rules evolved from the best experiences of other cities, ought to apply to the selection, promotion, and retention of teachers in a city such as Portland:—

1. The schools exist solely for the education of children, and in no sense of the word to afford places for teachers. Only the best education should be provided, and the best education can be provided only when the best teachers obtainable are in the schools.

2. The question of where a teacher comes from is absolutely immaterial, and "home girls" have no prior claim whatever to the positions. The schools exist to carry out a state purpose,

and should not be made local family affairs, in any sense of the word.

3. The selection of teachers is a professional function, which professional experts ought to handle. The Board of School Directors is not competent to handle such a function in the best manner, and poor results almost invariably follow their attempt to do so.

4. In the case of the Portland school district, the Board of School Directors should refuse longer to take the initiative in the selection, promotion, or dismissal of teachers, principals, or supervisors, or to see candidates for such positions, but should instead act only upon the recommendation of the Superintendent of Schools. The final responsibility for all such actions ought to be put squarely on his shoulders. If he can not handle this wisely and well, then he should soon give place to some one who can.

5. The Board should also cease to give hearings to principals and supervisors, or require reports as to teachers from them. All matters relating to instruction should be referred to the Superintendent and his assistants; principals of schools should deal with them, and not with members of the Board.

6. The Board should also cease to interview candidates for positions, or permit themselves to be interviewed by such, or their friends. In some of our best organized cities the Boards have had it printed on the back of every application blank that applicants, or their friends, are not privileged to call on the Board members individually to press their claims for appointment, and that the doing so, or the attempt to employ any personal, political, social, or religious influence to secure an appointment, will be regarded as unprofessional conduct and debar the candidate from further consideration.

7. The recommendation of teachers for appointment should come solely from the Superintendent of Schools. In selecting those for recommendation, the Superintendent ought to provide that rather large consultative authority should be given to the principals, heads of departments in the high schools, trade school, and the special supervisors, and, in lesser degree, to the principals of the elementary schools.

8. Because of the specialization of work in the high schools and in the trade school, all teachers for such should be selected with reference to their ability to fill certain particular positions. The same conditions ought also to apply to the selection of teachers for such intermediate schools as may be created.

9. For the selection of teachers for the elementary schools one of two plans might be followed. Either (1) the Superintendent of Schools should select teachers for recommendation to

the Board from a comparative list of applicants, compiled somewhat as such lists have been in the past; or (2) the Superintendent could constitute the Assistant Superintendents and two or three principals, together with himself, an examining committee to meet formally all applicants, at designated times, such as Saturday mornings during certain months, to pass on their apparent personality and fitness for teaching. Each member of the committee would mark in percentage his estimate of the fitness of each person so met. The professional preparation and experience of each would be looked up carefully by the clerk to the Superintendent, under his direction, and the average of the two kinds of evidence would form the candidate's rating on the list of applicants, from which nominations for appointment would be made by the Superintendent.

The advantage of such a plan as (2) is with the local applicants, as it tends to eliminate entirely personal, social, or political influence in the selection of teachers, and to place local applicants on a par with those from a distance; its disadvantages are that, unless the committee meets during the summer, or delegates the Superintendent to act for it, some of the best of the Eastern teachers would be cut out by it.

10. No one should be employed who is not certified to by the health supervisor, or some physician designated by the Board, as possessing sound health, sufficient bodily vigor to do effective teaching, and free from hearing defects and any communicable disease. The Superintendent should satisfy himself that the applicant is of high personal character. (See also Chapter XIV, Subdivision 6.)

11. For admission to candidacy for a position in the schools, the city might reasonably require of all:—

a) For Elementary Schools

Either (1) graduation from a four-year high school course, or its equivalent, followed by graduation from a standard normal school and one year of actual teaching experience; or (2) graduation from a four-year high school course or its equivalent, followed by two years of distinctly successful teaching experience, and some evidence of professional training and study.

b) For Intermediate Schools, Should Such Be Established

Either a), (1), above, followed by at least two years of college work, with preparation along the special lines to be taught; or still better college graduation, with practice-teaching experience or one year of class-room experience; or the promotion of eminently successful teachers within the system, favoring those, other things being equal, who have had a year or two of college work, or who have traveled abroad.

c) For High Schools

Graduation from a college or university of standing, and evidence of special preparation for the particular work to be done.

d) Certification

Instead of examining its teachers, as is now done, it might be much wiser to rely entirely on the state or county certification and save the energy now expended in conducting a separate examination. Instead, if any examination is felt to be desirable, such could presuppose the legal certificate required by law, and be made strictly professional in character.

12. After employment, the Superintendent and Board of Directors might reasonably expect all teachers and principals to do some studying each year, after some such plan as is suggested in recommendation 11, under Chapter III, as a means of maintaining the efficiency of the system. The Board might also with propriety require teachers who are deficient in education and training to improve their scholarship, along designated lines (as, for example, the sciences, agriculture, or special branches), with a view to being able to give better instruction in such subjects in the schools. The Board might also with propriety provide some or all of such instruction for its teachers, or arrange with some institution, such as Reed College, to do so for it.

2. TENURE OF TEACHERS

The New Permanent-Tenure Law

The Board of School Directors for the Portland school district could carry out all of these principles in the selection of teachers, under the law as it now is, but if they were to attempt to dismiss any teachers, except for open immorality or rank insubordination, the Board would find itself face to face with a new law, passed by the last Oregon legislature, which provides for practically permanent tenure for all teachers, principals, and supervisors. This law applies only to the Portland school district, and not to any other school district in Oregon. It is an example of vicious special legislation, under the guise of a general law.

This new law provides that teachers, after two years of service, can not be dismissed except after formal trial before the Board, and with formal written charges served, notices of trial, and attorneys present. This means that the person (Superintendent or principal) bringing the charges, and each supervisory officer endorsing them, will be put on trial by the accused teacher's attorneys, and not the teacher herself or himself. Almost any attorney can create enough errors, during the trial before the Board, on which to appeal to the courts if the Board

dismisses the teacher, and with almost a certainty that the courts will regard the preponderance of common evidence and the technical flaws as more important than the professional evidence and the interests of the children in the schools. The almost certain result is reinstatement, with full back pay. The law is not essentially different from the San Francisco or the Baltimore laws, and the School Boards in both places have practically given up trying to dismiss anyone, however incompetent they may be. The inevitable result on these systems has been bad, very bad, and the same result will inevitably come in time to Portland if this thoroughly bad law is not repealed.

The teachers of the city have doubtless been actuated, in securing this law, by what they have regarded as rank injustice. As was pointed out in the preceding chapter, the system of supervision has been inspectional rather than helpful; the principals have too often lacked the helpful qualities which principals ought to possess; the secret semi-annual written reports of the principals to the Board on the efficiency of their teachers, and the formal annual conferences with the Board to the same end, have served to keep teachers in a state of nervous tension; the requirement of an annual application from each teacher, as a prerequisite to retention, has doubtless been very irritating to many; and the formal annual election, with the constant fear of being dropped, have all alike tended to aggravate the situation. As a matter of fact, the Board of School Directors has not accorded the teachers in the schools as much permanence of tenure as is given to steam or electric railroad employees, clerks in stores or offices, or general business employees. Such persons do not have to apply over and over to hold their places, nor stand the chances of an annual re-election. Neither do policemen, firemen, nor city hall employees. In the schools, however, instead of the burden of dismissal for cause being placed on the Superintendent and the Board, every teacher has been automatically out of a position at the end of each year, and the whole burden of getting re-elected has been placed on the teacher's shoulders.

From numerous talks with teachers, principals, and others, we were convinced that the over-activity of the Board in the management of the teaching force has been largely responsible for the present law. Actually, the Board has dropped but very few teachers each year, and after doing so has turned around and reinstated from 10 to 30 per cent of those dropped. The Board has given the impression, though, of great activity in the matter, and this has kept many teachers in a state of needless alarm. When this new law was proposed it would have been wise had the Board made certain desirable concessions. Perhaps this unwise legislation could have been headed off by so doing. It may be urged also, that the teachers should have tried for con-

cessions from the Board, and not have rushed to the opposite extreme of a law providing for practical life tenure.

A Middle-ground Position

Between these two positions there is a desirable middle ground, and this ought yet to be taken by both sides, and taken in the interests of the children for whom the schools exist. When a new teacher enters the system in any capacity, she (or he) should be under observation for two or three years, varying somewhat with different teachers, during which time there should be an annual re-election. After this probationary period, he or she should then either: (1) be re-elected for a period of years, say four or five; or, perhaps better still, (2) be placed on indefinite contract. Indefinite contract would mean that annual elections would cease for all time; that no teacher or principal would be dropped, except after being advised of deficiencies, and being given a chance to improve; and that the Board, after such advice had failed, would be able to notify a teacher, formally in writing, that it desired to terminate the contract at the close of the school year. Teachers who did not receive such advice and notice would never need to give a thought to the question of re-election, as they would have practically permanent tenure.

This middle ground is equally just to both sides. The old conditions were not just to the teachers, and the new conditions are not just to the children, who certainly have rights as well as teachers. This middle ground proposed reserves to the Board of School Directors the right, on the advice of its educational officers, and after helpful offices have failed, to quietly remove from the schools those who are no longer fit to be there. To say that the Board has such power now, under the new law and by formal trial, is to cherish a delusion. The machinery for such action is of course provided, but it can probably seldom if ever be carried to a successful conclusion. Even if it should be, the notoriety given and the bitterness engendered by such trials are demoralizing to a school system, and ought to be avoided by both teachers and Board. Under the proposed conditions of tenure the exercise of the right to terminate the contract would naturally be used but seldom, for the reason that the whole condition of employment would be changed, but the retention of the right to such exercise by the Board, acting on the advice of its educational officers, would be good for both teachers and the schools. In the case of principals the right might need to be exercised more frequently, for the highest efficiency in such positions must be insisted upon.

That every teacher who is reasonably efficient today will continue to be so ten years from now, everyone who has had much to do with teachers or knows human nature knows will

not be the case. Good teaching demands keeping alive and keeping growing. Teaching, too, is constantly changing in nature and scope. Every decade new needs appear, and additional scholarship is demanded of teachers. To keep abreast of needs means constant growth. A few teachers will keep themselves professionally alive, even under adverse conditions; most teachers do their best when well led, and when the conditions favor professional growth; many others do their best work only under a constant spur. Such is only human nature, and teachers are no exceptions to human laws. Perhaps one of the surest means for producing future inefficiency in a teaching force is to take away the spur to growth, activity, and efficiency by providing life-tenure or its equivalent for all. A business so important as public education, where personal growth is so necessary to meet changing conditions, can not be successfully conducted or kept efficient on such a basis of employment. If we want to develop a self-satisfied and unprogressive teaching force, to ruin our American public schools, and eventually to turn education, for those who can afford it, over largely to the private and parochial schools to handle, then a life-tenure guarantee for teachers and principals is one of the surest means to such an end. Life-tenure for all efficient teachers there should be, but it should come as a deserved reward for efficient service, and not as a guaranteed right.

As was stated in Chapter II, perhaps no more important duty rested on the Superintendent of Schools and the Board of School Directors, during the past year, than that of preventing, by studying the causes, making the necessary concessions, and, if necessary, appearing in a body before the Legislature in opposition to the permanent-tenure law; and one of the most important duties still ahead of them is the repeal of this law and the enacting, in its stead, of some such provision as is contained in the suggested bill in Appendix A.

Right Principles of Action

In dealing with the question of the tenure of teachers, certain principles seem thoroughly sound, and ought to apply. These may be summarized as follows:—

1. All new teachers, or principals, when first employed, should be assigned to positions where they are most likely to succeed and grow, and for a year or two should be under the special observation of the Superintendent, his assistants, and the principal. The purpose should be to make every effort to develop all new stock into as strong teaching material as can be done, and much depends on the right start.

2. If the first year, or the first term, demonstrates a hopeless condition, and that a mistake in selection has been made, the Superintendent should be permitted to ask for a resignation.

If, on the contrary, good progress has been made and a reasonable hope exists, another year of trial may be given with advantage.

3. In case temperamental differences for which the teacher is not to blame have interfered with success, the teacher should be given another chance by transfer to another school. Sometimes a transfer, as a form of second trial, might be given for other reasons. All assignments and transfers of teachers should be under the direction of the Superintendent and his assistants, the Board merely employing teachers for the district.

4. During the trial period, which ought to cover from two to three years, varying somewhat with different individuals, annual reappointments should be made, on the recommendation of the Superintendent of Schools. After the probationary period has been passed, either election for long periods, or indeterminate contracts, preferably the latter, should be substituted, and the annual election for such teachers discontinued.

Indeterminate contracts should continue from year to year, without any action on the part of either Board or teacher. Teachers not notified of deficiencies by the Superintendent or principal by say March first, and further notified in writing, by say June first, that the Board desires to terminate the contract at the close of the school year, would be considered as retained in service and need give no thought to the matter of tenure.

5. The Superintendent ought not to consider charges of general incompetency from principals against their teachers, unless he is convinced that the principals have talked over the difficulties fully with their teachers, and have made a persistent effort to help them to succeed. If the weaker teachers felt that their principals were earnestly trying to help them, and if such teachers found that Board members refused to listen to their complaints and referred them back to the Superintendent of Schools, they would soon either make an earnest effort to cooperate in becoming efficient, or they would resign. If a principal can not or will not render such helpful assistance to his teachers, his (or her) own competency ought to be inquired into by the Superintendent.

6. The Board of School Directors should discontinue its present plan of giving hearings to principals first, and then to aggrieved teachers later on, and concentrate all such matters in the hands of the Superintendent of Schools and the Assistant Superintendents. All charges of incompetency should be approved or disapproved by this body; all hearings should be conducted by them; and the Board should accept their recommendations. If charges of incompetency are approved, the Superintendent should be empowered to request the resignation of the teacher involved. If a teacher is transferred for cause, a re-

quest for a second transfer from a second principal ought, in most cases, automatically to end the matter. The interests of the children in the schools are too important to keep weak teachers in the schools through sympathy. The sympathy is continually placed on the wrong side of the case.

7. While some way of quietly eliminating the unfit, or those who will not keep up with educational needs, is essential if school systems are not to deteriorate, it must, nevertheless, be remembered that the great object in school administration, so far as it relates to the teaching force, should be to make as high a grade of teacher as is possible out of the large amount of medium grade material which is employed; to keep teachers professionally alive and growing; to stimulate them to new intellectual and professional activity; and not merely to order teachers about, dismiss the ones who can not swim alone, and then take a new chance.

8. Growth is painful to most persons, and to some growth seems impossible. Because of this perfectly human trait, a few dismissals, from time to time, will be inevitable, but the number of such ought to be very small. If no dismissals are possible, or only possible after much turmoil, the system will deteriorate and the taxpayers' money will be wasted.

9. Once a teacher is dropped from the system, after careful consideration, he or she ought not to be reinstated. Almost every such action is unwise, and the effect of such action on the system is bad.

10. The Board ought to plan to enlarge the present pension system, either alone or in connection with the state, for the good of the school system as well as for humane reasons, and with a view to being able, ultimately, to retire honorably from the service those who have become too old and have fallen too far behind to longer render efficient service. The more rapid the development of the schools along new lines, the more will be the need of retiring those who can not longer grow.

Chapter V

THE SALARIES OF TEACHERS

Comparative Salary Schedules

The plan employed by a city in paying its teachers has much to do with the degree of efficiency and zeal for growth which in time comes to characterize a teaching body, and a wise administrative policy will so regulate the monetary and promotional rewards of teachers as to place a certain premium on personal effort and progress.

The teachers and principals of Portland are paid according to a regular salary schedule, the salary paid being, in large part, a product of the nature of the work, or the size of the school, and the number of years of service. The beginning of a merit system exists in the provision that the maximum salary shall not be paid to a teacher or principal whose work is not satisfactory. How this salary schedule compares with the salaries paid to teachers in other Pacific Coast cities may be seen from the following comparative table, compiled for those Western and Pacific Coast cities with which Portland may be expected to have to compete for the best Eastern teachers.

TABLE 3
Comparative Salary Schedules in Western Cities

CITY.	Teachers.		Principals.	
	Minim'm Salary.	M'xim'm Salary.	Minim'm Salary.	M'xim'm Salary.
1. Elementary schools.				
Alameda, Cal.	\$840	\$1140	\$1620	\$2160
Berkeley, Cal.	840	1200	1320	2280
Los Angeles, Cal.	744	1200	1200	2400
Oakland, Cal.	780	1200	1500	2400
Pasadena, Cal.	800	1100	1200	1900
PORTLAND, ORE. ...	725	1100	1050	2150
Salt Lake City, Utah....	600	1020	.....	.....
San Diego, Cal.	792	1032	1200	2004
San Francisco, Cal.	840	1224	1320	2260
Seattle, Wash.	840	1110	1200	2040
Tacoma, Wash.	600	960	1140	1800
2. Intermediate schools.				
Berkeley, Cal.	1080	1500	.....	3000
Los Angeles, Cal.	1200	1560	.....	3000
Oakland, Cal.	1260	1500	.....	2400
San Diego, Cal.	1080	1200	.....	2004
San Francisco, Cal.	960	1800	2340	2460

TABLE 3—CONTINUED
Comparative Salary Schedules in Western Cities

CITY.	Teachers.		Principals.	
	Minim'm Salary.	M'xim'm Salary.	Minim'm Salary.	M'xim'm Salary.
3. High schools.				
Alameda, Cal.	1200	1440	.....	2900
Berkeley, Cal.	1080	1500	.....	3000
Los Angeles, Cal.	1200	1560	3000	3600
Oakland, Cal.	1140	1500	3000	3300
Pasadena, Cal.	1100	1600	.....	.....
PORTLAND, ORE. ...	1150	1350	2500	3000
Salt Lake City, Utah....	850	1400	.....	.....
San Diego, Cal.	1200	1524	.....	2808
San Francisco, Cal.	1500	1680	2700	3300
Seattle, Wash.	1020	1560	2400	3600
Tacoma, Wash.	810	1350	1500	2500
4. Heads of departments in high schools.				
Alameda, Cal.	1500	1800		
Berkeley, Cal.	1800	2000		
Los Angeles, Cal.	1800	2160		
Los Angeles (sub-heads)	1560	1800		
Oakland, Cal.	1440	1800		
Pasadena, Cal.	1700	2000		
PORTLAND, ORE. ...	.....	1600		
Salt Lake City, Utah....	.....	1600		
San Diego, Cal. ....	.....	1692		
San Francisco, Cal. ....	.....	2040		
Seattle, Wash.	1710	1800		

The Portland Salaries

The feeling of all the members of the Survey staff who considered the question of teaching and salaries was that the salaries paid teachers in Portland were both too high and too low. For some of the teachers seen and for some of the principals, both in the elementary schools and in the high schools, the amounts paid were much too high for the quality of service at present rendered. On the other hand, the salaries of many of those seen were below their real worth, and below what would be paid them for a similar grade of work in other Western cities.

Averaged up, the salaries in the elementary schools are not too high. Compared with the salaries of firemen, policemen, city-hall employees, and school janitors, the salaries for elementary teachers are low. For the seventh and eighth grades, which ought to form the last two years of the elementary school, and for the ninth grade, which ought to form the first year of

the high school, the salaries are below what ought to be paid if these years were grouped into a series of Intermediate Schools, taught by well trained teachers, and according to a departmental instead of a grade method of work. (See Chapters IX and XI.)

For the high schools, the salaries are too low, especially for the higher positions, and these schools are continually losing some of their most promising and most useful teachers, because they have reached the Portland maximum salary and can not see a living on it. The demands on high school instructors are continually advancing; increased training is continually being demanded; and increasing salaries, and a good series of positions, ought to be provided to enable the high schools to retain the best of their teachers. Otherwise, in time, the only older and more experienced teachers who will remain in the schools will be the poorest ones,—the ones who have had no opportunities to go elsewhere, or who have seen no chance of getting away. These will fill the important places and block the way, so that there will be fewer and fewer chances for bright young teachers to advance to a position carrying a living wage. The result will inevitably be mediocre high schools.

A Uniform Salary Schedule

To merely advance the general level of salaries, and then continue to advance all teachers on the basis of length of service, while perhaps better than no increases, is, nevertheless, a poor use of funds. A much better plan is to place some emphasis on education, professional growth, study, travel, and skill in instruction, and to give the rewards so as not only to pay the most to those deserving the most, but also to encourage personal growth on the part of all not hopelessly dead. In any large school system a plan of salary rewards, in part based on personal growth, is desirable, and, in a school system where practical life-tenure of employment has been instituted, some such plan is a necessity if growth is to be encouraged and efficiency secured.

The uniform salary schedule for all presupposes that all of the same rank and experience are approximately of equal worth,—a condition that is never found. Not only does such a condition not exist, but instead, very wide variations in worth among teachers are commonly found, often in the same school. Portland is no exception to other cities in this respect, and to show the variations in ability observed, the following extracts from notes, made after visiting the work of certain teachers, are introduced here. They are snap shots, to be sure, but the judgments are probably not far wrong, and illustrate well that

differences in pay under the Portland salary schedule, and differences in worth, are not one and the same.

"Teacher A. Good personality, manner, and attitude toward children. Does her work very conscientiously and reasonably well, but without much apparent insight or reason why. An average teacher now, but might, with the right kind of help from her principal or the Assistant Superintendent, become a most excellent teacher. Left to herself she has about reached her limit, and in another ten years will be worth less than now. Present salary \$1,050. Not worth over \$900 now, but could be made to be worth \$1,200 to \$1,300 with proper aid, encouragement, and study. Present efficiency about 80%, and probably declining slowly."

"Teacher B. Work highly mechanical and entirely lacking in intelligent insight. Does things because they are in the books, and without a reason why. Work seen very weak. Poor manner; poor voice; slow; and generally inefficient. Pupils apparently making poor progress, and apparently copying her slow and inefficient manner. Product of the pupil-teacher system. Knows nothing else, and probably now too set in her ways ever to be made into anything more than a very mediocre teacher. Present efficiency about 40% of what her pay, \$1,050, ought to purchase for the city. In many systems she would not be retained, and no efficient Superintendent elsewhere would employ her."

"Teacher C. One of the best teachers seen here or elsewhere. Quick; alive; good restrained energy; good sense of humor; and does her work with despatch. Every pupil kept alive and interested in the class-room work. Questions and answers from the class showed that they were being trained to reason. Paid \$1,100 and worth \$1,500 at least. Would make an excellent intermediate school teacher. Efficiency 100%; in fact more efficient than a city might reasonably expect. A mature woman, professionally alive."

"Teacher D. Poor material; poor voice; slow; heavy; inefficient worker. Might do very well in the country, for she seemed to like her work, but her reaction time is too slow for a good city position. Paid \$825, which is too much for her. Does not keep the pupils working up to 50% of their possibilities, and they learn bad habits from her. Another product of the pupil-teacher system."

"Teacher E. Quick; clever; good humor; sees everything, but knows what not to see. A splendid teacher. Pupils making excellent progress under her. Paid \$1,050, and worth much more; certainly worth as much as any policeman in the city."

"Teacher F. Mediocre material. Room close and up to 75° in temperature, and had not noticed it. Three children in seats where their feet could not touch the floor, and had not noticed that. Seemed surprised when these things were called to her attention. Seemed weak in organizing ability, and in ability to instruct. Very sure of herself, however, and seemingly resentful of criticism from a man. Too old now to be taught much, and

probably will always remain a mediocre teacher. Probably faithful and conscientious, but professionally dead. Paid the maximum salary, and not worth more than the minimum."

"Teacher G. Head of a department in a high school. One of the best teachers in the subject have ever seen. Other teachers in same department seemed equally alive and vigorous. Good selections by some one. Questioning excellent, management of the class and room the same. Every pupil alert and watchful. Pupils learning excellent life habits, as well as subject matter under this teacher. Would make an excellent teacher of the subject in a normal school or college. Paid \$1,600; easily worth \$2,000 to \$2,200."

"Teacher H. Also head of a department in a high school. One of the slowest, dullest, and most ineffective teachers have ever seen. Extremely conservative; professionally dead; and department lacking in life and snap. Pupils under the teacher making but little progress, and learning very bad life habits. Pupils inattentive; order poor; teaching not 25% efficient. Paid \$1,600; would be a good investment for the city to give this teacher \$1,000 a year as a pension, for past services, and replace him by a man of energy and capacity."

"Principal X. Excellent principal. Knows his school, his pupils, and the details of his work throughout. Apparently knows how to do executive work without getting lost in the details. From questions, find him a student of education, and anxious to grow and advance. Apparently reads much, and keeps himself up with what is being done elsewhere. Would make a good superintendent of schools in a smaller city. Paid \$1,850; easily worth \$2,500."

"Principal Y. Has had training enough to be a much better principal than he is. Seems intellectually lazy. School largely what his teachers make it. Supervision of building and drills good; of the work of his teachers poor. Seems to know little about the details of the class-room work. Needs to be made to do more thinking, and get to work. Unless the Superintendent does this soon, he will be of little value in ten years more. Paid \$1,900; ought to be transferred to about a \$1,400 school until he gets to work, and does some thinking about what he is there for."

The Portland Teaching Force

Half of the illustrative cases selected are of good teachers and principals, and half are of poor ones. Just what percentage of the whole teaching force is of the poorer type the Survey staff can not say, for the reason that they did not attempt to see many teachers at work. The above merely represent cases seen, and of which there are doubtless many similar. The feeling of the members of the staff was, however, that the number of really poor teachers in the schools was quite small, and the number of really good teachers was relatively large; but that the remainder, quite a considerable body, represented teachers of average ability, or above, from whom the school department is not, at present, realizing more than 60% to 80% of their possible efficiency. This did not seem to be so much because the

teachers were unwilling as because of other conditions inherent in the kind of supervisory assistance provided, and in the present methods of paying teachers. In hours of work and in the faithful discharge of assigned duties, all of the teachers seemed actuated by a remarkably willing spirit. The chief defect of many seemed to be in educational insight and professional interest, and the force, as a whole, seemed to lack stimuli to professional activity and growth.

It is along the lines of awakening greater interest and insight on the part of the teachers and principals, and of developing a greater personal desire to keep growing, that it seemed to us that reforms in dealing with the teachers in the Portland school district ought to be directed. Inspection, compulsion, and rules and regulations are almost valueless here; helpful leadership must be substituted instead. In Chapter III this need of helpful leadership was emphasized. But helpful leadership can do only about so much; to help teachers most they must be stimulated to help themselves. To assist helpful leadership to do its work, both promotions on merit and monetary rewards should be added, to be given to those who do most to increase their personal efficiency and to advance the highest interests of the schools.

Payments Based on Merit and Efficiency

The beginnings of a merit system already exist in Portland in the provision that, to reach the maximum salary, a teacher or principal must be adjudged to be doing satisfactory work. According to the present plan of marking teachers (A, B, or C), this means either A or B. With the Board of School Directors elected for five-year terms, and only one each year, and hence with a Board not immediately responsive to any popular clamor which objecting teachers might raise, Portland is especially well situated to extend this merit system, and to offer its largest monetary rewards and best positions to those who do most to increase their personal efficiency.

The details of any plan for rewarding effort and growth ought to be worked out with some care before its adoption, but the following suggestions indicate certain lines along which Portland might do this by changing somewhat its methods of paying teachers and principals.

I. Elementary School Teachers

(First six grades, and seventh and eighth grades when conducted as grade work.)

1. If the regulation for admission to the system, as suggested in the first part of Chapter IV, subdivision 11, page 50, were put into force, the present minimum salaries are not too high. All elementary school teachers should then advance auto-

matically, after passing the probationary period, up to \$950 or \$1,000, at which increases would ordinarily stop. All teachers now having higher salaries to retain their present salaries.

2. Additional automatic increases to be granted to all elementary teachers, as follows:

a) For attendance at a summer session of a university or a teachers' college, and doing approved regular work, \$25 a year additional up to a maximum of four summers. All summer work also to count proportionally toward required college work, for promotion to other positions.

b) For a year of study, on leave of absence, at a university or teachers' college, doing regular work and following some approved course of study, \$50 a year additional in salary, and same to count, in full, toward eligibility for other positions.

c) For a year of study or travel in Europe, \$100 additional. This to count as equivalent to a year in college in determining eligibility for higher positions.

3. Leaves of absences for travel or study to be granted to teachers, without pay, on their application; and the same or an equivalent position to be guaranteed to them on their return.

4. For faithful and intelligent service and for professional growth, additional increase of \$50 a year may be recommended for any teacher, by the Superintendent, on the prior recommendation of the principal of the school and the concurrence of a majority of the Assistant Superintendents. All such must have been Class A teachers for at least the two years preceding, and such salary increases for service to be made not oftener than once in two years.

5. Maximum salary for elementary teachers in graded work, \$1,200.

6. Teachers of ability who improve themselves under any of the provisions of 2, above, so as to comply with any of the requirements for admission to the service, as proposed under subdivision 11, page 50, may be further advanced in salary by promotion to positions in the intermediate schools, after such are established.

II. *Intermediate Schools*

(Seventh, eighth, and ninth grades.) To apply only to regularly organized intermediate schools, when established, and not to grade work under present conditions.

1. Minimum beginning salary \$900, and to increase automatically, after passing the probationary period, up to \$1,100.

2. Further increases, on the basis of professional merit, teaching skill, and additional study, on the same basis as provided above for elementary teachers, up to a maximum of \$1,300.

3. Leaves of absence, for travel and study, also to be granted, as above.

4. Teachers of ability, who improve themselves under any of the provisions given above for elementary teachers, so as to comply with the requirements for admission to the service as proposed under subdivision 11, page 50, may be further advanced by promotion to the rank of Assistant in the high schools, after which they may be eligible for promotion to the rank of Instructor.

5. Experienced teachers from other places, entering the system, to be given such credit for their experience as may be determined.

III. *High Schools*

Three grades of teaching positions to be provided for the regular high schools, to be known as Assistants, Instructors, and Heads of Departments, and to have the following salary ranges:

a) Assistant.—To begin at \$900, and to be advanced automatically to \$1,200, at which all salary increases would stop, unless promoted to the rank of Instructor. Such promotion to be on the basis of teaching efficiency, interest, and growth; the recommendation of the head of the department and the principal of the high school; and with the approval of the Superintendent of Schools. Promotion to the higher rank may also be made by the Superintendent, by transfer to a vacant position in another high school.

b) Instructor.—May be filled by original appointment, or by the promotion of Assistants in the same, or other high schools. To begin at \$1,200, and to advance automatically to \$1,500. To retain desirable teachers, and for special merit or advanced study, the Superintendent, on recommendation of the principal of the high school concerned, may recommend a further increase to \$1,600.

c) Heads of Departments.—May be filled by original appointment, or by the promotion of Instructors in the same or other high schools. To begin at \$1,500, and to advance automatically to \$1,800. To retain desirable heads of departments, and for special merit or advanced study, the Superintendent, on recommendation of the principal of the high school concerned, may recommend further increases up to a maximum of \$2,000.

d) All teachers in high schools to be granted leaves of absence for study, as other teachers. For a year of graduate study in their special field of work, in an approved American or European university, all Instructors and heads of departments to be granted \$100 increase, in addition to the maximum salary limits reached by automatic increases.

IV. *Principals of Schools*

The present graded salaries, varying with the size of the school from \$1,050 to \$2,150, give splendid opportunity for an adjustment of the salaries of elementary-school principals according to their worth. Principals who cannot do good work, or who will not grow, should be dropped, or transferred to smaller schools, while principals who grow and are capable should be transferred to the largest schools and to the best positions. Positions ought not to be regarded as fixed, and a condition of healthy rivalry should be developed among the principals. When intermediate schools are established, promotion to these, at salaries up to \$2,500, should be open to the best of the elementary school principals. If any principal will take a leave of absence for a year, and spend it in study in a school of education in any of our better American universities, an additional \$100 a year, above the present maximum, should be added to his or her salary.

Advantages of Such a Merit Plan

The above outline is suggestive of a plan which could be applied to the payment of teachers and principals in Portland, with great educational advantage. A still better plan might be devised. Unlike most merit plans, to which teachers usually object, this suggested outline places definite rewards for definite things, and places but little dependence on the personal opinion of any one individual. It is to this last that teachers generally object. Where judgment is to be employed here it is the judgment of the principal and of the Superintendent. Such a plan contains little or nothing to which teachers or principals can legitimately object, unless they object to being expected to study and to keep thinking and growing. Even such could remain, if content with the lower salaries.

The salary limits proposed would cost the Board of School Directors a little more for salaries, but chiefly because salaries ought to be raised anyway. In the elementary school, while offering a larger maximum for the best teachers, it would cost practically no more than the present schedule, after it was once in operation, because all would not advance so high as now. In the intermediate school grades it would add a little to costs, but chiefly because a much higher grade of teaching service would be provided. In the high schools, while advancing costs somewhat, due to the higher level of salaries, and materially advancing the maximum for the best, it would not increase costs so much as might at first be thought because of the lower beginning salary which would eventually be paid to many of the newer teachers. By reference to the salaries paid in other western cities, it will be seen that the salaries proposed are still really low. The same will be true if the salaries proposed are compared with those

paid other city employees doing a similar high grade of work.

The merit of the suggested plan lies in that it would provide a much better distribution of rewards; would offer more encouragement for study and personal advancement; would provide more opportunities for the efficient to rise; would tend better to retain the best teachers in the service; and would give the School Directors better returns in efficiency for the money spent than does the present salary schedule. If some such plan for salary payments were inaugurated and carried out, it would be of great service in offering incentives to the ambitious and capable to enter the employ of the district, and to remain and advance in the ranks.

PART II
Instructional Needs

Chapter VI

THE SOCIAL AND ECONOMIC POSITION OF PORTLAND

It has seemed best to begin this study of the instructional needs of the Portland school district by first locating the city, among other cities of its class in the United States, and with reference to its size, its rate of growth, the character of its population, the character of its public interests, its comparative wealth, and its costs for annual maintenance, and from such an analysis to deduce the instructional needs of the district. This can be done best by presenting a series of tables, a glance at which will reveal the social and economic position of the city, and from which something as to the present and future educational needs and possibilities can be deduced.

Sources of Information

This is made possible at this time because of the recent publication of the results of the Thirteenth U. S. Census, for 1910, and the separate publication, within the past few months, of the Census Bureau's very comprehensive "*Financial Statistics of Cities for 1910.*" In this latter the income, expenditures, and wealth of all cities of 30,000 or more inhabitants are compared, in great detail. The information is, of course, two years old now, and some minor changes have no doubt occurred since then in all of the cities. It is, however, the most recent and the most accurate comparative information now available, and it is probable that similar information for the year 1912 would not materially change the relative rank and position of the different cities.

Cities Selected for Comparison

Portland had, in 1910, a population of 207,214, and there were then thirty-seven cities in the United States, including Portland, which had a population between 100,000 and 350,000 people. These may be considered as more or less in Portland's class in the matter of size, wealth, costs for maintenance, and provision for education. The educational problems which face cities within these population limits are somewhat the same. The high position of Portland, among the cities of the United States within the above limits, will be shown by the tables which follow.

The thirty-seven cities, with their population in 1910, and the rate of increase in population from 1900 to 1910, are:

TABLE 4.
Size and Rate of Growth of Selected Cities

CITY.	Population, 1910.	Rate of Increase, 1900-1910.
1. Albany, New York	100,253	6.5%
2. Bridgeport, Connecticut	102,054	43.7%
3. Spokane, Washington	104,402	183.3%
4. Cambridge, Massachusetts	104,839	14.1%
5. Lowell, Massachusetts	106,294	11.9%
6. Nashville, Tennessee	110,368	36.5%
7. Grand Rapids, Michigan	112,571	28.6%
8. Dayton, Ohio	116,577	36.6%
9. Fall River, Massachusetts	119,295	13.8%
10. Omaha, Nebraska	124,096	21.0%
11. Paterson, New Jersey	125,600	19.4%
12. Richmond, Virginia	127,628	50.1%
13. Scranton, Pennsylvania	129,867	27.3%
14. Memphis, Tennessee	131,105	28.1%
15. Birmingham, Alabama	132,685	245.4%
16. New Haven, Connecticut	133,605	23.7%
17. Syracuse, New York	137,249	26.6%
18. Worcester, Massachusetts	145,986	23.3%
19. Oakland, California	150,174	124.3%
20. Atlanta, Georgia	154,839	72.3%
21. Toledo, Ohio	168,497	27.8%
22. Columbus, Ohio	181,511	44.6%
23. PORTLAND, OREGON	207,214	129.2%
24. Denver, Colorado	213,381	59.4%
25. St. Paul, Minnesota	214,744	31.7%
26. Rochester, New York	218,149	34.2%
27. Louisville, Kentucky	223,928	9.4%
28. Providence, Rhode Island	224,326	27.8%
29. Indianapolis, Indiana	233,650	38.1%
30. Seattle, Washington	237,194	194.0%
31. Kansas City, Missouri	248,381	51.7%
32. Jersey City, New Jersey	267,779	29.7%
33. Minneapolis, Minnesota	301,408	48.7%
34. Los Angeles, California	319,198	211.5%
35. Washington, D. C.	331,069	18.8%
36. New Orleans, Louisiana	339,075	18.1%
37. Newark, New Jersey	347,469	41.2%

Size

The city is one of large dimensions and large future possibilities, and it has had a very remarkable growth. The city had, at the beginning of 1913, a land and water area of nearly fifty-four square miles, which is large among cities. This means as yet but little crowding, as this averages less than eight persons to the acre of land. Of the thirty-seven cities used for comparison throughout this report, twenty have an area of less than twenty-five square miles, thirty-two have an area of less than sixty square miles, and but three exceed seventy-five square miles in size. The Willamette River divides the city into two unequal divisions,—the West Side, of about eleven square miles, and the

East Side, of about forty square miles. (See Figure 1, page 5.) The water area covers a little more than two square miles. The city is almost certain to annex more territory, particularly to the Southwest, Northwest, and East, and to include a much larger area as the population increases. An area of one hundred and fifty square miles and a population of two millions of people is perhaps not too much to expect within the next half century.

Population

The city has had a remarkable growth in population, as the following figures will show:

Census of	Population	Increase in decade	Rate of increase
1860	2,847	.....	.....
1870	8,293	5,419	188.6%
1880	17,557	9,284	111.9%
1890	46,385	17,557	163.9%
1900	90,426	44,041	94.9%
1910	207,214	116,786	129.2%

Of the 225 cities of the United States having a population of 25,000 or over in 1910, but fourteen had grown faster than had Portland during the ten years preceding; and Portland was one of the six cities in the United States, having 100,000 or more inhabitants, which doubled its population during the preceding decade. Of these six cities it is significant that five were Pacific Coast cities. They were:

City	Rate of growth, 1900-1910
1. Oakland, California	124.3%
2. PORTLAND, ORE.	129.2%
3. Spokane, Washington	183.3%
4. Seattle, Washington	194.0%
5. Los Angeles, California	211.5%
6. Birmingham, Alabama	245.4%

It is confidently claimed that Portland has at the present time a population of 250,000, and the peculiar location and the economic importance of the city are such that it can confidently look forward to having a population of 1,000,000 people within the next twenty-five to thirty years, and probably twice that number within the next half century. A city with such a "manifest destiny" ahead needs to plan wisely and in the large for its future.

Character of the Population

From an educational point of view the population of Portland is exceptionally good among cities, and much better than can be expected to continue after the city has become older and larger. The present population, based on the census figures for 1910, is characterized by a high percentage of the native born, a foreign-born population drawn largely from the stronger and more intelligent national stocks, an almost entire absence of negroes, a marked excess in adults and males, a small number

of married couples, and a very small percentage of children of school age. This condition is well shown by the following tables and diagrams.

The first table shows the composition of the population in the thirty-seven cities chosen for purposes of comparison.

TABLE 5.
Composition of the Population: 37 Selected Cities

CITY	Percentage of the whole who are			
	Native born of native parents	Native born with 1 or both parents foreign born	Foreign born	Negroes
1. Indianapolis, Ind..	64.5	17.7	8.5	9.3
2. Columbus, Ohio....	64.4	19.6	9.0	7.0
3. Dayton, Ohio.....	62.9	21.9	11.9	4.2
4. Kansas City, Mo....	61.9	18.4	10.2	9.5
5. Atlanta, Ga.....	59.4	4.2	2.8	33.5
6. Nashville, Tenn....	57.7	6.5	2.7	33.1
7. Richmond, Va.....	54.2	6.0	19.0	36.6
8. Los Angeles, Cal...	53.2	26.1	20.3	2.4
9. Spokane, Wash....	52.3	26.1	20.3	0.7
10. Louisville, Ky.....	50.7	23.4	7.8	18.1
11. Washington, D. C..	50.4	13.6	7.4	28.5
12. PORTLAND, OR..	50.3	24.6	21.1	0.5*
13. Denver, Colo.....	50.1	28.7	18.2	2.5
14. Birmingham, Ala...	50.0	6.3	4.3	39.4
15. Memphis, Tenn. ...	45.8	9.3	4.9	40.0
16. Toledo, Ohio.....	44.6	35.2	19.0	1.1
17. Seattle, Wash.....	44.6	25.8	25.6	1.0
18. Albany, N. Y.....	44.6	36.4	18.1	1.0
19. New Orleans, La...	43.5	21.9	8.2	26.3
20. Syracuse, N. Y.....	42.6	34.2	22.4	0.8
21. Omaha, Neb.....	42.6	31.9	21.8	3.6
22. Oakland, Cal.....	36.8	33.3	24.5	2.0
23. Grand Rapids, Mich.	36.2	38.0	25.2	0.6
24. Rochester, N. Y....	34.2	38.4	27.0	0.4
25. Minneapolis, Minn..	31.9	38.7	28.5	0.9
26. Scranton, Pa.....	29.8	42.7	27.0	0.4
27. St. Paul, Minn....	28.7	43.5	26.3	1.5
28. Worcester, Mass....	28.4	37.5	33.2	0.9
29. New Haven, Conn..	28.2	37.0	32.0	2.7
30. Jersey City, N. J...	28.0	40.7	29.0	2.2
31. Newark, N. J.....	27.3	38.1	31.8	2.7
32. Providence, R. I....	26.7	36.7	34.0	2.4
33. Bridgeport, Conn...	26.6	36.6	35.5	1.3
34. Cambridge, Mass...	24.4	38.0	33.0	4.5
35. Patterson, N. J....	22.6	40.0	36.1	1.2
36. Lowell, Mass.....	19.5	39.5	40.9	0.1
37. Fall River, Mass...	13.3	43.7	42.6	0.3

* Plus 3.5% of Indians, Chinese, and Japanese,—mostly Chinese.

The high percentage of the native-born and the small percentage of colored people are noticeable features of Portland's population. But six northern or western cities have a higher percentage of native born.

The character of Portland's population is still better shown by the figure inserted here,

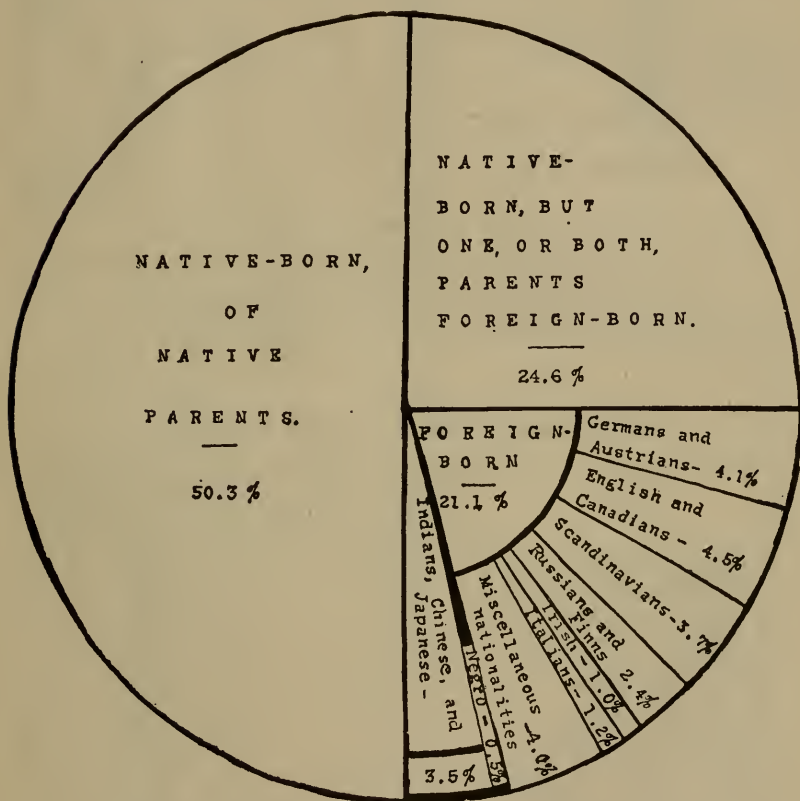


Fig. 4. The Elements of Portland's Population

which gives the percentages for each class and the distribution by nationalities of the foreign-born element. The large Teutonic element among the foreign-born is a noticeable feature, and it is even larger among the native-born of foreign parentage. This may be expected to change, after the opening of the Panama Canal, and with the coming to the city of large numbers of immigrants from the south and east of Europe.

That much of this foreign element, small as it is, is without children of school age, is further shown by an analysis of the

nationality statistics for the children enrolled in the schools of the district. This analysis shows a remarkably small foreign-born element in the schools. The enrollment for 1912-13 showed the following percentages:

Born in Portland	28.7%	
Born elsewhere in Oregon	15.0%	
Born in other American states	48.1%	
		91.8%
Total native born		91.8%
Born in British North America.....		1.5%
Born in N. W. Europe	2.3%	
Born in Russia	2.3%	
Born in Italy	0.6%	
Born in all other countries	1.5%	
		6.7%
Total foreign born		6.7%
		100.0%

Males

The preponderance of males and of unmarried people are also marked characteristics of the population of Portland. This is shown by the comparisons made in Tables 6 and 7.

TABLE 6.
Percentage of Males in the Total Population

City.	Per cent of the total population who are	
	Males.	Males over 21 years old.
1. Seattle, Wash.	57.7	42.9
2. PORTLAND, ORE.	57.4	42.9
3. Spokane, Wash.	55.1	38.6
4. Omaha, Neb.	52.3	34.8
5. Minneapolis, Minn. ..	52.2	34.9
6. St. Paul, Minn.	52.1	33.6
7. Oakland, Cal.	52.0	35.9
8. Kansas City, Mo.	51.7	35.2
9. Bridgeport, Conn. ..	51.5	32.3
10. Jersey City, N. J.	51.3	30.2
11. Los Angeles, Cal.	50.9	36.0
12. Birmingham, Ala. ...	50.8	30.7
13. Dayton, Ohio	50.6	32.8
14. Columbus, Ohio	50.4	33.5
15. Denver, Colo.	50.3	33.7
16. Toledo, Ohio	50.3	31.3
17. Worcester, Mass. ...	50.3	31.2
18. Syracuse, N. Y.	50.2	32.6
19. Memphis, Tenn.	50.1	33.8
20. Scranton, Pa.	50.0	28.5
21. New Haven, Conn. ...	49.9	30.3
22. Newark, N. J.	49.9	27.9
23. Paterson, N. J.	49.8	29.4
24. Rochester, N. Y.	49.7	31.9
25. Indianapolis, Ind. ..	49.1	32.8

TABLE 6—CONTINUED
Percentage of Males in the Total Population

City.	Per cent of the total population who are	
	Males.	Males over 21 years old.
26. Providence, R. I. . . .	49.1	30.8
27. Grand Rapids, Mich..	48.5	30.5
28. Louisville, Ky.	48.5	30.2
29. Lowell, Mass.	48.5	29.4
30. Fall River, Mass.	48.3	26.5
31. New Orleans, La.	48.2	28.6
32. Atlanta, Ga.	48.1	28.7
33. Albany, N. Y.	48.1	31.9
34. Cambridge, Mass. . . .	47.9	28.9
35. Washington, D. C. . . .	47.7	31.3
36. Richmond, Va.	47.7	29.2
37. Nashville, Tenn.	47.3	27.9
38. All cities in the U. S.	50.8	31.3

The unusually high percentage of males in the voting population in Portland is of significance.

TABLE 7.

Percentage of Males Fifteen Years Old or Over Who Are Married

1. Grand Rapids, Mich.	59.7
2. Dayton, Ohio	59.2
3. Indianapolis, Ind.	58.8
4. Toledo, Ohio	58.5
5. Atlanta, Ga.	57.4
6. Newark, N. J.	57.4
7. Fall River, Mass.	56.7
8. Birmingham, Ala.	56.6
9. Nashville, Tenn.	56.1
10. Paterson, N. J.	56.0
11. Syracuse, N. Y.	55.9
12. Columbus, Ohio	55.4
13. New Haven, Conn.	55.4
14. Denver, Colo.	55.1
15. Bridgeport, Conn.	55.0
16. Los Angeles, Cal.	55.0
17. Kansas City, Mo.	54.7
18. Scranton, Pa.	54.5
19. Rochester, N. Y.	54.5
20. Providence, R. I.	53.9
21. Washington, D. C.	53.8
22. Cambridge, Mass.	53.5
23. Oakland, Cal.	53.4
24. Jersey City, N. J.	53.2
25. Worcester, Mass.	53.0
26. Louisville, Ky.	52.6
27. Lowell, Mass.	52.4
28. Richmond, Va.	52.1
29. Memphis, Tenn.	51.4
30. Albany, N. Y.	51.7
31. New Orleans, La.	51.5
32. Spokane, Wash.	50.6
33. Omaha, Neb.	49.5
34. Minneapolis, Minn.	47.9
35. St. Paul, Minn.	45.7
36. PORTLAND, ORE.	42.6
37. Seattle, Wash.	42.5
38. United States as a whole	55.8

The two tables preceding reveal a city made up of much more than the usual number of men without families. In the figure which follows the age distribution of Portland's population is compared with the age distribution for the United States as a whole, and this throws further light on the composition of Portland's population.

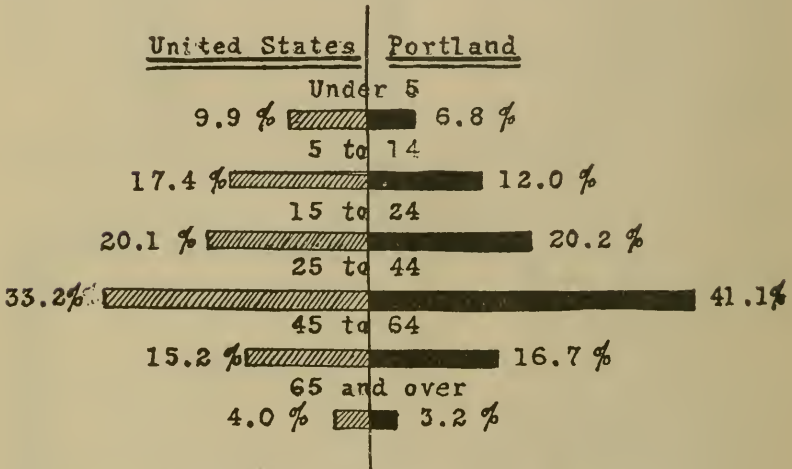


Fig. 5. Age Distribution of the Population.

The above figure reveals the great excess of population of the aggressive adult years between 25 and 45, and also the small percentage of children of school age in Portland. In the population between 25 and 45 the preceding table shows that there must be a marked preponderance of men, many of whom have no families. Such a condition is characteristic of a new and a rapidly growing community, and will inevitably change as the city grows older and its population become more settled.

The small number of children of school age in Portland, compared with the other cities studied, is another of the noteworthy characteristics of the city's population. This is well shown by Table 8.

TABLE 8
Percentage of Children in the Population

City.	Percentage 6 to 14 yrs. of age.	Percentage Under 15 yrs. of age.
1. Fall River, Mass. . .	18.2	32.3
2. Scranton, Pa.	18.1	32.0
3. Jersey City, N. J.	17.5	30.6
4. Newark, N. J.	16.6	29.6
5. New Orleans, La.	17.0	28.4
6. Birmingham, Ala.	16.2	29.0
7. Paterson, N. J.	16.1	29.1
8. New Haven, Conn.	16.1	28.4
9. Nashville, Tenn.	16.0	27.0
10. Cambridge, Mass.	15.7	27.8
11. Atlanta, Ga.	15.6	27.5
12. Toledo, Ohio	15.4	26.6
13. Richmond, Va.	15.3	26.1
14. Worcester, Mass.	15.3	27.0
15. Grand Rapids, Mich.	15.2	27.0
16. Lowell, Mass.	15.1	26.8
17. Bridgeport, Conn.	15.0	27.2
18. Louisville, Ky.	14.6	25.1
19. Providence, R. I.	14.3	26.2
20. St. Paul, Minn.	14.1	24.9
21. Syracuse, N. Y.	14.0	24.3
22. Rochester, N. Y.	13.9	24.2
23. Denver, Colo.	13.7	23.1
24. Indianapolis, Ind.	13.7	23.3
25. Dayton, Ohio	13.7	24.5
26. Omaha, Neb.	13.6	23.6
27. Washington, D. C.	13.5	23.2
28. Minneapolis, Minn.	13.3	23.4
29. Memphis, Tenn.	13.3	23.1
30. Albany, N. Y.	13.3	22.5
31. Columbus, Ohio	13.2	22.7
32. Spokane, Wash.	13.0	23.2
33. Oakland, Cal.	12.6	22.5
34. Kansas City, Mo.	12.3	21.2
35. Los Angeles, Cal.	11.6	20.1
36. Seattle, Wash.	11.1	19.7
37. PORTLAND, ORE.	10.7	18.8
38. All cities in U. S.	13.2	27.3

This low percentage of children of the elementary school age in the total population has made the schools of Portland very easy to maintain. If the percentage for Portland were as high as the average for all cities in the United States (13.2%) it would mean an increase of 6,000 elementary school children and about 150 additional teachers and class rooms (10 to 12 buildings) to provide for the present population only. If Portland had such percentages of school children as are found in such cities as Fall River, Jersey City, or Newark, cities where the foreign-born population is large, from 450 to 500 additional teachers and class rooms (25 to 30 buildings) would be required to meet the needs of a city of the present size. The very small

number of children in the city has enabled, and for some time to come should enable, the city to continue to provide educational advantages for its children much better than the average city can do.

Business Interests

The city is essentially a residence and a commercial city. Though ranking 28th in size in 1910, it stood 55th in the value of its manufactured products. It ranks with other Western residence and commercial cities in the matter of the percentage of its people engaged in the manufacturing industries, and not with the manufacturing cities of the East, as is shown by the following table:

TABLE 9

Percentage of the Total Population Engaged in Manufacture

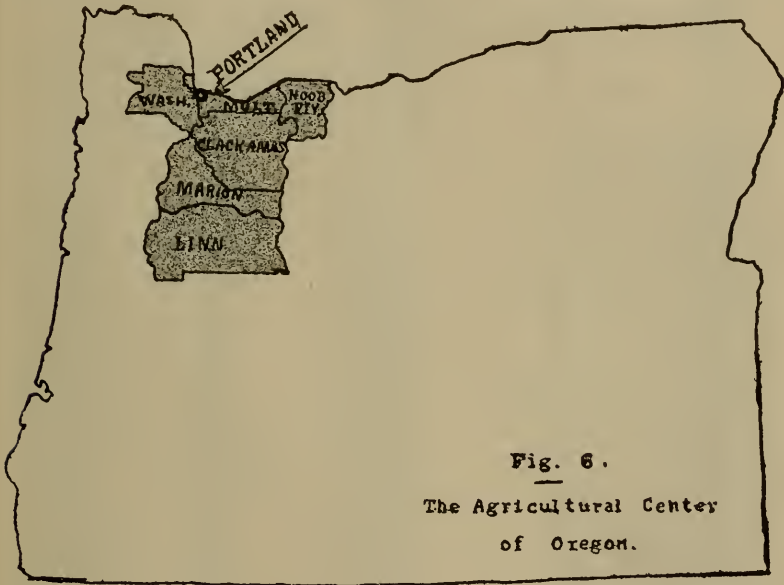
City.	Per cent.	City.	Per cent.
Spokane, Wash.	3.8	Rochester, N. Y.	18.0
Seattle, Wash.	4.2	Dayton, Ohio	18.5
Oakland, Cal.	4.6	Albany, N. Y.....	18.6
Los Angeles, Cal. ..	5.4	Providence, R. I....	20.7
Denver, Colo.	5.6	Lowell, Mass.	30.6
PORTLAND, ORE..	5.9	Fall River, Mass....	31.1

The lumber industry is the only manufacturing industry in Portland which requires any large number of persons. This employed, in 1910, 26.3% of those engaged in the manufacturing industries of the city, and the value of its output was 22% of all of Portland's manufactures, and 33.5% of the lumber manufactures for the whole state. The next largest industry was printing and publishing, which employed 11.2% of those engaged in manufacturing. Then, in order, foundry and machine shops (6.3%); bakeries (4.5%); clothing industries (3.8%); furniture manufactures (3.6%); copper, tin, and sheet iron products (3%); leather goods (2.6%); and confectionery (2.4%). The remainder of Portland's workers (36.3%) were scattered among a large number of small industries. In all lines but 14,891 persons were employed. These figures reveal that Portland has as yet no large manufacturing industries.

It is buying, selling, and transshipping which forms the great business interest of Portland. The jobbing trade is large, important, and rapidly increasing. Over an area calculated at 136,768 square miles in Oregon, Washington, and Idaho, an area three times as large as the state of New York, it is estimated that Portland merchants sell 80% of all the goods bought. Over another area calculated at 103,513 square miles in six western states, an area twice as large as Pennsylvania and New Jersey combined, and which is ranked as competitive territory, it is

estimated that Portland merchants sell from 40% to 80% of the goods sold. This means that an area four times as large as the six New England states combined, and larger than the German Empire, and which is rapidly increasing in population, is contributory to Portland in its buying and selling. This is reflected in the bank clearings of Portland, which have increased from \$50,000,000 in 1900, and \$300,000,000 in 1906, to \$600,000,000 in 1912.

The agricultural industries which surround Portland are much more important than its manufactures. Not only is Portland the natural transshipping and exchange center for a large area in three states, but it is also located in the very center of the agricultural industry of the state of Oregon. In the six coun-



ties immediately surrounding the city, as shown by the above map, and which comprise but 7.5% of the total area of the state, there resides one-third of the rural population of the whole state, one-third of the total number of farms is located, and one-third of the agricultural products of the state is raised.

The great interests of the city are home interests, professional interests, business interests, and agricultural interests, though manufacturing will doubtless increase somewhat with time. Beautifully located as the city is, with its hills, river, and plain; located virtually at the junction of two great rivers, each open to the navigation of large ocean-going ships; with fresh-water navigation in three directions for long distances.

and soon to open to the Idaho line; and with agricultural and timber interests of large and increasing proportions in all directions and for long distances, Portland is certain to continue to be a desirable residence city, and to become a commercial and jobbing center of very large future importance. These facts necessarily should modify and color the kind of education provided by the city for its children.

Wealth

The city is one of much wealth, being one of the richest cities, per capita of population, in the United States, and also has very low taxes, as is shown by the two tables which follow.

TABLE 10
Assessed and Real Wealth Per Capita of the Population

City.	Assessed wealth, per capita.	Basis of assessment, %.	Real per capita wealth.
1. Lowell, Mass.	\$ 753.52	100	\$ 753.52
2. Paterson, N. J.	758.31	100	758.31
3. Fall River, Mass.	776.45	100	776.45
4. Toledo, Ohio.	492.60	60	821.00
5. Bridgeport, Conn.	830.19	100	830.19
6. Dayton, Ohio.	537.25	60	895.41
7. Jersey City, N. J.	902.09	100	902.09
8. New Orleans, La.	681.06	75	908.08
9. Nashville, Tenn.	687.69	75	916.93
10. Syracuse, N. Y.	829.50	89	920.74
11. Scranton, Pa.	558.33	80	922.91
12. Grand Rapids, Mich. ..	742.01	80	927.51
13. Albany, N. Y.	932.59	100	932.59
14. Columbus, Ohio.	559.68	60	932.80
15. New Haven, Conn. ...	949.26	100	949.26
16. Newark, N. J.	955.68	100	955.68
17. Worcester, Mass.	971.99	100	971.99
18. Birmingham, Ala.	496.02	50	992.04
19. Rochester, N. Y.	815.33	80	1019.16
20. Cambridge, Mass.	1020.21	100	1020.21
21. Louisville, Ky.	776.06	70	1108.65
22. Providence, R. I.	1155.22	100	1155.22
23. Kansas City, Mo.	602.43	50	1204.86
24. St. Paul, Minn.	622.18	50	1244.36
25. Richmond, Va.	940.32	75	1253.76
26. Denver, Colo.	634.86	50	1269.72
27. Memphis, Tenn.	709.22	55	1289.51
28. Atlanta, Ga.	778.10	60	1296.83
29. Indianapolis, Ind.	794.84	60	1324.73
30. Washington, D. C.	937.41	70	1329.16
31. Oakland, Cal.	713.55	50	1427.10
32. Omaha, Neb.	234.95	15	1566.33
33. Minneapolis, Minn. ...	707.16	45	1571.46
34. Seattle, Wash.	865.38	45	1923.06
35. PORTLAND, ORE. ...	1115.57	57	1957.14
36. Spokane, Wash.	820.09	41	2000.00
37. Los Angeles, Cal.	911.36	45	2025.24
38. Average of all cities...	953.98	.....	.....

TABLE 11

*Rate of Tax, in Mills, for Maintenance of All City Departments,
Including the School Department*

City.	Nominal rate of taxation, mills.	Basis of assessment, per cent.	Real rate of taxation, mills.
1. Birmingham, Ala. . .	10.00	50	5.00
2. PORTLAND, ORE.	11.78	57	6.71
3. Spokane, Wash.	17.51	41	7.18
4. Atlanta, Ga.	12.50	60	7.50
5. Oakland, Cal.	15.34	50	7.69
6. Indianapolis, Ind. . .	15.40	60	9.24
7. Omaha, Neb.	62.16	15	9.32
8. Los Angeles, Cal. . . .	21.63	45	9.42
9. Memphis, Tenn.	17.50	55	9.71
10. Seattle, Wash.	22.13	45	9.96
11. Washington, D. C. . . .	15.00	70	10.28
12. Richmond, Va.	14.00	75	10.50
13. St. Paul, Minn.	21.99	50	10.68
14. Nashville, Tenn. . . .	14.74	75	11.06
15. Kansas City, Mo.	22.60	50	11.30
16. Grand Rapids, Mich. . .	14.14	80	11.31
17. Paterson, N. J.	11.33	100	11.33
18. Scranton, Pa.	14.18	80	11.34
19. Minneapolis, Minn. . . .	25.95	45	11.50
20. Jersey City, N. J.	12.60	100	12.60
21. Louisville, Kv.	18.50	70	12.95
22. Worcester, Mass.	14.01	100	14.01
23. Dayton, Ohio	23.87	60	14.32
24. Providence, R. I.	14.70	100	14.70
25. Columbus, Ohio	25.15	60	15.09
26. Albany, N. Y.	15.39	100	15.39
27. Bridgeport, Conn. . . .	15.71	100	15.71
28. Fall River, Mass.	15.84	100	15.84
29. New Haven, Conn.	16.00	100	16.00
30. Rochester, N. Y.	20.07	80	16.06
31. Denver, Colo.	33.26	50	16.63
32. Toledo, Ohio	27.83	60	16.70
33. Newark, N. J.	16.72	100	16.72
34. Lowell, Mass.	17.02	100	17.02
35. New Orleans, La.	23.00	75	17.25
36. Syracuse, N. Y.	19.87	89	17.58
37. Cambridge, Mass.	18.61	100	18.61
38. Average of all cities. . .	18.89	...	.....

Cost for City Maintenance

The annual per capita of the total population cost for maintaining the city government, including schools, but excluding public-service undertakings (water, wharves, etc.) which are business undertakings and partly or wholly self-supporting, is shown in the next table for each of the thirty-seven cities studied. From this table the low per capita cost of Portland's government is seen.

TABLE 12

Per Capita Cost for City Maintenance

City.	Cost per year per capita.
1. Birmingham, Ala.	\$ 7.10
2. Nashville, Tenn.	9.14
3. Scranton, Pa.	9.34
4. Richmond, Va.	9.99
5. Paterson, N. J.	10.52
6. Columbus, Ohio	10.78
7. Atlanta, Ga.	10.93
8. PORTLAND, ORE.	11.11
9. Grand Rapids, Mich.	11.35
10. Toledo, Ohio	11.66
11. Jersey City, N. J.	11.77
12. Bridgeport, Conn.	11.79
13. Dayton, Ohio	11.99
14. Oakland, Cal.	12.22
15. Memphis, Tenn.	12.24
16. New Orleans, La.	12.42
17. Indianapolis, Ind.	12.48
18. Fall River, Mass.	12.78
19. Lowell, Mass.	12.81
20. Louisville, Ky.	13.00
21. St. Paul, Minn.	13.03
22. Albany, N. Y.	13.38
23. Spokane, Wash.	14.21
24. New Haven, Conn.	14.35
25. Omaha, Neb.	14.36
26. Kansas City, Mo.	14.40
27. Providence, R. I.	14.81
28. Syracuse, N. Y.	15.03
29. Los Angeles, Cal.	15.13
30. Seattle, Wash.	15.35
31. Cambridge, Mass.	15.41
32. Minneapolis, Minn.	15.68
33. Worcester, Mass.	16.00
34. Rochester, N. Y.	16.38
35. Newark, N. J.	19.03
36. Denver, Colo.	19.21
37. Washington, D. C.	24.70

A further analysis of the different items of expense for each of the thirty-seven cities studied shows that Portland maintains nearly all branches of its civic activity much cheaper than do most other cities of its size. If the seven Southern cities were excluded from consideration, Portland would stand at the bottom of the list for most items of city expense. This may be seen from the following table:

TABLE 13

Rank of Portland in Items of City Expenditure

Items.	Per capita cost for		Rank of Portland in amt. spent.
	Portland.	Average of 37 cities.	
1. General expenses of the city government	\$ 0.84	\$ 1.30	30th
2. Police department	1.25	1.54	26th
3. Fire department	1.69	1.64	20th
4. Inspection service .....	.13	.19	22d
5. Health conservation .....	.10	.29	35th
6. Street cleaning and sanitation .....	.86	1.10	25th
7. Care and lighting of streets and bridges	1.25	1.70	27th
8. Charities, hospitals, and corrections .....	.02	.74	36th
9. Education	4.29	4.23	19th
10. Libraries, art galleries, and museums .....	.15	.22	27th
11. Parks, playgrounds .....	.37	.44	19th
12. Damage settlements, and miscellaneous expenses..	.16	.14	9th
Total per capita cost....	\$11.11	\$13.39	30th
13. Interest paid on debt.....	2.89	2.54	12th
Total per capita rate....	\$14.00	\$15.93	25th

This table shows the very low cost of maintenance for the city government of Portland, including the schools of the district. Only for fire protection (3), for schools (9), for damages for personal injuries (12), and for interest on its bonded debt (13) does Portland reach the average of the thirty-seven cities selected as being of its class in size and costs, while in nearly all other items Portland is much below the average of the thirty-seven.

The rank of Portland in amounts spent, given in the last column, is a better index of its position than the expense per item. As this list of thirty-seven cities contains seven Southern cities, where all costs for maintenance are quite low, the average costs for the thirty-seven are considerably lower than would have been the case if only Northern cities had been considered. Portland's low cost for police (2) is an indication of the orderliness of the city, and this, together with the high per capita wealth (Table 10) and the very low cost for health service (5) and for charities (8), give further indication of the good character of the city's population.

The amount spent for education (9), while slightly above the average for the thirty-seven cities, must not be taken too

favorably, as the list contains a number of Eastern and Southern cities where the costs for maintenance and the wages paid teachers are both very low. As it is, the city stands nineteenth

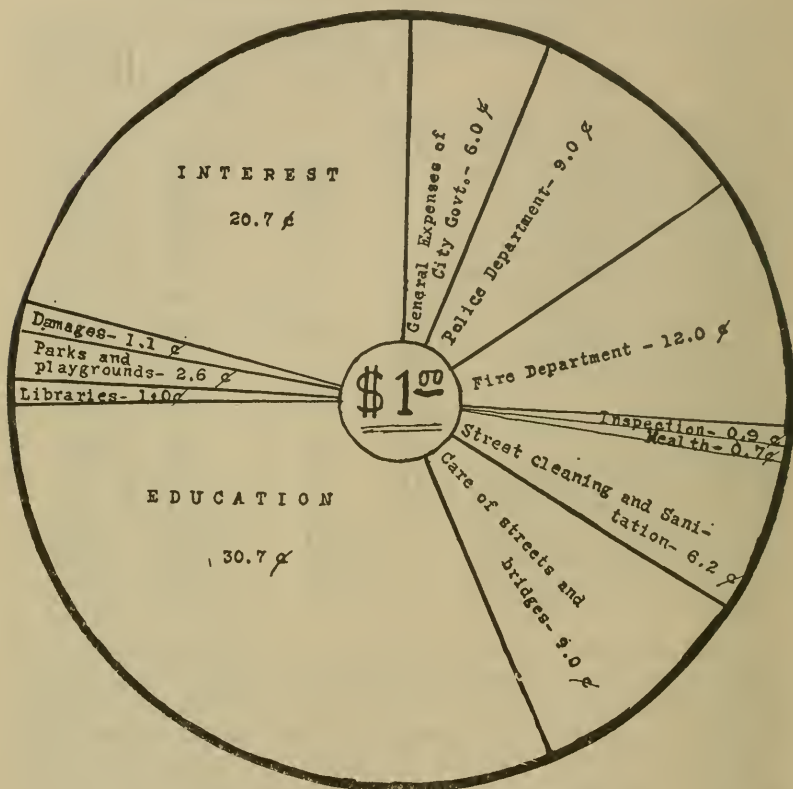


Fig. 7. How Portland Spends Its Dollar

from the top. If only the nine cities west of the Mississippi River were considered, cities where expenses for maintenance and for salaries are more nearly comparable, the average per capita cost for schools would become \$4.71 instead of \$4.23, or 43 cents larger than Portland's.

Chapter VII

THE EDUCATIONAL NEEDS OF SUCH A CITY.

General Character of the City

We find, then, as a result of the comparisons made in the preceding chapter, that we have to consider the needs of a rapidly growing western city of the best class. It is also one destined to grow rapidly in the future in both area and population, and to occupy an important place in the social, political, commercial, and agricultural life of the northwestern part of the United States. In the state of Oregon it will, in all probability, continue for all time to be not only the metropolis, but the commanding influence as well.

In population the city is, as yet, essentially an American city, with but a small foreign-born population, and this drawn largely from nations of Teutonic stock. The number of Orientals of school age is small, and the number of negroes is almost negligible. The city has a large surplus of men, particularly of the productive and creative years of early manhood; a small number of married couples; and a very small percentage of children of school age. These facts, as was pointed out in the preceding chapter, give the city many educational advantages.

The city itself is essentially a residence and a commercial city. While there is some manufacturing, the large city interests are home and business interests,—retailing, wholesaling, the transshipment of freight, and supplying both the needs and the outlet for the rich agricultural and timber region surrounding the city for some distance in all directions. It is these elements which should color its educational system.

The city, too, is one of the wealthiest large cities in the United States, and it is conducted on a very low rate of taxation and a very low per capita expenditure. In almost every item of city expenditure the rank of Portland is low. While this is commendable, there is no reason why Portland should hesitate to materially increase its expenditures for its educational system, or for other branches of helpful municipal service. In such a city, composed of an excellent class of people, growing rapidly, rich, and with a great future before it, the school system provided should be one of the best in the United States. It should also be one which, in addition to providing the general fundamentals of knowledge and the ordinary types of instruction, provides also in a broad and generous way for its citizens, public life, and commercial needs of tomorrow. This involves the provision of elementary and secondary educational opportunities, of course, and something more.

Changes in Our Conception of Education

Schools arose, with us, as democratic institutions, and to serve democratic ends, and quite early in our educational history education came to be conceived of as a right on the part of the citizen, and as a political necessity on the part of the state. The early conception of the school was that of a place where the fundamentals of knowledge could be imparted, and the pupil trained for participation in our political life. Reading, writing, arithmetic, language, geography, and the history of our country constituted the substance of the course of instruction, and to convey the accumulated knowledge of the past to the next generation was almost the only function of the school. This conception, once established, has persisted in many places up to very recently.

Within recent years, and particularly since about 1900, entirely new conceptions of the place and province of public education in a democratic society have come to the front, and are rapidly being accepted by our American people. The idea that the school exists to transmit to the next generation the accumulated knowledge of the past has given way to the newer conception that the school exists to prepare the child of today for intelligent participation in that society,—social, political, and economic,—of which he or she will form a part.

Significance of the Change

This change in conception is of far-reaching significance, and involves radical reconstructions in the work of public education. What is desired today is not so much accumulated knowledge, for such is not power, as we used to think, unless it is capable of application to the work of life, but knowledge which fits the child for his place in that society of which he will probably form a part. This has not only involved the addition of entirely new subjects of study, but also of entirely new classes of schools. It has also shifted the point of emphasis from subject matter to the child himself. A rich, fruitful childlife is seen to be more important than information.

With the increased participation of our people in the functions of government, as evidenced by the adoption of the initiative, the referendum, the recall, and the extension of the suffrage to women, the need of better education for the masses of our people has been seen to be necessary. With the great increase in scientific knowledge, and the application of the discoveries of science to all phases of human life, the need of instruction in science for the masses of our people has been seen. With the growing importance of commerce and industry, careful training for the larger commercial activities of a community

has become important. With the recent great increase in complexity of our industrial and social life, the need of education to fit the worker better for his or her vocation and for proper living has rapidly become apparent. The home, too, has been seen to need direction and guidance, and the home-keeping arts have been introduced.

In proportion, too, as our political, industrial, commercial, and social life has become broader and more complex, a longer period of educational guidance, and intelligent choice instead of haphazard drifting, have alike become necessary to prepare the individual for intelligent and successful participation in it. Our schools, slowly at first, are finally grasping the vast significance of their social, political, and commercial connections, relations, and obligations, and are now rapidly coming to realize that their worth as institutions of democracy depends, not so much on the imparting of mere information, as upon their efficiency as institutions for the improvement of society.

These New Conceptions Applied

Applying these principles to the local situation, we should expect to find, in a city of the size and importance of the city of Portland, a school system thoroughly conscious of these modern ends and aims, and consciously working to improve not only the educational, but also the social, political, commercial, and physical welfare of the community.

The elementary school system, by which we mean now all instruction below the high school, where the great masses of the people are trained, should be especially rich in its offering, providing not only instruction and personal guidance, but instruction and personal guidance for many different classes of children, and meeting the social, physical, and educational needs of many different types of youth. A system of kindergartens, for the instruction of children under six, might well precede the elementary school course, particularly in the poorer and more foreign quarters of the city. The elementary school training, in its earlier years, should carry the kindergarten spirit over into it, and be rich in activity and happy expression. In its later years it should differentiate somewhat to meet different needs, and certain divisions of it should be given a strong vocational turn. The secondary instruction should involve the best quality of purely cultural, domestic, scientific, technical, commercial, physical, and vocational education, and carefully adjusted to individual and community needs.

A city of the size and importance of Portland should also provide good extension education, for adults and for those beyond the compulsory school age. There were in the city, in 1910, 1,187 illiterate males of voting age, and 2,145 of ten years

age and over who could not read and write. For these some instruction should be provided, suitable to their needs. Far more important than these, though, are the thousands of men and women who are not illiterate, as the tests are made, but who still have a need and a thirst for information and instruction. Summer schools, of different types, should also be maintained, and good and readily accessible facilities provided for organized and directed play.

To be still more specific, let us examine each of these divisions more in detail.

1. THE ELEMENTARY SCHOOL SYSTEM

The elementary school system of such a city should of course give instruction in the old fundamental subjects of the elementary school curriculum, viz., reading, writing, language, arithmetic, geography and history. The first four of these are tools, pure and simple, and should be taught well, but as economically of time and energy as is possible, and should lead as soon as possible to applied work. Perhaps few tests serve so well to distinguish a school system possessed of a modern spirit and a proper conception of its functions, from a school system of the old traditional type, as does the way in which these tool subjects are taught in the schools. In the former these subjects are frankly regarded as tools, to be taught of course, but always with a view to their use in learning or doing something else; in the latter they are taught as ends in themselves, and with a minuteness and an attempted thoroughness which is painful to behold. Years of a child's life are often spent in learning certain supposed uses of a tool, for which there is no use outside of the schoolroom itself. This is particularly true of arithmetic and grammar. Pupils are often drilled for years on problems of a type no man in practical life ever solves, and grammatical drill is given, often for years, which can be of no use to anyone except a school teacher.

Tool Subjects

We should expect, then, in a city of the size and type of Portland, to find a school system in which the fundamental elementary school tools—reading, writing, spelling, English usage, and the fundamentals of arithmetic—were taught well, but taught always with a view to their use as tools. We should also expect to find a corps of supervisors of instruction—superintendents and principals—carefully protecting the children and guiding the teachers away from perhaps the most common mistake of school teachers,—that of regarding these subjects as ends in themselves.

Content Subjects

The reading should be especially rich in material read, and large in quantity, with a view to giving the child ideas and enthusiasms, as well as the ability to pronounce. In a city so wonderfully located as Portland, a city where almost every geographical feature and type is before the eyes of teacher and children, and in a wonderfully fine form, we should also expect to find the instruction in geography rich in its content, closely correlated with the nature study work, and among the best taught of all the elementary school subjects. The instruction in history we should expect to find closely correlated with reading and literature in the early grades, and rich in story and biography, but gradually separating itself as a study, so that by the fifth or sixth grade an elementary history text might be in the hands of the pupils. Good instruction in drawing and music should also be provided.

Science

In a western city such as Portland, one whose whole future promises to be colored by the inventions and discoveries of science and by agriculture, we should also expect to find a course of study rich in instruction in the elements of many sciences. Such work should be found in every grade of the elementary school, from the first to the last, and in the upper grades it ought to culminate in rather specific instruction in agriculture and in general science. School gardening should be very prominent in the instruction of a school system located, as in Portland, in the very heart of one of the richest agricultural regions of the United States. Good instruction in domestic science and homework for girls, and in manual training for boys, should also be prominent features of the work of the upper grades of a course of study for such a city.

Individual Differences

The school system of such a city, too, should recognize the great differences which exist among children, and particularly the great differentiations in aptitudes which begin to be marked after about twelve or thirteen years of age. To best meet such needs a series of intermediate schools might be provided with advantage. For a city such as Portland, with its large residential class of means, its large business and working middle class, its home-building foreign population of good stock, and its poor and poorly-housed element, small now but certain to increase rapidly, differentiations in instruction for the upper years of the elementary school ought to be provided. For some the op-

portunity to take up a foreign language and other mathematics than arithmetic ought to be provided. For others what is known as pre-vocational training, the nature of which is further explained in Chapters IX and X, should be given. Manual training and the home-keeping arts should be emphasized for others. Music, drawing, constructive art-work, and dramatic expression should also be included.

Other Features

In such a city, too, one ought to expect to find smaller classes to the teacher than in eastern cities of larger school population and much smaller per capita wealth. This, in turn, should enable the schools to provide differentiations based on capacity and needs, and an excellent quality of instruction. In such a city, too, one should find ungraded rooms and special classes for those needing such attention. In addition, in a city of a quarter of a million inhabitants, one would expect to find special classes provided for the seriously anemic, the tubercular, those of defective speech, the overaged and backward, the defective, the deaf, and perhaps the blind. It is a waste of money and energy to try to teach such children in classes with normal children, and it also is not fair to them or to normal children. Play activities should also be emphasized, good health supervision should be provided, and good instruction in hygienic living should be given in the schools. An educational system which is conscious of its social mission is engaged in far more than mere instruction; its purpose is to so use instruction as to do the most possible for every boy and girl under its care.

Finally, we should expect such a school system to cover this rich course of instruction in eight years of time; save as large a percentage as possible from dropping out before the completion of the course; and get its pupils into high school work by the age of fourteen to fifteen.

2. SECONDARY EDUCATION

Vocational education, of a number of types, should be available for those completing the course and not desiring to enter the regulation high-school course. Such instruction should involve the homekeeping arts for girls, some of the trades for boys, and certain lines of specialized work in drawing and of business work for both. In addition, a wide range of high school education should be available for all, and an effort should be made to make this so varied and so thorough that a large percentage of those finishing the elementary-school course would feel the necessity of going on and graduating from some one of the high-school courses before beginning their life work. To

make this the case the high school instruction should relate itself closely to the needs of the city itself.

College-Preparatory Subjects

In such a business and residential city as Portland, with many beautiful homes and many attractive cottages, a people of good native stock, and a people of much means and means well distributed, there will naturally be a large and a constant demand for instruction in the older types of college-preparatory subjects,—the languages, history, English, mathematics, and the older sciences. These we would expect to find offered in a number of the high schools, and taught in the best manner and by the best teachers obtainable. To meet growing civic needs, good instruction in economics and American history should be provided as well.

Technical Courses

For those desiring a general education, but of a more technical type, good instruction in courses of a polytechnic nature—mathematics, the physical sciences, drawing, and shop work for the boys, and drawing, art work, the sciences, and the home-keeping arts for the girls—should also be provided. A good manual-arts course, including instruction in electricity, machine-shop work, plumbing and sanitary engineering, the printing and book-binding trades, millinery, dressmaking, and designing of many kinds, might also be provided with advantage. Whether taught in special high schools, or offered in each of the general or so-called cosmopolitan high schools, we might reasonably expect to find such instruction provided, in one form or the other, in a city of such a character as Portland.

Commercial and Agricultural High Schools

Two other prominent needs of such a city as Portland, located as it is and with its large future just ahead of it, are the best quality of instruction in commerce and in agriculture. The commercial business of Portland, and not manufacturing, will probably ever be its prime interest, and agriculture will be its second largest interest and source of income. Properly to meet such present and future needs we might reasonably expect such a city to maintain, in addition to the more general commercial courses, a large commercial high school of the first rank, where careful preparation could be made to meet the large and increasing commercial needs of the city. Besides offering an excellent form of education, such a school would give large financial returns to the business interests of the community. The trade of Portland is certain to expand rapidly, as population increases, and the merchant class of Portland should have

at hand the best training available for their business work. The same is equally true of agricultural instruction. An agricultural high school of the best class, in which all the instruction was developed from an agricultural standpoint, would offer instruction to young people of high educational value, would direct many young people into useful and profitable life careers, and be a paying investment for the business interests of the city as well.

3. PUBLIC SCHOOL EXTENSION

We have only recently begun to extend the school to meet the various needs of our people, and, excepting night schools, which have been maintained generally for many years, many cities have not as yet done much to meet the needs of their people. On the other hand, many of our wealthier cities have made very commendable beginnings, and it is only a question of time until all will be forced to do so. A generation hence public education will be a much more important undertaking than it is today. Such work ought to include evening high schools, especially of the vocational type; evening elementary schools, of a type different from the day schools, and for the instruction of foreigners in our language and form of political life, and for instruction in applied science and art; evening lectures and scientific demonstrations, covering a wide range of subjects, for adults; summer schools for the more energetic, and summer vocational schools of various types; and well-directed playgrounds, open all summer after school hours, and on Sundays and holidays, and with attendants in charge not only to direct the play, but also to give particular attention to individual needs in the line of health and physical development.

Portland's Special Educational Opportunity

The laws of the State of Oregon require that all children in the state, unless excused for certain specified reasons, "between and including the ages of nine and fifteen years of age," shall attend a public school for the full time such public school is held in the district. This is interpreted to mean that all children must enter school by the time they are nine, at latest, and must remain in school until they reach their sixteenth birthday. The schools of Portland are in session ten months in the year, and children usually enter at six or seven years of age. This gives Portland an unusual opportunity to ensure the proper education of all of her future citizens.

In a community such as Portland, composed of excellent stock, largely American, and with but few foreign-born children in the schools; a city of intelligence, and with wealth sufficient to provide for any educational needs; a quiet, law-abiding com-

munity; and a city offering few opportunities for children to work in mills or manufacturing establishments, it ought to be possible to put practically every child in the community through a six-years' elementary and a three-years' intermediate school course, and to offer to such not only good instruction in the fundamentals of learning but to offer some pre-vocational opportunities and instruction for all as well. Nothing less than this ought to be the aim and the ambition of the school authorities of the district, and the instruction and the promotional rate ought to be shaped to this end. We should expect to find, then, every reasonable provision to facilitate the progress of the children through the grades; no large number of repeaters or over-age children in the grades; and no marked falling off of children after the sixth grade, as is common in many other cities.

Such is an outline of what a city of the size, wealth, social composition, political importance, and commercial future of Portland might reasonably be expected to provide for its children, and for its citizens.

In the next chapter the educational offering of the city, elementary and secondary, is stated, from which one who reads can see to what extent the city school system measures up to what might reasonably be expected of it.

Following this, in Chapters IX, X, and XI, the needed changes and additions are outlined, and a constructive program for the city set forth. While there are slight duplications in Chapters IX and XI, as to recommended improvements, it has seemed best to retain such, as the recommendations come from two city superintendents of schools whose school systems are noted for their efficient work.

Chapter VIII

THE PRESENT SYSTEM OF ELEMENTARY AND SECONDARY INSTRUCTION

(Prefatory Note)

The part of this report contained in this and the following chapter is based on annual reports, courses of study, rules and regulations, of the Portland schools; together with a personal study of the schools in operation, from April 7 to April 24, including many conferences with principals, teachers, superintendent, assistant superintendents, and members of the Board of School Directors. In the personal study of the schools it was thought preferable to devote all of the limited time to a few schools, that might be considered typical, rather than to divide the time among all the schools. Carrying out this plan, the following schools were studied: The three high schools, one day being devoted to each; the School of Trades, one forenoon; the School for the Deaf, one short afternoon; the School for Defectives, a part of one morning; the Brooklyn School, one forenoon; the Highland School, one full day; the Arleta School, one full day; the Glencoe School, one morning; the Holladay School, one full day; the Couch School, one forenoon; the Failing School, one forenoon; and the Shattuck School, one afternoon. The inspection of the work of the elementary schools was so planned that some exercises were seen in all subjects; in the principal subjects,—reading, language, arithmetic, geography and history,—exercises were seen in every grade of each subject, and usually in more than one class, sometimes in several classes of a grade.

Conferences of one to three hours were held with the principal of each one of the schools studied. At these conferences searching inquiry was made into the purpose, work, difficulties, and shortcomings of the school, from the standpoint of the principal.

Such is approximately the scope of the studies on which this section of this critical report is based. This is made known at the outset, so that one reading this section of the report may judge for himself of the reliability and justification of generalizations that are obviously based largely or wholly on personal investigation of the schools at work. The facts that the studies of all the elementary schools, after the first one visited, revealed nothing of fundamental importance that was not evident in the first school, but served to confirm the chief characteristics of that first school; that several principals volunteered the assurance that to know one Portland grammar school was to know them all; and that the study of the Portland school system from every standpoint warrants the expectation of uniformity, seem to me to justify the belief that further studies would show that all generalizations made in this section may safely be accepted as reliable. Nevertheless, should anyone, particularly anyone conversant with all the Portland schools, contend that any generalization here made, which is chiefly based on conditions found in the schools studied, is not true of the schools as a whole, I should not argue the point, for I have had no opportunity to know anything through personal investigation of the work of three-fourths of the Portland schools.

F. E. SPAULDING.

1. FUNDAMENTAL PRINCIPLES

In the working out of the local problem of education, as presented in the preceding chapter, and in adapting it to local needs and conditions, it is quite obvious that the following three simple, common-sense propositions must be observed:

Three Fundamental, Working Principles

First, the children and youth of the community must be constantly and sympathetically studied by teachers and principals, in order that these may understand at all times the condition, the capacity, the interests, and the educational needs of each child or youth;

Second, the various present and prospective opportunities and needs of the community for worthy service must also be studied, constantly and appreciatively, particularly by those immediately responsible for the education of youth soon to be called upon to take effective part in the occupations and life of the community; and

Third, the instruction of each child and youth—the content, the method, and the immediate purpose of that instruction—must be constantly adapted to the needs of that child or youth, in the light of the needs of the community.

Only through the intelligent and constant observance of these three propositions in practice is it possible for the schools to perform the largest service to the children and youth of the community and to the community itself. Indeed, these three propositions constitute the three comprehensive, fundamental, working principles on which any adequate system of education for this, or for any other American community, must be based. Moreover, these principles must be constantly observed, not alone in the general administration of the school system, but equally in the minute details of schoolroom procedure; they must be observed alike by school board, by superintendent and assistant superintendents, by supervisors, principals, and teachers.

Constant Changes Necessary

The observance of these principles will lead to constant changes throughout the school system:—changes in the courses of study, changes in the types of schools; changes in the organization of the various types of schools into a harmonious system; changes in the organization within the individual schools, and within the individual classrooms; changes in the immediate aims, and in the detailed methods of instruction of every teacher. The constant changes which the observance of these principles must determine will indicate, not anarchy; not lack of purpose, plan or system; but the continuously progressive adapta-

tion of forms, instruments, means and methods of education to the ever varying needs of different children and youth, and to the ever changing and growing needs of the community for service. The observance of these principles, with the constant changes that their observance will necessitate, will insure the unity and continuity of intelligent effort to make the most possible of every child and youth of the community, that both the individual and the community may profit to the utmost.

The Most Fundamental Principle Observed in the Present Conduct of the Portland School System Is the Maintenance Unchanged of a Rigidly Prescribed, Mechanical System, Poorly Adapted to the Needs Either of the Children or of the Community

To what extent are the three fundamental, working principles which we have just described, now observed in the conduct of the Portland schools? Almost not at all, consciously and intentionally; certainly in practice they are not accepted in any degree as fundamental, guiding principles. The universal practice—whether approved or disapproved by those participating in it—is enlisted in the maintenance of a rigid, minutely, and mechanically prescribed system of instruction, organization, administration, supervision, examination, and inspection. Any change in this elaborate mechanism meets with resistance, positive as well as negative. So far as this system is adapted at any point to the actual needs of the individual children and youth that come under it, so far as it is adapted to the needs of the community for adequately trained recruits to serve the community, the adaptation is accidental,—not the result of intelligence now operative at that point.

School Board and Superintendent, as Well as Principals, Teachers and Pupils, Are Victims of the System for Which No One Is Primarily Responsible

So far as we have been able to learn, the spirit and fundamental outlines of this rigid, mechanical system antedate the beginnings of the services of those now longest connected with the schools. No single individual, no single group or class of individuals, at present within or without the school system, can fairly be held responsible, either primarily or chiefly, for the system as it today exists. Of course, the seat of the authority that maintains, and that has long maintained this system, is to be found somewhere in the school board, in the superintendent and his assistants; but the school board, the superintendent and his assistants, are today manifestly the victims, whether willing or unwilling, of the system that they help to maintain, just as truly, if not as fully, as is every principal, teacher, and pupil in the schools. And these officials will continue to be the volun-

tary or involuntary servants of a system for which it ought to be possible to hold some one primarily and chiefly responsible, so long as authority is merely "seated somewhere" among them; authority and corresponding responsibility must be definitely centered, as has been pointed out in Chapter III, as a primary condition of the escape of any or all from the universally oppressive incubus of the present system.

Did the solution of the local educational problem lie in the maintenance of a rigidly uniform, mechanical system of instruction, we should have only commendation for the system that prevails here. We have never known another mechanical school system that was worked out and carried out so logically, so consistently, and so completely. Personally, those who are earnestly maintaining this system are deserving of much credit for hard, painstaking work, and for loyalty—to the system.

This Study Has to Do With the System Primarily, With Personalities Only Incidentally

In attempting to evaluate Portland's present educational activities, it is apparent that we shall have to deal primarily with this long-established, mechanical system, which is the one universally and overwhelmingly dominant factor, to study the effects of this system in the principal phases of local educational effort. We shall have to do only incidentally with the personalities of those that now chance to be engaged in maintaining this system. Whenever reference is made to individuals, such reference must be understood to be purely impersonal.

The Purpose of This Study Is Wholly Constructive

Let it also be understood that our sole purposes in setting forth the inadequacies and the positive defects of the present system are, first, to make apparent to everyone, especially to those now directly involved in the maintenance of that system, the necessity of breaking the system's benumbing power; and, second, to prepare the way for an appreciative understanding of those principles and ideals of intelligent procedure that will be advocated in place of the present mechanism. The purpose of our critical study is wholly constructive; it is destructive only incidentally and unavoidably.

2. THE ELEMENTARY SCHOOL CURRICULUM

What Is the Nature of Portland's Mechanical and Uniform System? What Are Its Effects and Its Defects?

The system, so far as it is revealed within the schools, centers in the course of study, and consists largely of the course

of study and of the means and methods employed in carrying out that course of study. Table 14, opposite this page, shows the scope and arrangement of the present elementary curriculum; more than that, it appropriately suggests, but scarcely exaggerates, the mechanism that attends the administration of this curriculum, almost from the beginning to the end. For the sake of clearness, the elementary and the high school work will be studied separately.

The Elementary Curriculum Vivisected Into Fifty-four Dead Pieces

As indicated by the Roman numerals above, the elementary curriculum is first divided into nine parts, or grades; then each of these grades is halved, as shown by the letters *A* and *B*; finally, each half grade is divided into three parts, numbered in order. Thus at the outset is the elementary curriculum, that should be instinct with life in the minds of principals, teachers, and pupils, vivisected with mechanical accuracy into fifty-four dead pieces. This is no mere figure of speech; nor does the mechanical dismemberment of the curriculum exist merely in the diagram which the author of this study has drawn. The city's published course of study, the system of examinations, the scheme of advancing pupils, the method and spirit of the supervision or inspection, and finally the actual work in the school rooms, all, in perfect mechanical harmony, reveal a dead, fifty-four times disjointed curriculum.

What Is a Living Curriculum?

We shall examine critically, in some detail, the contents of this dead curriculum, and the chief means of administering it; but first, let us consider for a moment this one characteristic of death, as contrasted with that of life in a curriculum. A living curriculum, while it may be, for the most part should be, broadly outlined on paper, has its real existence in the minds of teachers, principals and supervisors; it is plastic and adaptable, constantly undergoing changes in emphasis of its various parts, even to the elimination of some entirely and the substitution of others, as the sympathetically studied needs of the particular children to be taught seem to require; the living curriculum ministers practically to the ever and almost infinitely varying needs of boys and girls, no two of whom were made alike or destined to be made alike; the living curriculum serves as readily and as well the child whose mental processes depend on concrete things, as that one who readily grasps abstract ideas; the living curriculum serves the present needs of every pupil, whether those needs be the preparation for the next steps that will lead in due time through a college preparatory course to

college, university, and a professional career, or whether those needs are for skill of hand that will enable a youth to support himself honorably, within a year, by rendering some worthy service to the community.

What Is a Dead Curriculum?

A dead curriculum—Portland's dead curriculum—is the standard by which the living child is measured and to which he must conform; if the fifteen, sixteen, seventeen, or even eighteen year old child has not yet transferred to his memory parts thirty-seven to fifty-four inclusive of the dead and comminuted curriculum, the chief constituents of which, in these parts, are abstract arithmetic and technical grammar, then he must begin with part thirty-seven and appropriate that and each of the succeeding seventeen parts in order before he can even be associated with youth of approximately his own age—an important matter educationally—before he can engage in studies suited to his age and condition, studies and exercises that will be of immediate and practical value to him in the effort that he must shortly make to serve society for the sake of his own livelihood.

Some Effects of Portland's Dead Curriculum

In June, 1913, there were, in all of the elementary schools of Portland, 100 boys and girls from fifteen to eighteen years of age just completing part thirty-nine of the elementary curriculum—in other words, completing grade 7A; at this same time there were 1310 more boys and girls of fifteen, sixteen, seventeen, eighteen, and a very few even of twenty to twenty-one years of age, who were completing the task of appropriating some one of the pieces of the curriculum between the thirty-ninth and the fifty-fourth. Here were altogether 1410 youth—more than the enrollment of the largest high school—healthy and strong physically, probably most of them normal mentally, though not brilliant in the memorizing of the printed page, everyone about to attempt his varied active part in the world's work, yet all doomed to the study—mainly the memorizing—of exactly the same pages,—pages prescribed, though scarcely more suitable, for the education of children from ten to twelve years of age, whose serious participation in the services of the community must necessarily be deferred from four to six years, and probably, in most cases, are actually to be deferred much longer. On the above date there were 1347 children from nine to twelve years of age, working right beside those 1410 youth from fifteen to eighteen, doing, or trying to do, exactly the same work and in exactly the same way.¹ The following single, concrete illus-

¹ Figures taken from an age and class distribution table supplied by the School Clerk.

tration, extreme but wholly typical, will serve to reveal more effectively than further discussion the role that the elementary curriculum is made to play in the Portland schools.

The Same Thoughtless Routine That Dominates the Regular Schools Prevails Just as Strongly in the Special School for the Deaf

As a part of the Portland school system there is a School for the Deaf, "organized four years ago at the request of parents of deaf children, who wished to have their children educated by the pure oral method and keep them in a home environment while attending school," the object of which is "to reach those incapacitated from receiving the benefits offered under the regular course of study."²

This school of about twenty-five pupils, quartered in cheerless rooms in the Buckman school building, was visited on the afternoon of April 23. We pass no judgment whatever on the efficiency of its work in teaching articulation and lip-reading to its deaf pupils; our visit was too brief, were we competent, to pass such judgment. Our chief purpose in visiting this school was to find out what those who are conducting it are trying to make of their afflicted pupils; what they are trying to do, recognizing the handicap under which their pupils must live all their lives, no matter how successful the school may be in teaching articulation and lip-reading,—what they are trying to do to discover and to train discriminatingly the particular possibilities of each child, to the end that each one may become self-supporting and independent, capable of rendering to the community service that the community requires, and so entitled to receive from the community adequate compensation.

Anticipating our visit to this school, we could not believe it possible that we should find here also the same unthinking routine that we had hitherto found universally in the regular elementary schools,—the routine of carrying out the mechanically prescribed curriculum, without regard either for the pupils' individual needs or for the usefulness of the prescriptions in fitting anyone for the service of society. But our anticipations were not realized; for we found that unthinking routine—accentuated by conditions that cry out for something so entirely different—dominates this school for the deaf as completely as it does every other. *The sole discoverable reason for the segregation of the pupils of this school is to teach them articulation and lip-reading so that they may take identically the same course of study that every normal child must take!* The head teacher of this school, in response to questions, declared it to be the purpose of the school to make deaf children just as nearly like normal children as possible; hence, in carrying out this purpose,

² Course of Study, 1912-13, p. 135.

their chief aim is to teach exactly the same subjects, to maintain the same standards, to pass the same examinations, that are taught, maintained, and passed in the regular schools. The official description of the school, indeed, is in full harmony with the purpose that animates its head. "The course of study of the city schools," so runs this description, "is followed as closely as possible."³

*Trying to Make Deaf Children Normal by Teaching Them
Technical Grammar!*

Of course the purpose of making a deaf child like a normal child, in the sense of overcoming so far as possible the deaf child's defect, so that in the life that he leads his deafness may be no considerable handicap, is entirely practical and most commendable. But to think of accomplishing this result merely by requiring the deaf child to learn the same amount of abstract arithmetic and technical grammar that the normal child is compelled to learn!

"Technical Grammar Broadens the Mind."

Among the pupils of the school, most of whom, as might be expected, are much over-age in comparison with the work of the curriculum with which they are engaged, was observed a boy with the physical proportions of a good-sized man.

"How old is this boy?" we asked.

"He is seventeen," replied the head teacher.

"How long has he been here, and what is he studying now?"

"He has been here a year and a half; he is now doing fifth grade work."

"How long will he probably continue in school?"

"Three years or more."

"Will he be required to pursue the same course that all pupils now in the fifth grade must pursue, technical grammar and all?"

"Yes, it is our aim to make him like normal children."

"But what good will so many years' study of purely technical grammar do this young man who, presumably, must soon try to earn his own living in some way?"

"Why, technical grammar broadens the mind!" replied the head of the school, obviously somewhat surprised at the question.

Think of it! Three or more years' study of technical grammar to "broaden the mind" of a youth now in grade five, struggling with part twenty-six of the rigid educational mechanism, but already old enough either to be through with his secondary education or to be out of school bearing a man's part in the world's work! What will this unfortunate young man be able to do at twenty-one, when he goes out from this child's school,

³ Course of Study, 1912-13, p. 135.

his sole trained equipment a mind "broadened" by several years' study of technical grammar?

Mechanical Uniformity to the Fifty-fourth Part of Every Subject Prescribed in the Curriculum Is the Universal Ideal of the Elementary Schools

The treatment of this boy—young man—makes to stand out clearly, but does not exaggerate in the least, the spirit and the thoughtless routine that dominates the elementary schools. The only recognition accorded the individualities of pupils, no matter how much they differ through peculiar strength, weakness or defect, is the recognition that the school mechanism compels; their treatment varies only in so far as it is necessary to vary it temporarily that everyone may learn exactly the same things and in the same way—from part one to part fifty-four inclusive—that every one else must learn. All must be made just as nearly alike as possible. To this mechanical end every phase of the elementary curriculum and its administration seems to be adjusted—and very nicely and thoughtfully adjusted. This adjustment can best be revealed through a brief analysis and examination of the several chief aspects of the curriculum and of its administration.

The Mechanical Form and Prescriptions of the Elementary Course of Study

The form in which the elementary course of study is outlined and prescribed is characteristic of the universal mechanism. Following is a sample:

Seventh B Grade

PART FORTY.

READING.

Cyr's Fifth Reader, pages 97 to 142.

ARITHMETIC.

Smith's Practical Arithmetic, pages 202 to 216.
(For forms of analysis read Parts 21 and 22.)

LANGUAGE.

- (1) Buehler's Grammar, pages 81 to 95, inclusive.
- (2) and (3) See Part 31.

GEOGRAPHY.

Natural School Geography, pages 124 to 137, to end of "China."

(Pages 40, 41 and 42) Map Drawing—The Humboldt Geographical Note Book, Part 4 (No. 51), pages 15 to 32, inclusive.

SPELLING.

(Parts 40, 41 and 42.)

Reed's Word Lessons, pages 115 to 127, inclusive.

WRITING.

Outlook Writing System No. 6.

DRAWING.

Prang's Text Book of Art Education, Book VI.

MUSIC.

New Educational Third Music Reader.

PHYSIOLOGY.

Krohn's Graded Lessons in Physiology and Hygiene, Chapters X, XI and XII.

PART FORTY-ONE.

READING.

Cyr's Fifth Reader, pages 143 to 179.

ARITHMETIC.

Smith's Practical Arithmetic, pages 217 to 231.
(For forms of analysis read Parts 21 and 22.)

LANGUAGE.

- (1) Buehler's Grammar, pages 96 to 108, inclusive.
- (2) and (3) See Part 31.

GEOGRAPHY.

Natural School Geography, pages 137 to 149, to end of "Hawaiian Islands."

For work in Spelling, Writing, Drawing, Music, Physiology and Map Drawing, see Part 40.

PART FORTY-TWO.

READING.

Cyr's Fifth Reader, pages 187 to 228.

ARITHMETIC.

Smith's Practical Arithmetic, pages 232 to 245.
(For forms of analysis read Parts 21 and 22.)

LANGUAGE.

- (1) Buehler's Grammar, pages 110 to 121, inclusive.
- (2) and (3) See Part 31.

GEOGRAPHY.

Natural School Geography. Take supplements: (1) Insular Possession, (2) Oregon.

For work in Spelling, Writing, Drawing, Music, Physiology and Map Drawing, see Part 40.

This prescription for the Seventh B is fairly characteristic of the prescriptions for all the other grades, with these exceptions. The outlines in arithmetic for the first four grades, that is through Fourth B, covering the method of presenting the chief topics to beginners, are full, detailed, suggestive and helpful to the teacher; there are also given brief outlines of method in reading and language for the first grade. With these and two or three other similar, but much less important exceptions, the entire elementary course of study as placed in the hands of teachers and principals for execution consists in an arithmetical division by pages, and fractions of pages, of prescribed textbooks.

Obviously, the only thought devoted to the formulation of the course of study was the simple mathematical thought necessary to parcel out the pages of books as indicated. This becomes plainly apparent when one follows through several grades the prescriptions in a single subject. For illustration, the prescriptions in geography, beginning with Sixth A and continuing through Seventh B, are from the Natural School Geography and are as follows:

Sixth A

Part Thirty-one: Pages 5 to 19, to end of "Wearing Away of Land."

Part Thirty-two: Pages 19 to 30, to end of "Government and Religion."

Part Thirty-three: Pages 30 to 41, to end of "North America."

Part Thirty-four: Pages 43 to 55, to beginning of "North-eastern Section."

Part Thirty-five: Pages 55 to 66, to end of "West Virginia."

Part Thirty-six: Pages 66 to 77, to end of "Southern Section."

Part Thirty-seven: Pages 79 to 93, to end of "Central America."

Part Thirty-eight: Pages 93 to 107, to end of "South America."

Part Thirty-nine: Pages 109 to 124, to end of "Switzerland."

Part Forty: Pages 124 to 137, to end of "China."

Part Forty-one: Pages 137 to 149, to end of "Hawaiian Islands."

Part Forty-two: Supplements, (1) Insular Possessions, (2) Oregon.

Neither by example nor by precept do such outlines suggest to teachers and principals any thought of the function of the various prescribed subjects as means of education; any consideration of the relative importance for Portland children, not to mention different groups of Portland children, of the numerous

topics treated in text-books designed for use throughout the country; any correlation in the treatment of closely related subjects; any adaptation of method to the educative ends sought through the use of this text-book material. On the contrary, whether so intended or not, the one all-dominating suggestion of the published course of study for the elementary schools is that so many pages of certain text-books are to be learned, and at a certain time and in a certain order. This suggestion, reinforced by the system of uniform city examinations from the fourth grade on, and by supervisory inspection, has become the chief guiding purpose in the work of teachers above the primary grades; it could scarcely be otherwise.

Some Significant Characteristics of the Content of the Elementary Course of Study

In respect to content—and lack of content—the elementary course of study presents the following significant characteristics: (See Table 14, page 99.)

1. The absolute uniformity of subject matter to be learned, both in kind, amount and order, by all pupils, and in all parts of the city, regardless of age, mental or physical characteristics, past experiences, or future prospects.
2. The overwhelmingly abstract and bookish character of the course as a whole, offering far too little that is suitable to the education of that large minority, if not actual majority, of children who must be educated through contact with concrete things.
3. The excessive amount of time given to technical grammar.
4. Inadequate attention to composition, both oral and written.
5. The excessive emphasis on theoretical, abstract arithmetic.
6. Deferring the beginning of the study of United States History to the eighth grade, a point in the course which probably at least one-third of all Portland children never reach.
7. The limitation of nature study to the first two grades.

3. THE SUBJECT MATTER FURTHER ANALYZED.

If the bare statement of these characteristics is not sufficient, a brief discussion of them in order will suffice to reveal their chief significance.

Subject Matter Rather Than the Child Made the Focus of Attention

The uniformity of subject matter, both in kind and amount, can mean in practice only that the attention of teachers, and all concerned in educating children, is focused on definitely pre-

scribed matter to be learned,—not on the diverse needs of the children to be educated. What should be the variable in the process of education is made fixed; the endlessly variable of human characteristics and needs is ignored.

No Adequate Provision for the Effective Education of a Large Portion of Children

It has been demonstrated in schools over and over again, and is a matter of the most common observation, that a very large proportion of children learn with much difficulty from books, especially when they advance beyond the simplest, concrete ideas; that a large majority, not all, of these same children are naturally intelligent, are as capable of improvement through education adapted to them, as are children who learn more readily from books. Portland's elementary course of study provides very little indeed—only a bit of manual training and sewing, not more than the easiest book-learner ought to have—that is suitable for the adequate education of this type of child. This deficiency in the course of study is doubtless responsible in no small degree for the large number of over-age pupils in the grammar grades, and for the failure of many of these over-age pupils to remain in school after the period of compulsory attendance has been completed.

Excessive Attention Given to Technical Grammar Largely Wasted Effort

In the published course of study the general term "language" is used to designate work both in technical grammar and in composition. In practice three exercises per week are devoted to the former, and two to the latter. So far as could be discovered by listening to several exercises, both in grammar and in composition, and by talking with teachers, these subjects, as taught, are just about as independent as arithmetic and history. It does not appear that grammar, in the elementary course of study, is contributing "to a deeper appreciation of literature and to the development of power in composition," as the Syllabus of the Course in English⁴ for the Portland High Schools rightly maintains to be the sole function of this subject.

The grammar prescribed is abstract and technical in the extreme, and the assignment for every grade far beyond the real comprehension of most pupils of that grade. Beginning with Third B, and continuing through Sixth A, pupils have been required to study, in "Modern English Lessons," about as much grammar as could be made of practical value in the entire elementary course; but with Sixth B the intensive study of technical grammar begins in real earnest. From this point on, the assignments are from Buehler's "Modern English Grammar," a

⁴ Page 5.

book best suited to high school grades, usable in the highest grammar grade, but entirely out of place in sixth and seventh grades. After three and one-half years' study of this technical book in the elementary schools, from page 15 to page 358 inclusive, the same book is again prescribed for three years of further study in the high schools! To make the matter worse the high school instruction begins at the beginning, with the simple sentence and the parts of speech.

It is scarcely too much to say that the time now devoted to technical grammar in grades six to nine inclusive is wasted. In these grades not more than one-half as much time as now should be given to grammar, and that not technical, but practical and comprehensible to the pupil.

Composition Neglected

The time and attention devoted to composition is as inadequate as that devoted to grammar is excessive. While two exercises per week are given to the former and three to the latter, composition does not appear actually to receive as much as two-fifths of the effort expended on "language." It is quite possible that the final term examinations are largely responsible for the preponderance of emphasis on grammar, out of proportion to the time allotment. However this may be, typical term examinations fairly represent the relative importance that seems to be accorded these two phases of "language"; in these examinations the relative value of composition, as compared with that of grammar, certainly appears as something less than the ratio of two to three. Following is a copy of the final term examination, given in January, 1913, and covering the work in grammar for the seventh grade:

Grammar Examination Questions—Seventh Grade

PART 37.

- I. (a) Define Complement.
- (b) Give example of each kind of complement in a sentence.
- II. (a) Select the complements in the following, tell the kind, giving reason for your answer in each case:
 1. A soft answer turneth away wrath.
 2. The great forest became the home of Robin Hood.
 3. They considered him a brave sea-captain.
- (b) Define Indirect Object.

PART 38.

- I. (a) Define a modifier.
- (b) What is the difference between a phrase and a clause?
- (c) Construct a sentence in which the subject is modified by a phrase; one in which the verb is modified by a clause.
- II. Tell whether the underlined words are objects, attribute complements, or modifiers:

Some men turned *traitors*.

Some men turned *away*.

Some men turned their *heads*.

PART 39.

- I. (a) Point out the indirect object in the following:
Edward gave us some blotters.
- (b) Change your sentence into the passive form.
- II. (a) Define an appositive.
- (b) Construct a sentence containing an appositive.
- (c) Diagram (Written Analysis)
Some boys from our school played a fine game of football yesterday.

PART 40.

- I. (a) Select the substantive phrases and clauses in the following sentences and give their use:
It is now possible to cross the Atlantic in five days.
I asked Grace if she would lend me a pencil.
All age and youth must learn the truth,
That nothing pays that's wrong.
- (b) Construct a sentence with a clause used as subject; one containing a clause used as attribute complement.
In these sentences point out the subject and verb in each clause.
- II. (a) What is an Independent Element?
- (b) In the following sentences select the independent elements and classify them:
Jump, boys! It's our last chance!
We grumble a little now and then, to be sure.

PART 41.

- I. (a) How are sentences classified with respect to form?
- (b) Write a sentence illustrating each.
- (c) Tell the kind of sentence and give reason:
1. God has made America the schoolhouse of the world.
 2. A cruel story runs on wheels, and every hand oils the wheels as they run.
 3. Smooth runs the water where the brook runs deep.
- II. (a) What is an elliptical sentence?
- (b) Complete the following sentences:
1. He was busy while here.
 2. He entered, hat in hand, and sat down.
 3. The truth is better expressed by Solomon than him.

PART 42.

- I. (a) What is meant by "parts of speech"?
- (b) How can one determine to what part of speech a word belongs?
- (c) Define pronoun, adjective, adverb.
- II. (a) Tell the part of speech of each word:
1. The lowing herd winds slowly homeward.
 2. The Danish king could not stop the ocean tide.
 3. I do not doubt his strange story.

The examinations in grammar given at the same time and covering the work of the fourth, fifth, and sixth grades, were nearly as extensive for each grade as the above. At the same time the examination in composition for all these grades—four, five, six, and seven—consisted of the following, which was the identical examination given to these grades in June, 1912:

COMPOSITION TEST

January, 1913.

Fourth, Fifth, Sixth, and Seventh Grades

The subject matter of composition will be taken from the term's work in reading. Each teacher will select all or part of some lesson read by the class during the term, read it aloud once, and require the pupils to reproduce it in such language as they can command. Care should be taken to see that no pupil has access to any reading book while undergoing examination in composition. Unless physically incapacitated the teacher should read the selection herself, rather than delegate such duty to a pupil. In fact, no pupil should have any inkling of the subject matter of the composition until it is read by the teacher.

Too Much Time Devoted to Abstract Arithmetic

Arithmetic claims an undue amount of time and attention, both at the very beginning of the elementary course, and, as a purely abstract subject, in the higher grammar grades. Most children *can* master number facts at six and even five years of age, and many of this age begin to develop some reasoning powers; but, as has been shown in the work of many excellent schools, only a little time can be spent to the best advantage on arithmetic in the first grade. If the systematic and serious study of this subject is postponed until the second, or even until the third grade, it is found that by the end of the fourth grade pupils are as far advanced in their arithmetical knowledge as they are when arithmetic is made a principal subject from the very beginning.

In the higher grammar grades the present course in abstract arithmetic—abstract for inexperienced pupils, even though using concrete terms—might advantageously give place to algebra and constructive geometry for those pupils whose interests are best served by the pursuit of abstract mathematics in high school and perhaps beyond, and to practical applications to concrete things, with which they are actually dealing, for those pupils whose education needs to be concrete instead of bookish.

One-third of All Pupils Receive no Systematic Instruction in United States History

The most elementary education should include some systematic knowledge of the history of our country. The soundness of this proposition is evidently recognized in the provision for the study of history in the highest two grammar grades. But

this provision does not reach at all the need of probably one-third of all children who never reach the eighth grade, and only partially meets that of probably one-fourth of those who, entering the eighth grade, fail to complete the ninth.

It is desirable for all pupils, and of prime importance for those who are not to complete the elementary course, that the systematic study of the history of the United States be begun with the fifth or sixth grade, and covered in a simple way by the end of the seventh. There are several text-books available for this purpose, presenting the matter largely from the biographical standpoint, and well suited to the interest and capacity of pupils of the grades indicated.

The Course in Nature Study Quite Inadequate

A practical, concrete course in nature study, based not on books, but on the phenomena of nature themselves, ought to form a part of every elementary school curriculum, from the lowest to the highest grade. Such a course, correlated with language, literature, physiology, and geography, and efficiently carried out, would do something to modify Portland's present predominantly abstract and bookish courses. The present course in nature study, limited to the lowest two primary grades, is outlined in a way much better adapted, so far as it goes, to higher grammar grades than to the lowest primary.

4. THE SYSTEM OF PROMOTIONAL EXAMINATIONS.

Nature of the Examinations

The system of examinations for the promotion of pupils from grade to grade, beginning with Fourth A, is in complete harmony with the form and spirit of the course of study; indeed, the examinations are really a necessary complement to the course of study. As has already been seen, the course of study prescribes, chiefly by designating pages and portions of pages, just what shall be learned in each of the fifty-four parts into which the elementary school course is divided with something like mathematical precision; uniform examinations for the city, issued under the direction of the superintendent, assume to test, part by part, every pupil's success in taking the fifty-four prescriptions. Samples of these examinations have been quoted. These uniform examinations are given at the end of each term, or half-year of work, and each one covers three of the fifty-four parts of the curriculum. Mid-term examinations of similar character and purpose are given under the direction of the elementary school principals, each principal controlling the examinations in his own school.

A pupil's promotion depends, one-half upon the results of these two formal examinations, and one-half upon the teacher's

estimate of his daily recitations, in this way: Of a possible maximum of one hundred credits in any subject, fifty—ten each month for the term—may be secured on daily recitations, twenty on the principal's mid-term examination, and thirty on the superintendent's final examination. While nominally the examinations count only one-half, and the final examination only thirty per cent toward the possible maximum number of credits, the effect of the whole scheme—and it must almost inevitably be so—is to concentrate the efforts of teachers and pupils on preparation for the passing of the final examinations. Under these conditions the best teacher can scarcely avoid adjusting her efforts, not in the way that she thinks will best serve the educational interests of her pupil, but in the way that she thinks will best prepare the pupil for passing an examination, issued by one who probably never even saw that pupil, and who certainly has no intimate knowledge of the pupil's capacity and needs.

Efforts Distorted by Anticipations of Examinations

With scarcely an exception, the several principals and teachers, with whom the system of examinations was discussed at length, expressed emphatic disapproval, and based their disapproval on sound pedagogical grounds. Most of them felt that the examinations were "catchy," that, as one expressed it, some unimportant foot-note was quite likely to be made the subject of examination. With such anticipations concerning the examinations, what else can teachers be expected to do than to spend much of their best effort in preparing their pupils—which means chiefly storing their memories—with relatively unimportant facts, that they may be able to answer the "catchy" questions that are likely to occur in the examinations? Under these conditions, neither pupils nor teachers are in an attitude to pursue a subject on its merits, to give much or little attention to the various facts and phases of that subject in accordance with the real relative importance of those facts and phases; their efforts and judgment are constantly distorted by the desire to fortify themselves against examination attacks at points that would ordinarily, and probably rightly, be more or less neglected. So in addition to the constantly distorting influence of the thought of the probable character of examinations, it seems to be the practice to give at least one full week to a special preparation for the final term examinations.

Whether the prevalent conception of teachers and principals regarding the final examinations is justified or not—two complete sets of these examinations that have been studied, somewhat carefully, seem scarcely to warrant the characterization of "catchy"—is of no consequence in this connection; the effect of their conception on their work is the same.

Examination Time Spent Unprofitably

The time actually given up to the final examinations, one full week at the end of each term, is worthy of consideration. Is one-twentieth of every term profitably spent in exercises whose chief or sole purpose is to reveal to teachers what they already know? Any competent teacher ought to know, thinks she knows, and probably does know, as much about the ability of at least nine-tenths of her pupils before as after one of these formal examinations. But has the final examination some other purpose than a revelation of the pupil's knowledge, or lack of knowledge? Is it given as a means of instruction to the pupil? If so, then the exemption of pupils from final examinations under certain conditions, as is done, giving them a week's vacation—rather depriving them of a week's instruction by which other pupils profit—is scarcely defensible.

The Scheme of Promotion Advances Pupils According to Their Ability to Meet Fixed Requirements

Just as the system of examinations is in complete harmony with the form and spirit of the course of study, so is the scheme of promotion in complete harmony with the form and spirit both of the course of study and of the system of examinations. These three complementary factors—course of study, examinations, promotion—make up the essential whole in the pupil's educational life.

As the pupil acquires part by part, each one of the fifty-four parts of the course of study, and demonstrates his acquisitions in examinations, he is advanced on the educational highway. Those who acquire easily what is prescribed for them, advance rapidly; those who take the prescriptions with difficulty, advance slowly. Some evidence that the scheme works is suggested by the fact that there are children of eleven, twelve, thirteen, fourteen, and fifteen years of age in every one of the elementary grades, from the first to the ninth.* This plan of advancement is as it should be—if education consists in learning certain prescribed things. It is as it should not be, if education consists in developing the natural capacities of children, through whatever means may be found most effective with each individual child.

5. THE CLASS-ROOM INSTRUCTION.

Actual Instruction in the Class Rooms Generally in Harmony with the System

Personal observation of the work and inquiry into the conditions, methods and results, in more than fifty elementary class

* See 38th Annual Report, p. 32. The age and class distribution sheet for June, 1913, shows the same thing to be true.

rooms, in nine different buildings, showed the actual instruction in the schools to be, on the whole, in substantial harmony with the system as already described. The uniformizing and mechanizing effects of the system were everywhere apparent in the grammar grades, but not so universally in the primary, particularly in the first primary grades.

Work in the Lowest Grades Good, Very Good, and Superior.

On the whole, the work observed in the lowest three grades—the primary—was good, much of it very good, some of it distinctly superior,—equal to the best that the observer has ever witnessed anywhere. The principal subjects of these grades, reading and arithmetic, were generally taught skillfully and by intelligent methods; several teachers manifested skill and ability in these subjects of very high order. In their classes, the results were quite remarkable, especially in reading; children of the first grade were able to read matter of considerable difficulty, and not previously seen, with fluency, understanding and good expression. While not much of the results of the instruction in primary arithmetic were observed, the methods in use, suggested by outlines and instructions from the superintendent's office, were intelligent, intelligible and interesting to the children.

Work in the Grammar Grades Much Inferior to That in the Primary

While several teachers of the grammar grades whose work was studied were probably equal in ability to the best of the primary teachers, and while the grammar teachers on the whole seemed to compare favorably in ability with the primary teachers, the work observed in the grammar grades, both in methods and in results, seemed to be, as a whole, decidedly inferior to that observed in the primary. With few exceptions, and these only partial exceptions, and made such chiefly by contrast with the prevailing conditions, the regular class-room work in the grammar grades was characterized by routine, lack of originality of method, and absence of any evidence of genuine interest, not to say enthusiasm, in the work, both on the part of teachers and of pupils. While they were generally busy, even in a sense earnest, their busyness and earnestness seemed perfunctory and forced, rather than spontaneous and independent. Aside from several gymnastic exercises, which were generally good, and in some cases excellent, just one grammar school exercise was observed which was manifestly enlisting the deep and genuine interest, and calling forth the very best efforts of everyone taking part in it, teacher and pupils. That was an exercise in manual training. More specific observations on the work observed in

the principal regular subjects are made with some reluctance, because of the few exercises that could be observed in any single subject. So far as these observations went, at least, these characterizations are warranted; others must determine whether or not they are more widely applicable.

Reading Perfunctory

The exercises in reading were perfunctory, lacking in interest and worthy purpose. The good work of the early primary grades seemed to have been lost in the progress upward. There are no examinations in this subject. Occupying the time allotted according to schedule meets the requirements.

Composition Very Poor

The work in composition is scarcely better. Although this subject is examined, it is treated, as has already been pointed out, as of quite subordinate importance in comparison with technical grammar. Although I inquired frequently, and on many occasions when I was investigating other subjects, in no single class-room was I able to find a single piece of a pupil's work in written composition in the possession of the teacher. No literary or content value seemed to be attached by teachers or pupils to any of the latter's written work. Such work as teachers were able to secure from pupils for my inspection was presented in pads of the greatest variety of size, shape, and appearance, but uniformly of very poor paper. The appearance of these pads as a whole, and of the individual pieces of composition which they contained, was unattractive in the extreme—slovenly is not too strong a term to apply to most of this matter.

There is no little evidence that attention in written composition is focused almost entirely on form, to the neglect of content. The instruction observed and pupils' written work strongly indicated this. Indeed, in the published course of study for the grammar grades the only direction or suggestion regarding written composition strongly implies that correctness of form—which in practice almost invariably means correct spelling, correct use of capitals and marks of punctuation—constitutes the chief purpose of instruction in this subject. In the language prescription for Sixth A, Part thirty-one, occurs the following direction, to which reference is made in every one of the succeeding twenty-three parts of the grammar course:

“There should be regular exercises in written composition. The work should for the most part be impromptu, the writing being done in the school room under the eye of the teacher.

“The work should be criticized by having specimens placed on the blackboard. These specimens should then be made the subject of class criticism. All typical errors will be reached in this way, and the comments of the teacher will be better understood than her pencil marks upon the pupils' papers.”

Impromptu work, followed by blackboard criticism of "typical errors," does not constitute a method of procedure likely to result in developing individuality of thought and expression, independence and self-confidence in giving expression to one's own ideas, and pride in the finished product of one's efforts. Predominance of attention to form, as has been abundantly demonstrated by schools that have tried it—and this is almost everywhere the prevailing method of teaching composition, it must be admitted—never produces even tolerably satisfactory formal results. This failure was evident in practically all the composition seen in the Portland schools,—the form was as poor as the content. Composition, that ought to be and might well be one of the most interesting and valuable studies of the elementary schools, serving almost as no other subject can to develop rich individuality, is evidently carried on as a routine class exercise; one teacher's practice of "occasionally looking at individual papers when pupils get careless," is probably not confined to that one teacher. Composition, that may be inspiration and opportunity, is all too evidently drudgery for pupils and teachers.

Penmanship Poor and Careless

No special exercises in penmanship were observed, but the penmanship in the regular written exercises, compositions, and examinations, was carefully noted. It was prevailingly poor, careless, and untidy. Only an occasional paper or note book, certainly not more than one in ten, was seen that could be called fairly good from the standpoint of the penmanship, and rarely one that could be called excellent.

Work in Geography Abstract and Bookish

With the exception of two exercises in the Arleta school, which seemed fairly real and involved considerable thought on the part of teachers and pupils, all the work observed in geography was abstract and bookish in the extreme. The assignments for study and the questions, almost without exception, called for unreasoning memorization of the statements of the book. No connection was made or suggested between the book statements and the pupils' own immediate observations of geographic phenomena; not the slightest stimulus was given to observe, to think about, and to interpret the geographic phenomena in which Portland and vicinity surpassingly abounds; even an exercise in "home" geography was conducted entirely from the book, the teacher reading therefrom such questions as these: "Where is the air?" "What is moving air called?" "What heats the air?" "What time of day is warmest?"

Such exercises threw about the whole subject, as they could not fail to do, an atmosphere of unreality. It is true, pupils

answered the teachers' hollow word-questions fairly well,—answered them with memorized hollow word-statements. And it is more than probable that such exercises are most effective, and most conserving of time and effort, in the preparation for passing the formal term examinations in this subject, which, as has already been pointed out, are so potent in shaping the work of the schools. The following is a fair sample of the type of final term examinations in geography. This examination was given in January, 1913, and covered the work of the Fourth A, that is, the very beginnings of systematic work in geography,—a period in the course which should be devoted to the first-hand observation and study of geographic phenomena, within the comprehension of the pupil, in order that he may have some real concepts with which to interpret geographical language referring to phenomena beyond the range of his experience:

Geography Examination Test

January, 1913.

PART 19.

- I. (a) What is a continent? Ocean? Isthmus?
- (b) Name the continents and the grand divisions of the two large continents.
- II. (a) To what race do you belong? The Chinese?
- (b) Where is the home of each of these races?

PART 20.

- I. (a) What is a strait or channel? Write the name of one strait and tell what it connects.
- (b) What causes day and night?
- (c) What is a zone? Name the zones in order, beginning at the north.
- II. (a) Name the oceans surrounding North America.
- (b) What is an island? Name four islands off the coast of North America.

PART 21.

- I. (a) Where is the Great Central Plain of North America?
- (b) What mountains border it on the east? West? What bay and ocean north of it? What gulf south?
- II. (a) In what country do we live?
- (b) What ocean is east of it? West? What country and gulf south? What country north?

How could a child of nine or ten answer such questions as the above, except from memorized statements,—statements that could be little more than words to him?

History Instruction Dry and Dull

The few exercises observed in history bore very much the same general characteristics as those in geography. In this

subject, too, the best exercise seen was one in the Arleta school. Here several texts were in use; pupils were learning to study the same topic, as presented in different books; the teachers' questions called for some real thought, and there was evident a very moderate amount of real interest in the subject. The other exercises observed were dull and bookish in the extreme; there was not the slightest evidence of active and positive interest in the subject; the one purpose seemed to be to acquire, by sheer force of memory, the statements of the assigned text,—a text that could be most advantageously displaced by any one of a half-dozen texts that might be named.

Arithmetic and Technical Grammar Better Taught Than Other Subjects

Arithmetic and technical grammar are evidently considered and treated by the central authorities as the backbone of the elementary school course; naturally these subjects receive corresponding attention from the teachers. - Assuming that these subjects as prescribed must be taught—we have already criticised such prescriptions—the teaching of these subjects seemed, on the whole, to be the best teaching observed. It is true that much of the technical grammar had little meaning for most of the children, and could not be expected to inspire any real interest in itself, but several teachers—indeed most of those observed in this subject—were making commendable, and, in a few cases, quite skillful efforts to bring the subject within their pupils' understanding. The arithmetic, too, was on problems few would ever have to solve, while quick, simple mental calculation, where tested, was quite poor.

Criticisms From a Practical Standpoint

The foregoing criticisms of the work of the grammar grades as observed in the several "regular" subjects are not made from the standpoint of a highly desirable but unattainable ideal, but are made entirely from the standpoint of the present actual accomplishment of the best public schools. From this practical standpoint, our statement of the shortcomings of the work observed in the Portland schools—severe as it may possibly appear to some—is conservative, and more than justified by the facts.

6. DEADENING EFFECT OF THE SYSTEM.

The System Relieves Teachers of Educational Responsibility

The influence of the system, rigidly centralized, mechanical and mechanically administered, as already shown in some detail, is quite manifest in all the class-room work of the grammar

grades—in the attitude of principals, teachers and pupils. In these grades everywhere there is a noticeable absence of any feeling of educational responsibility. Teachers are convinced that many of their efforts are futile, that much that they are attempting is of little or no value to their pupils; but what can they do about it? They have no responsibility, no right, to depart from the rigidly uniform prescriptions of the course of study, reinforced by inspection from the central office, and by the important term examinations. Indeed, there is probably nothing tangible or definite to hinder a teacher from doing something more than the prescribed work, and possibly doing that something more in an original way; but no encouragement from the higher authorities could anywhere be found for attempting anything beyond the strict requirements. In fact, considering the extent and nature of these requirements, their fulfillment according to the letter of the law is probably a sufficient tax on most teachers and pupils.

Work of Teachers and Pupils in the Grammar Grades Passive, Routine, Clerical

In complete harmony with this lack of all feeling of active and intelligent responsibility for the best education of the children placed in their charge, was, as would be almost inevitable, an equally complete lack of originality, even in the details of class-room procedure. Passive, routine, clerical, are the terms that most fittingly describe the attitude of principals and grammar-grade teachers toward their work. And the attitude of the pupils is inevitably the same. Except in one exercise, in all my visits to grammar-grade rooms, I heard not a single question asked by a pupil, not a single remark or comment made to indicate that the pupil had any really vital interest in the subject matter of the exercise; on not a single occasion was there interested disagreement and active discussion over any point to show that the pupils were thinking independently. The single exception, to which reference is made, occurred in an exercise in physiology, in which several alert boys cited numerous cases within their knowledge—and with no little degree of success—to refute the teacher's contention, unsupported by facts, that the use of tobacco shortens the life of the user.

The attitude of the teacher as she teaches, of the pupil as he learns, is unquestionably of far more educational importance than is the subject with which they deal; when passive, neither teachers nor pupils are putting themselves into their work. Any system that compels, encourages, or permits passivity to become the prevailing attitude in the schools, at once deprives itself of the best powers of teachers and limits the education of pupils to the training of their lower faculties. That the Portland system is chiefly responsible for this condition in the grammar schools, there can be no serious doubt.

Of course, Portland grammar teachers are not universally passive by nature, although the system under which they work unquestionably tends to select and retain teachers of this type, rather than those of professional originality and natural aggressiveness. In private conversation, the majority of a considerable number of teachers with whom school interests were discussed at some length, gave evidence of alertness, independence, and originality, of which there was little or no trace in their class-room exercises.

Deadening Effect of the System on Principals

The system bears even more heavily upon principals than upon teachers. It virtually permits little, it fails utterly to encourage, much less does it require, the assumption of real educational responsibility, the exercise of professional initiative and originality by principals. Both in letter and in spirit the functions imposed upon principals by the system are routine and clerical. In the published "Rules and Regulations" of the school district, eight pages are devoted to defining the duties and responsibilities of principals. The very first duty here imposed upon principals, and the spirit in which it is imposed, as indicated by the penalty for failure to comply, is typical of the character of their prescribed duties and responsibilities as a whole. That first duty and the penalty for its neglect, read (*Rules*, pp. 52-53) as follows:

"Principals shall personally see that at 8:30 A. M. the school buildings are open and the assistants have registered their attendance.

"Any principal who fails to comply with the first requirement of this rule shall be fined two dollars for each such failure."

Other duties assigned are to report neglect of janitors, provide for supervision of school premises, report pupil attendance to Superintendent of Schools, hold fire drills as prescribed by the Board, report to the School Clerk each month the quantity and condition of school property, enter any alteration and amendment in the rules in each copy of the rules in the principal's building, see that the flag is raised over the building and removed as prescribed, that assembly halls are used only as directed by the Board, and to be at the building in cold weather one hour before pupils.

The only duties imposed upon principals, which obviously pertain directly to the instruction in their schools, are the two following:

"All supervising principals are required to teach at least one period each day." (*Rules*, p. 60.)

"All principals shall make themselves familiar with the work of the grades under their supervision, and shall co-operate with the city superintendent to see that such work is faithfully executed." (*Rules*, p. 53.)

Teaching a certain class one period per day—according to the hard and fast prescriptions of the course of study—and co-operating with the city superintendent to see that other teachers execute their work as prescribed, constitute the full extent of educational responsibility imposed upon elementary school principals; and, with two exceptions, none of the principals whose schools were studied were actually exceeding the letter of this clerical responsibility imposed upon them.

One other duty imposed by the *Rules and Regulations* might, under radically different conditions, be important educationally. The duty referred to is defined as follows:

"It shall be the duty of principals to hold, each week, at least one general meeting of all the teachers in their respective buildings, for the purpose of consultation on subjects pertaining to school work." (*Rules*, p. 53.)

Obedience to this requirement is insured by a fine of one dollar for every failure!

All principals with whom conference was held were complying with the letter of this rule; with one, or possibly two exceptions, their compliance was merely formal. At all events, with the one, or possibly two exceptions noted, no principal was holding meetings of any educational significance. The time of these meetings, which are usually brief, is devoted to notices, rules and directions, and matter of a similar routine character, most of which might be handled much more effectively with the use of a mimeograph.

One principal, who has clear and sound ideas on the real functions of a supervising principal, and who is fully conscious that he is not fulfilling those functions under the Portland system, related that years ago he tried to hold professional meetings with his teachers, but gave it up,—because his teachers were not fitted for such work! The best of them, those who were capable of taking leading parts in such meetings, were reluctant to express themselves, lest their advanced views should be reported throughout the city and get them into trouble. They feared to advocate anything out of the routine, for that would mean more work, and more work—with its attendant accomplishment—in one part of the system, would threaten other parts of the system with a like affliction!

There is one, and only one, other duty, not yet referred to, which is imposed on elementary school principals. That duty is prescribed only by implication in the following rule, which defines the penalty for failure:

“Any principal, who for any cause whatever, fails to attend any meeting called by the city superintendent of schools for consultation, shall forfeit the sum of one dollar for every such failure; and for tardiness at any such meeting one-half dollar shall be forfeited.” (*Rules*, p. 59.)

The influence of the system, replete with prescriptions of mechanical, routine, and clerical service, but neither requiring nor encouraging the exercise of any professional initiative or judgment, is plainly manifest in the character and attitude of the principals that the system selects and retains. Extended conferences with the principals of all the elementary schools visited revealed among this number three quite distinctly marked types, so far as their present attitude toward professional work is concerned. There are, first, those who are professionally dead, who could be made to disclose no evidence of ever having been professionally alive, and who, of course, do not know that they are dead; second, there are those who were once professionally alive, who cherish rather fond memories of those golden days, realize that they are now dead, but are not sufficiently dissatisfied with their present inertia, or lack the strength, to resume a self-respecting, active professional existence; and finally there are those who are professionally very much alive, are, of course, conscious of their life, and quite as keenly conscious of the professional death all about them. Only one of the principals interviewed seems to belong wholly to this last type.

Work in Primary Rooms Presents Marked Contrast to That in Grammar Rooms

What has been said regarding the prevailing attitude of grammar-grade teachers does not apply to the score of primary teachers whose work was inspected at some length. The work of these teachers, as a whole, was characterized by activity, originality, independence, initiative, interest, and enthusiasm. Their pupils responded in kind. Why the marked contrast in this most important respect between the primary and the grammar grades? While, naturally, the answer to this question is not susceptible of mathematical demonstration, it seems more than probable that the contrast is due largely to the inequality with which the system bears upon the primary and grammar departments. Much educational responsibility is placed upon primary teachers; the primary work is much less definitely prescribed than is that of the grammar grades; and, most important of all, there are no examinations imposed from without to determine the fitness of pupils to advance. Primary teachers are evidently expected to use intelligent judgment and to exercise no little independence, both in respect to subject matter and method.

7. OTHER ELEMENTARY SCHOOL NEEDS.

The Dearth of Suitable Educational Materials

Without going into much detail, record must here be made of the dearth of suitable educational material throughout all the schools visited. Not a single one of the hundred elementary school rooms visited was even fairly well supplied with what must be regarded as the barest essentials necessary for good work. In most subjects there is lack of a sufficient number of suitable regular texts; and a lamentable lack of supplementary books, geographical, historical, and literary readers.

This lack of supplementary readers is perhaps most keenly felt in the lower primary grades. Classes are limited to the two regular texts, and such miscellaneous single books as can be secured, by giving pay entertainments, or by borrowing from the public library. There should be available for every primary room at least ten sets of suitable supplementary readers. By a system of exchange the same sets might be made to do service in several class-rooms within the year. Every primary class in reading that was inspected was actually suffering for more books; the pupils had learned how to read; their great need was for reading material, and an abundance of it. The same lack extends up into the other grades.

Apparatus, pictures, maps, so necessary in the most effective teaching of geography, history and literature, are conspicuous by their absence. Suitable and uniform paper for written work seems to be uniformly lacking. Some is furnished, but the quantity is far too small. In the primary grades, slates, which have been long since abolished beyond recall in most educationally progressive cities, are here still largely taking the place of paper.

Books and Other Necessary Material Should be Supplied by the School District

It can hardly be expected that sufficient and suitable books and other equally necessary educational material will be supplied to every school-room until the school department assumes the expense and the responsibility of these indispensable aids to school-room work. Several whole states and many cities of the East have found, by nearly a generation of experience, that it is not only educationally advantageous, but economical as well, for the city or school district to furnish everything necessary for the maintenance of schools. In the interest both of educational efficiency and of economy, this course is recommended for Portland.

If it should seem impracticable to meet at once the initial cost of supplying all necessary books and material in sufficient quantity, the policy might well be introduced gradually. For

example, a good beginning might be made by supplying, in the elementary schools, everything except the regular text-books; this would probably cost about \$2 per pupil per year, of which about one-half would be necessary for stationery and other quickly consumed supplies, while the other half should be expended on supplementary books, and other relatively permanent material. By spending this amount for three or four years, a good supply of supplementary books, and other relatively permanent materials, would be accumulated; then, without much increasing the annual costs, the district might undertake to supply the regular texts in the elementary schools. All books would, of course, be loaned, not given, to pupils. When the system of furnishing books and supplies by the district had been once completely established, it could be well maintained at an annual expenditure not exceeding \$2 per pupil in the elementary schools.

There can be no reasonable doubt that this comparatively small addition to the present cost per pupil, amounting to an increase of less than five per cent over the present rate, would more than justify itself in the increase of efficiency throughout the elementary schools. It should also be pointed out that, to a considerable extent, this increase would be apparent, rather than real. Such books and materials as are now used are paid for by the people of the school district, and by those who have children in the schools; when the books and materials are furnished by the school district, they are paid for by the people of the district, through taxation. Purchasing in large quantities, the school board can buy books at about twenty per cent less, and other supplies at a much larger reduction, than can individuals purchasing in very small quantities. Hence the actual cost of books and supplies that must be met from resources of people of the district, when these are purchased in quantity by the district, will not be, on the average, more than two-thirds to three-fourths as much as when purchased by individuals, as at present.

Classes in the Elementary Schools of Commendable Size.

The school authorities deserve much credit for keeping up with the very rapid increase in school population, which has been taking place during the last decade, with an equally rapid extension of the school plant and increase in the number of classes, with the result that all pupils are afforded a full day's schooling, and that in classes of very favorable size, in comparison with those of most large, rapidly growing cities. While many such cities are struggling to give thousands of pupils a full school day, and to reduce the size of elementary classes to forty-four, forty-two, or forty pupils, as a practical ideal for the immediate future, Portland schools are already enjoying the great advantage of an average class membership of scarcely thirty-six. While an average membership of thirty is preferable to one of thirty-six, the

authorities will do well, in the next few years, not to let classes increase over the present size.

Discipline

In every elementary school building and class-room visited the pupils seemed to be under the complete control of principals and teachers. Not a single case of disobedience or of disturbing conduct was observed; on the contrary, the speech and attitude of pupils was universally respectful and responsive to the desires of teachers and principals.

Provisions for Defectives

The only provision made for elementary instruction in the Portland schools and not already referred to in the preceding pages of this section is the wholly inadequate provision for defectives. This provision of the system is discussed elsewhere, in Chapter XIV.

8. THE CURRICULA OF THE SECONDARY SCHOOLS

Extent and Character of Provisions for Secondary Education.

The rapidly growing demand for secondary education, quite general throughout the country, is manifested in Portland by the remarkable increase in secondary school enrollment during the last four years. Within this short period the number of secondary pupils enrolled has increased from 1793 to 3544, an increase of 92 per cent; during the same period the increase in elementary school pupils, from 20,420 to 26,973, showed a growth of only 32 per cent.

Causes of Increase in Secondary School Enrollment

The principal causes of this extraordinary growth of secondary pupils appear to be the three following: First, the growing disposition to prolong education beyond the elementary grades; second, the increased attractiveness and the greater accessibility of regular high school opportunities that have been brought about within five years by the building of the Jefferson and new Lincoln schools; and, finally, the provision of radically different types of secondary education in the School of Trades, and the extension of the more immediately practical courses—the commercial, manual training, domestic science and domestic art courses—in the high schools. Just how much of the increase in secondary pupils in excess of the general increase in school population is due to each of these causes, it is obviously impossible to determine accurately. That the new and

enlarged trade and practical courses are chiefly responsible for more than one-half the increase of nearly 1200 pupils in excess of the average increase in the total school enrollment would seem to be a conservative estimate, when we consider that during the period in question the enrollment in the School of Trades has grown from nothing to 380, in the commercial courses from 99 to 431, in the domestic science and art courses from 110 to 234, and in the manual training from 58 to 137. This growth and the apparent causes of it are most significant, and suggest still further extensions and improvements in the secondary program, as will be pointed out more fully by Superintendent Francis in Chapter X.

Present Provisions for Secondary Education

At the present time the provisions for secondary education in the district are found in three high schools, and in the School of Trades. Pupils, both boys and girls, are admitted to all these schools, and on the same scholastic condition, viz., completion of the elementary course of study or its equivalent.

Character of Instruction

The time that could be devoted to a study of the actual classroom work in the high schools, and its results, was too limited to warrant any confident generalizations concerning its character as a whole. Five exercises by different teachers were witnessed in English, four in commercial subjects, two in history, and one each in psychology, physiography, drawing, and German; these exercises were about evenly divided in number among the three schools. From the conduct of these exercises, and from private conversations with the teachers conducting them, we feel fully justified in saying that in the Portland high schools there are teachers equal to the best that we have ever seen in any secondary school—and there are also teachers as poor as the poorest that we have ever seen anywhere. Examples of such extremes of surpassing excellence and of lamentable inefficiency we have never before met with in one and the same school; and in some cases the representatives of inefficiency were drawing considerably larger salaries than were the representatives of excellence. The conditions as they relate to salaries have been considered at some length in Chapter V.

A careful study of the curriculum of the high schools, and long conferences with the three principals and with eight department heads, regarding its character, administration, and adaptation to the needs of the youth and the community, form the chief immediate basis of the characterizations and criticisms that follow.

TABLE 15
Showing the High School Courses of Study, 1912-13

Terms	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth
English	English: — Literature, Composition, Rhetoric and Grammar throughout the course							
Latin	Hist.: Greek and Oriental.	Roman	Mediaeval	Modern	English	English	American	American
German	Science: Physiogr'phy	Physiogr'phy	Zoology or Botany	Physiology or Botany	Physics	Physics	Chemistry	Chemistry
Scientific	Mathematics: Algebra	Algebra	Algebra	Plane Geom.	Plane Geom.	Solid Geom.	Trigonometry	Higher Alg.
College Prep.	Latin: Lessons	Latin Lessons	Caesar	Caesar	Cicero	Cicero	Virgil	Virgil and Ovid
	German: — Grammar, Reading and Composition throughout the course							
Teaching Course	Art	Art	Art	Art	Psychology	Psychology	Principles of Teaching	Principles of Teaching
Dressmaking Course	Art	Art	Art	Art	Bookkeeping	Bookkeeping	Dressmaking	Dressmaking
Domestic	Drawing	Drawing	Drawing	Drawing	Sewing	Sewing	Home Economics	El. Dietetics
Sci. Course	Cooking	Cooking and Fl. Bacteriology	Sewing	Sewing	Sewing	Sewing	Home Economics	El. Dietetics
Man'l Train. Course	Shop Work and Drawing throughout course							
Commercial Courses	Money and Correspond.			Com'l Products and Local Hist.	Com'l Geog.	Com'l and Parliament'y Law	Polit. Econ.	Commerce and Finance
	Penmanship	Typewriting	Shorthand and Typewriting	Shorthand and Typewriting	Shorthand and Typewriting	Shorthand and Typewriting	Shorthand and Typewriting	Shorthand and Typewriting
	Business Bookkeeping and Practice	Business Bookkeeping and Practice	Business Bookkeeping and Practice	Business Bookkeeping and Practice	Business Bookkeeping and Practice	Business Bookkeeping and Practice	Business Bookkeeping and Practice	Business Bookkeeping and Practice
	Com'l Arith.	Com'l Arith.						

COURSES

High School Courses of Study

Table 15, on the preceding page, shows in a single view the scope, character, and arrangement of the complete high school curriculum for Portland. As outlined in the published high school courses of study, there are ten distinct "courses" of study, among which a pupil beginning high school work must choose, as follows: English, Latin, German, Scientific, College Preparatory, Teaching, Dressmaking, Domestic Science, Manual Training, and Commercial. The chief constituents of every one of these courses, with the possible exception of the Commercial, are found in the six subjects first indicated on the chart, that is, English, history, science, mathematics, Latin and German. Indeed, the five courses first named above are made up entirely of these six subjects, taken in varying proportions. The five remaining courses are made up of varying proportions of these same six subjects, with the addition to each course of the practical subject, or subjects, as indicated on the chart, and which gives the name to the course.

Principals and Teachers Employed in Teaching Subjects, Not in Educating Youth

While the courses of studies for the high schools are more varied, and while they have undergone considerably more change and growth in the last half-dozen years than has the elementary course, the same characteristics that were pointed out and criticised at length in the elementary course are marked also in the high school courses. First to be noted is the rigid maintenance of the formal integrity of the prescribed courses. Instead of a living curriculum, easily adaptable by principals, heads of departments, and teachers, to the varying and changing needs of the youth and the community, there is just the reverse—a fixed curriculum, varied even in comparatively unimportant details with difficulty and the loss of much time; pupils and community must make what they can of what is provided. The high schools are maintained, and principals and teachers are employed, to give instruction in the prescribed subjects to those pupils who meet the prescribed conditions; the system does not encourage or even permit, to any considerable extent, the concentration of the thought and effort of principals and teachers primarily on the best education of the high school youth of the city.

Of course, everyone concerned hopes—and doubtless some believe—that the best educational results are achieved under these conditions. So one may hope and perhaps believe that the best way to make a deaf child like a normal child is to give him for

several years the same instruction in technical grammar to which the normal child is subjected. The fundamental fault with this attitude, wherever it manifests itself in the educational field, is that it fails to study and to attempt to meet definitely the actual, concrete problems of education as they present themselves; it shirks the responsibility, perhaps because of the very real danger of failure, of undertaking the really difficult thing in teaching,—the most efficient education of an actual living individual. It involves comparatively little responsibility to teach a subject well to those who are capable of learning it, and many teachers reach a high degree of excellence in this; it is quite another matter to teach a child or youth well. How many teachers are capable of this will not be revealed until school authorities permit, encourage, and require this as the obviously primary function of all true teachers.

An Official Step in the Wrong Direction

That teachers may teach youth, rather than subjects, it is necessary that they be allowed time to study sympathetically the youth they are to teach, to know them, to appreciate their capacities and interests, their strength and their weakness. A teacher who is occupied with class-room instruction every period in the day, every day in the week, meeting each period in the day a new group of faces, under the constraint of teaching each group a given portion of the prescribed curriculum, has far too little opportunity, and still less incentive, to know his pupils individually, as he must know them, if he is really to educate each one intelligently and effectively. The recent order of the school authorities abolishing, for nearly all high school teachers, the all-too-few periods that had previously been free from set recitations, was a step in the wrong direction. There is no question but that the teachers in the high schools are today required to teach altogether too many periods per week.

Uniformity of Curriculum for All High Schools

That the maintenance of the uniformity of the curriculum, rather than the serving of the varying individual needs of youth, is made to loom large on the teacher's horizon, is evidenced in several ways, among which the following are of prime importance. In the first place, there is the same identical curriculum—outlined not quite so minutely, but with the same kind of formal and mechanical detail that characterizes the elementary curriculum—for all three high schools; the only officially sanctioned variation is found in the Washington and Lincoln schools, no manual training being given in the latter, and no commercial subjects in the former. Not only is there one single outline of

subjects to be taught in all the schools, but no deviation from this outline may be made in one school, to meet temporary needs, unless the same deviation is agreed upon by principals and interested heads of departments for all the schools, and formally approved by Superintendent and the Board of School Directors. Such, for example, is the only process of making so small a variation from the prescribed uniformity as the substitution for one of the least of the classics that must be read at a given point in the course in literature of another classic, equally good from the literary standpoint, and much better adapted to meet conditions that obtain at a given time in one school, but which may not obtain at all in the other schools.

Of course, it may be maintained with some truth that the sum total of the characteristics and needs of the thousand pupils in one school is approximately the same as the sum total of the characteristics and needs of the thousand pupils in either of the other schools; hence, the conclusion may be drawn that the curriculum adequate to meet the needs in one school must be adequate to meet the needs in the other schools. Unfortunately, the trouble with the curriculum that grows out of such reasoning, and that is maintained in the spirit of such reasoning, is that in practice it never adequately serves the actual needs of pupils in any school. Such a curriculum is always rigid, dead, demanding the service of pupils and teachers; while an adequate curriculum must be living, adaptable, easily varied in the service of teachers and pupils, that their work together may result in efficient education.

Uniformity of Curriculum a Barrier to Progress

The concentration of effort on the maintenance of a uniform curriculum for all schools is a most effective barrier to progress in the adaptation of the curriculum to local needs; under these conditions the least progressive school, the least progressive principal or department head, is the most influential in determining what all the schools shall do. The progress of all is determined by the rate of the slowest. More than one illustration of this, touching some of the largest and most important courses, was discovered in the Portland high schools. On the other hand, let there be placed upon every principal, every department head and every teacher, large responsibility for meeting progressively and as fully as possible the concrete and ever-changing problems that present themselves—not to others in other schools, but to them in their schools—and just the opposite results will inevitably follow; the most wisely progressive school, principal, department head, and teacher, will advance rapidly, and the slowest will be stimulated to follow.

Uniformity and Isolation of Subjects

In full harmony with the uniformity of the curriculum as a whole, perhaps almost a necessary part of such uniformity, is not only the uniformity but the isolation of every distinct subject of which the whole curriculum is composed. For example, there is a single, minutely defined course in English language and literature, which is identical, not only for all schools, but for all pupils. It matters not in what school a pupil is, or what course the pupil is pursuing,—whether the college preparatory, the manual training, the domestic science, the commercial, or the teaching course,—when that pupil studies English, he is given exactly the same instruction, both in subject matter and method, as every other pupil who studies English. And the same thing is true of every other subject. Is not English, English; chemistry, chemistry; history, history; and mathematics, mathematics, no matter who studies these subjects, or for what purpose? Indeed, such seems to be the only assumption capable of justifying the uniformity and isolation of subjects that obtain in the Portland high schools.

Pupils' "Courses" Lack Unity and Definiteness of Purpose

One of the unfortunate results of this uniformity and isolation of subjects is that any "course," as the domestic science, commercial, or teaching course, that a pupil pursues, lacks unity of purpose; it is merely made up of a certain number of subjects uncorrelated with each other and unadapted to any specific purpose that the pupil's "course" ought to serve. This condition is most obvious in the "practical" courses, which are rightly supposed to serve specific ends in the very near future. For illustration, it is a misnomer, if nothing more, to call a course a "teaching" course, seven-eighths of which consists of the same subjects, handled in the same way, that go to make up the major portion of all the nine other high school "courses." Such a course offers but a very inadequate preparation for teaching anywhere, much less in a city of the importance of Portland.

Cost of the Examination System

One other feature of the administration of the Portland high schools is worthy of serious consideration; that is the examination system to determine the promotion of pupils. This system in the high schools is practically the same as that in the grades, which has been described and commented upon at length, in the earlier part of this chapter. Four times each year, at the end and in the middle of each of the two terms, a whole week is given up to formal examinations, and another week is devoted to definite preparation for them. Twenty per

cent of the school year devoted to examinations, and specific preparation for them, certainly seems like a large price to pay for information regarding pupils' knowledge and ability, which, in most cases, is already known by teachers, better than any examination can reveal. To furnish this superfluous and somewhat unreliable information seems to be the main purpose for which these examinations are maintained. Undoubtedly pupils learn something, often much, in the course of preparing for examinations, and in undergoing them; but the amount of time that can be profitably given to formal examinations must be limited. The Portland school authorities appreciated this fact in part, about seventeen years ago, when the monthly examination system of that time was made to give way to the present plan of four examinations per year. A further appreciation of it is needed now.

9. SUMMARY OF THE CHIEF CHARACTERISTICS OF THE PRESENT SYSTEM OF ELEMENTARY AND SECONDARY EDUCATION.

1. A rigidly prescribed, mechanical system of instruction, organization, and administration, poorly adapted both to the needs of the children and youth to be educated, and of the community to be provided with efficiently trained service, is the most universally evident fact of the Portland schools.

2. No one is wholly or primarily responsible for the system that dominates and mechanizes the thoughts and efforts of all connected with it,—school board, superintendent, assistant superintendents, principals, teachers, and pupils.

3. The mechanical system manifests itself in the course of study:

- a. The elementary course of study is dead, vivisected mathematically into fifty-four separate prescriptions, most of which are composed of a given number of pages from certain text-books.
- b. Regardless of age or need pupils are fitted to this dead curriculum,—there is no adaptation of the curriculum to the pupil. As a consequence, there are children of each year of age, from eleven to fifteen inclusive, in every one of the nine elementary grades.
- c. There is abundant evidence that almost no thought was ever devoted to the working out and formulation of the elementary course of study.
- d. In content the elementary course of study presents the following characteristics:
 - 1) The prescriptions of subject matter are absolutely and mechanically uniform for all.

- 2) The prescribed work is overwhelmingly abstract and bookish.
 - 3) An excessive amount of time is given to abstract arithmetic and technical grammar.
 - 4) Composition receives inadequate attention.
 - 5) The study of history is deferred to a point that one-third of the pupils never reach.
4. The mechanical system manifests itself in the scheme of promotional examinations:
- a. The scheme is mechanical.
 - b. The anticipations of examinations dominate and distort the work of teachers and pupils.
 - c. The examinations are wasteful of time and effort.
5. The mechanical system manifests itself in the spirit and method of instruction in the class-rooms:
- a. In the lowest grades, where the system bears less heavily, the work is generally good, much of it very good, some of it excellent.
 - b. Work in the grammar grades is characterized by routine, lack of method, absence of evidence of genuine interest.
 - c. In the grammar grades, reading is perfunctory; composition, very poor; penmanship, careless; geography, abstract and bookish; history, dry and dull; arithmetic and technical grammar taught with considerable skill, but greatly over-emphasized, and the instruction not adapted to human needs.
6. The influence of the mechanical system is manifested in the attitude of principals, teachers, and pupils in the grammar grades:
- a. It relieves teachers of educational responsibility.
 - b. It encourages passive, routine, clerical work on the part of both teachers and pupils.
 - c. Its effect on the principals is deadening; it neither requires nor encourages, it scarcely even permits, the assumption of any real educational responsibility by them.
7. The absence of the mechanizing effects of the system is manifested in the activity, originality, independence, interest and enthusiasm which characterizes the work of the primary grades.
8. There is a dearth of suitable and even necessary educational material throughout the elementary grades.
 9. Classes in the elementary schools are of commendable size.
 10. The discipline in the elementary schools is excellent.
 11. Provisions for defectives are wholly inadequate.

12. Provisions for secondary education are found in three high schools and in the School of Trades.

13. In the last five years there has been a rapid growth of secondary pupils, out of all proportion to the increase in total school enrollment.

14. There are some excellent and some grossly inefficient teachers in the high schools, some of the representatives of inefficiency drawing larger salaries than the representatives of excellence.

15. High school principals and teachers are engaged in teaching subjects, rather than in educating the youth of the city.

16. The uniformity of curriculum for all high schools is a distinct barrier to progress.

17. Subjects are uniform and isolated.

18. Pupils' courses lack unity and definiteness of purpose.

19. The examination system costs twenty per cent of the school year, and its results are of little value.

Chapter IX

OUTLINE OF AN EDUCATIONAL PROGRAM ADAPTED TO LOCAL EDUCATIONAL NEEDS.

(Spaulding.)

In Chapter VIII the character and scope of the educational program, at present being carried out in the school district was set forth in some detail. The defects and shortcomings of that program were dealt with especially there, and at length. We also tried to recognize at least its chief distinctive merits. The fact that the defects and shortcomings are more numerous than the merits recorded, and that to the discussion of the former far more space is devoted than to the latter, gives no warrant whatever for the conclusion that, in the main, the local school system is positively bad and inefficient. Such is by no means the truth; the positive merits of the present system outweigh many times the recorded defects, which are mainly relative.

1. POINT OF VIEW AND PURPOSE IN THIS STUDY.

Lest this last statement may seem out of harmony with the content and spirit of the last section, and to guard against the drawing of unjustifiable conclusions from that section, a brief explanation here concerning the point of view and purpose of this part of our study may not be out of place. We have studied the present school program in the light of an ideal—not a visionary, but a wholly practicable ideal; we have studied what is being done in the light of something more and better that may be done. Were our standard and purpose totally different, were we setting forth the accomplishments of the present school system in comparison with a zero accomplishment, our findings would be very different. Under these conditions, even the features of the present system that we have criticised most severely would appear meritorious. A single extreme illustration will suffice to make this clear: Unquestionably it is better to exercise the mind of a deaf youth on the dry husks of technical grammar than to allow him to grow up wholly untutored; but it were far better still to exercise both the mind and hand of that youth in learning to do something useful for himself and for the community.

We Are Facing the Future

In the study which we have made of the Portland school system, it has not been our purpose at all to cast up and close the account, as it were, showing a final balance of merit or

defect; such a showing, were it possible, is unimportant. Still less has it been our purpose even remotely to suggest either credit or censure, as a personal matter, for present conditions and achievements; such a bestowal of personal praise or blame were still less important. We are facing the future. How can the educational opportunities and needs of the community—those of the immediate future—be more adequately met than present provisions are capable of meeting them? This is the all-important question with which this study is concerned; this is the one great question that must command the full and loyal attention of all locally engaged in the educational service, of all citizens who are genuinely interested in the educational welfare and progress of the community; this is the question whose progressive answer during the next five years may easily place Portland educationally in the very front rank of American cities.

To aid in answering the above question is the purpose of this chapter. The preceding chapter was written solely in preparation for this one. That chapter, necessarily so full of the defects and shortcomings of the present system, as already explained, serves its preparatory purpose, in three ways: First, it absolutely precludes the otherwise possible illusion that the present school system is really doing—perhaps under somewhat different forms—substantially what the program to be outlined in this section demands; second, it helps to bring out more clearly by contrast, and so to focus attention upon the chief distinguishing features of this proposed program; and, finally, it is the necessary basis of appreciation of the program of the future, just as the present system in practice must be the basis of future developments. The program to be here outlined has necessarily been anticipated, to some extent.

What Is the Educational Problem That Presents Itself to Portland?

To go right to the heart of the matter, in the simplest possible way, what is the immediately educational problem that presents itself to this community? Simply this: Here are forty-three thousand children and youth from four to twenty years of age; not quite one-half of them are compelled by present law to attend school; three-fourths of the remainder are “entitled to school privileges”; all of them constitute the living, educable assets of the community. What shall be done for these forty-three thousand children and youth that their efficiency, their value to themselves and to the community, may be increased to the largest possible extent? That the community desires, not simply to meet the letter of the educational law of the state, but to make the most possible through education of the young people of the community, is assumed without question. How can this be done? This is the simple question whose repeated answer

must determine the entire activity and process of the educational program, from the most comprehensive administrative measure to the least detail of class-room procedure.

The First Step

When we have resolved the problem thus into its simple, naked elements, it is plain to see that the first step in its solution is always an understanding of the material—the boys and girls—that we propose to improve through education. Any group of forty-three thousand children and youth presents an untold wealth of growing, budding, human interests and capacities of richest variety. How much more the forty-three thousand children and youth of Portland, of many nationalities, drawn—selected, in a sense—from every state in the Union and from nearly every country in the world presents such wealth! An intelligent process of education applied to these many thousand boys and girls means nothing more nor less than the recognition, development, and training to highest usefulness of each of the forty-three thousand distinct and different groups of interests and capacities that we call individuality. We must study these forty-three thousand boys and girls sympathetically, appreciatively—not as a mass, but individually—if we would adapt our educational efforts intelligently to the development of the best that is in each one of them.

An Impossible Undertaking

But is not this a prodigious undertaking,—to know intimately, as is necessary, forty-three thousand boys and girls, whose personnel is changing by several thousands every year? How is it possible for one to compass such a task? It is not possible; it is utterly impossible; *one* ought never to undertake it; *one* ought never to assume to prescribe the content and character of the educational process to be applied to each of forty-three thousand young people. There are, in the system, approximately nine hundred teachers, principals and supervisors; theirs should be the responsibility of knowing somewhat intimately every individual in this constantly changing army of children and youth; theirs should be the responsibility, under wise guidance and leadership, of adapting the educational process, both in content and method, to individual needs. For them, this task is difficult, to be sure, but not impossible.

Large Numbers No Excuse for Machine Methods

The large number of pupils involved in this, or in any other, school system, constitute no valid excuse whatever for mass treatment and machine methods; such treatment and methods simply reveal the fact that some one, or some few individuals,

are attempting that which, in the very nature of conditions, they are utterly incompetent to do wisely, viz., to prescribe the educational treatment of thousands of children with whom they can have no acquaintance. Large numbers of children to be educated demand correspondingly large numbers of teachers for the task. Only let each teacher bear the responsibility and exercise the intelligence worthy of a real teacher, and the individuality of the child who is one in a system of one hundred thousand pupils may be as fully respected and as adequately treated as though he were one in a system of one hundred pupils. The progressive withdrawal from teachers and principals, as their numbers increase, of opportunity and responsibility for the exercise of worthy educational intelligence, and the corresponding increased assumption of responsibility by central authority, as the knowledge necessary for the wise exercise of it decreases, is indeed a prevalent, but none the less a mistaken practice, without justification or merit.

Character of the Program to Be Projected

What has just been said must suggest, both positively and negatively, the character of the educational program here to be outlined. Obviously this program cannot undertake to deal in detail with the educational needs of individuals, nor to prescribe the content and character of the educational processes best adapted to those needs; this would not be desirable, were it practicable, for these are matters to be worked out, day by day, and every day as long as their service lasts, by the nine hundred permanent teachers, principals, supervisors and superintendents of the system. What this program can do safely and profitably, is to project, in broad outlines, comprehensive plans of procedure adequate to the problem before us, and to point the way to the working out of those plans in detail.

In projecting these plans, we begin, not with the course of study nor with the methods of its administration, but with the boys and girls to be educated; for it is their needs, their individual needs, that must everywhere and always determine the course of study, its administration, and every phase of the organization and conduct of the schools. This priority of consideration cannot be overemphasized; for not only is it demanded by the very nature of the problem with which we are dealing, but it is contrary to present prevailing practice, not alone in Portland, but to a large extent, it must be confessed, in many other cities. The order of procedure here in attacking the problem of education as a whole, may well serve as an example to every teacher, principal, and supervisor in working out this problem, even in its minutest details, for the first safe step is universally and invariably the discovery of the individual needs of the children or youth who are to be taught.

2. SEVEN FACTORS DETERMINING THE GROUPING OF CHILDREN

Due regard for individual needs does not demand that instruction be individual to any large extent, in the sense that pupils be taught alone; it does demand that pupils whose individual needs are sufficiently similar be grouped into schools and classes; that pupils of very diverse needs be not taught together, for their instruction should be radically different, either in content or in method, or in both.

The principal factors which will determine the advantageous grouping of boys and girls for educational purposes are the following:

1. Maturity, most readily, but only roughly, indicated by age.
2. Knowledge, and ability to learn and to do.
3. Probable time to be devoted to schooling, due to economic condition of family, personal capacity, aptitude, and inclination.
4. Natural capacity and interest.
5. Command of the English language.
6. Marked defects, abnormalities and subnormalities, physical and mental.
7. Sex.

Some of the above characteristics and conditions overlap, more or less, yet each one is sufficiently distinct to serve as a valuable practical guide in actually determining the placement of any child or youth. Such actual placement will be determined as the resultant of giving to each of these factors its due weight. The relative importance of each factor may vary, under different conditions, from zero to a degree outweighing all others combined. Hence, it is obvious that the suitable grouping of children for educational purposes is no routine or mechanical matter; the placement of every single child requires study, knowledge, thought, insight, and judgment of a high order. But, really, is not every child worthy of this much consideration, even though we are dealing with them by the tens of thousands? It were certainly an unworthy parent who did not think so most emphatically concerning his own child. A brief consideration of each of the above factors in turn, with some reference to their application to the local problem, will help us to appreciate their importance, and to see something of the result of their application to the suitable grouping of the children and youth of Portland.

3. THE SIGNIFICANCE OF AGE, AND OVERAGE.

At the present time, the question of maturity, as represented by age, seems to be raised just once during every pupil's school

career—that is, on admission to the school system. If the applicant for admission is six years of age and under twenty-one, he is admitted to school privileges; if his age falls outside these limits, he is denied school privileges, except that in case he is over twenty-one he may be given instruction on the payment of a fee. Maturity, as indicated by age, appears to have at present no influence whatever in determining the grouping and classification of pupils who are admitted to the system, or the content and method of their instruction, except that candidates for admission to the School of Trades must be at least fourteen years of age.

Children Under Six Educable

Children under six years are now denied all school privileges in the district. In the school district there are over five thousand children between four and six years of age. That the education of children can be profitably begun at this age has been demonstrated for years in the kindergartens and sub-primary rooms of hundreds of school systems.

With How Wide An Age-Range May Children Be Advantageously Instructed Together?

In June, 1913, there were in the first six grades of the Portland schools, 17,606 children; these children ranged in age from six to nineteen years, in the preceding February, when the ages were taken. Engaged on work that is supposed normally to occupy children for about six years—from six to twelve years of age—were children and youth of an extreme age-range of fourteen years. The oldest children were by no means all in the higher of these grades; the smallest age-range in any grade was eleven years, in the fifth and sixth grades, while the four lower grades contained pupils differing by twelve, thirteen, and fourteen years in age. It is possibly true that no single classroom contained pupils of quite the extreme age-range here indicated; it is probably true that the pupils of comparatively few rooms represented an age-range exceeding six or seven years; it must be also true that an age-range of five years, or more, is common, beyond the first grade, as no measures are taken to segregate pupils on account of age.*

Assuming that the subject matter of instruction is to be substantially the same for all, and that all have already approximately the same knowledge of that subject matter, within what range of age may children be advantageously grouped together into classes? It is impossible to give an answer to this question

* Careful statistical studies of age and grade distribution, made by Mr. Tanner for the schools studied by Superintendent Spaulding show an age range of four to six years for the different grades.—E. P. C.

that would be universally applicable, as age is only an approximate index of maturity and of the possession of characteristics that normally accompany different degrees of maturity. On the whole, however, for children of six to fourteen years, a range of more than three years is not desirable; a range of four years begins to be too great; that is, were large numbers of such children grouped for advantageous instruction into classes according to age, it would probably be found that an age-range of four years proved too large more frequently than suitable. If we apply this age-range by grades to the enrolment in the first six grades in June, 1913, considering within the extreme four-year range all pupils of the four age-years having the largest number of representatives, we get results as shown in the following table:

TABLE 16
Age Distribution in Certain Grades

Grade.	Total enrollment.	Four age-years most largely represented.	Enrollment of these four age-years.
I	3742	6- 7- 8- 9	3669
II	3226	7- 8- 9-10	3022
III	2529	8- 9-10-11	2311
IV	2908	8- 9-10-11	2511
V	2652	9-10-11-12	2259
VI	2549	10-11-12-13	2150
Totals	17,606		15,921

Grade.	No. Younger.	Per cent Younger.	No. Older.	Per cent Older.
I	0	.....	73	2
II	120	4	84	3
III	112	5	106	5
IV	12	1	385	15
V	14	1	379	17
VI	21	1	378	18
Totals	279	2	1405	9

Eleven Per Cent of Elementary School Pupils Should Be Reclassified on Account of Age Alone

According to the above analysis, eleven per cent of all pupils working in the first six grades were badly classified. In other words, assuming—contrary to the facts—that all other factors were satisfactorily observed in the classification of these pupils, due regard for the factor of age alone would lead to a different classification of eleven per cent of them. This analysis, let it be repeated, can be taken to give only approximate figures. That, for example, every one of the identical 379 pupils in grade V who were thirteen years of age and over—57 of them were over

fifteen—could be classified more advantageously, is not probable; it is quite certain that a considerable number of the 2259 pupils whose ages fell within the four age-years, chiefly of those twelve years of age, were too old for their classification with children of nine and ten; hence, the estimate of a total of 379 as too old for their class grouping would probably prove, upon study, to be considerably under, rather than over the actual number. The same will hold true of the estimated numbers of excessively old children in each of the other grades; these estimates are undoubtedly, in every grade, well within the actual numbers needing better classification. The number of extremely young children in each grade is so small—two per cent for the six grades,—and these few are doubtless so scattered throughout the city, that any separate classification of them would probably be impractical.

Some of the Causes of Overage

But age—or maturity as indicated by age—never actually occurs as the sole factor, never even as the sole important factor, to be considered in determining suitable groupings of pupils. Where a number of children of widely varying ages have approximately the same degree of knowledge of elementary school subjects, there are sure to be important conditions or characteristics that have resulted in the acquisition of the same degree of knowledge at widely different ages. Some are extremely backward, and in consequence, although they have had equal advantages, have been well taught and have exercised faithfully such powers as they possess, have advanced no farther, in terms of conventional school subjects, at ten, eleven, or twelve years of age, than have other children at seven or eight; others are backward to the point of marked deficiency, even imbecility, so that they can never equal in knowledge of school subjects, normal, well-taught children of six or seven; some over-age pupils, who are normally endowed by nature, have had slight educational opportunities, others have been misunderstood by their teachers, have not been “reached,” and so have not applied themselves diligently; unfamiliarity with the English language, as the native tongue, is chiefly responsible for the over-age of others; sense-defects, mal-nutrition, over-work outside of school, unfortunate home conditions, disease, alone or in combination, account for the over-age of still others. This by no means exhausts the list of principal causes, that, operating alone, or more frequently in combination, result in over-age; that is, in an age exceeding normal in the acquisition of a given degree of knowledge and ability respecting the usual school subjects.

Over-age Pupils in the Portland Schools

To give a better idea of the importance of the study of the overage pupils for Portland, we reproduce here a few tables,

to show their number and distribution, The "Annual Report of the Public Schools" for the district each year contains a table, showing in detail the age and grade distribution of all pupils in the elementary schools of the district. This may be found in the report just referred to, and for that reason is not reproduced here. Instead the following tabulation from a table supplied by the School Clerk, and compiled for the school year ending June 26, 1913, shows the condition even better than the table published in the school report:¹

TABLE 17
Over-Age Children in the Portland Schools

Grade.	No. of pupils more than 1 year				No. of pupils over	
	Under regular age*		Over regular age		15 (Port. High School age)	14 (High School age els'wh'r)
	Number	Per cent of whole	No.	Per cent of whole		
First ..	..	....	407	10.9	5	11
Second ..	..	....	641	20.0	10	13
Third .	1	....	789	31.3	13	32
Fourth ..	12	....	810	27.9	33	79
Fifth ..	14	....	864	32.6	56	167
Sixth ..	21	....	799	31.3	123	332
Sev'nth ..	19	....	657	30.4	254	661
Eighth ..	58	0.2	412	22.1	414	884
Ninth ..	58	0.3	247	17.6	680	1143
Totals	183	0.8	5626	24.4	or 7.2%	or 15.0%

* By regular age is meant the second-division, or nine-year pupil.

The large number of over-age pupils in the schools early attracted the attention of the members of the Survey staff. To ascertain whether the distribution was general or not, statistical tables were compiled for comparison and study. An examination of these showed a very general distribution of over-age pupils throughout all of the schools, the outlying schools not differing materially, in this respect, from the schools in the best residential districts. A tabulation of the age distribution of the pupils in the three high schools was also prepared, and this, together with a summary of the over-age conditions found in the eight schools studied in particular for the purposes of this and the preceding chapter, are given in Tables 18 and 19, which follow.

¹ Tables 17, 18, and 19 are here inserted in Superintendent Spaulding's report, to show more fully the over-age conditions he is discussing.—DIRECTOR.

TABLE 18

Age and Grade Distribution for the Three High Schools

(Calculated to June, 1913)

Ages of pupils, in years.	First year.	Second year.	Third year.	Fourth year.	Totals.
13 to 14	48	...	...	...	48
14 to 15	204	30	...	...	234
15 to 16	362	158	23	1	544
16 to 17	275	285	132	23	715
17 to 18	158	261	255	104	778
18 to 19	57	116	170	200	543
19 to 20	20	33	62	130	245
20 to 21	13	6	19	75	113
21 to 22	3	1	6	21	31
22 to 23 .....	...	...	1	4	5
23 to 24 .....	...	...	...	...	0
24 to 25	1	...	...	1	2
Totals	1141	890	668	559	3258
Average age of class....	15 ys., 8 mos.	16 ys., 11 mos.	17 ys., 10 mos.	20 ys., 8 mos.	
Number over 19 years (college age)	36	40	88	231	395
Per cent of whole No...	3.2	4.5	13.2	41.3	12.1

In compiling Table 19 the Ladd School, which is next adjacent, has been substituted for the Shattuck, because of a slight mistake made in compiling the age distribution tables. Tables were first compiled for all schools, showing the age distribution, by years. To secure still greater accuracy, tables for the eight schools studied by Superintendent Spaulding were ordered compiled again, to show distribution by half years instead of years. In doing so, through a misunderstanding, the Ladd School was compiled instead of the Shattuck, and data is not now at hand from which the mistake could be corrected. The substitution, though, is unimportant, as an examination of the distribution tables, by years, shows no material difference.

The cross lines in the table separate the pupils into three groups. The first group covers the first three grades, where the examination system does not control promotions. The third group, as shown by Figure 8, page 150, contains the years where the enrollment drops rapidly, due largely to these over-age pupils now escaping the compulsory attendance law.

TABLE 19. Pupils in Grades, Two Years or More Over Age

(Calculated on the basis of nine years, for the Elementary School Course, and ages as of February 5, 1913, when the second half-year began.)

Grade.	Arleta.	Brooklyn.	Couch.	Glenco.	Failing.	Ladd.	Highland.	Holiday.	Totals and averages for the 8 schools.
1A	3	2	1	0	2	5	3	0	16
1B	4	4	6	3	16	14	3	0	50
2A	7	2	10	1	5	6	5	2	38
2B	9	8	8	5	12	14	7	3	66
3A	18	4	7	1	11	6	3	6	55
3B	24	10	1	0	6	18	9	3	71
Total No.	65	30	33	10	42	63	30	14	296
Per Ct. of all	20	17	15	7	15	23	11	7	15
4A	18	6	10	1	13	15	5	9	77
4B	20	15	9	0	12	14	4	5	79
5A	14	14	11	2	13	19	9	8	90
5B	18	8	13	9	15	17	8	13	101
6A	12	12	5	1	10	16	4	8	66
6B	14	6	13	7	16	20	14	7	97
Total No.	96	61	61	20	79	101	44	50	510
Per Ct. of all	31	31	22	15	32	30	18	24	26
7A	10	2	6	2	5	8	7	7	47
7B	5	8	8	2	7	9	10	7	56
8A	8	3	4	3	1	9	3	7	38
8B	3	3	8	2	0	9	5	3	33
9A	5	7	2	3	3	3	4	5	32
9B	3	1	4	2	2	8	0	0	20
Total No.	34	24	32	14	18	46	29	29	226
Per Ct. of all	24	20	15	14	15	20	15	17	18
Tot. for sch'1	195	115	126	44	139	210	103	29	1032
P. C. wh. No.	25	24	19	12	22	24	14	16	20

Necessary Treatment and Study of Over-age Pupils

All these children should be carefully studied to determine the cause, or causes, of their condition; then, as far as necessary, they should be organized into separate classes, into separate types of classes, so that they may receive the treatment that their condition requires. Such separate classification for the very large majority of these over-age children, for practically all of those who are two or more years over-age, will undoubtedly be found necessary, not only in the interest of the efficient instruction of these pupils themselves, but quite as much in the interest of the normal children whose progress they retard when classified with them. For many of these children, separate classification need not be permanent. The causes of their over-ageness may be removed, or overcome; or when segregated and given instruction adapted in content and method to their peculiar needs, they will make such rapid progress that within a comparatively short time they will be able to take up work in a regular grade that is normal for their age.

Importance of Anticipating and Preventing the Development of Over-age Pupils

Important as it is to study the present contingent of over-age children in the schools, and to institute measures of treatment adapted to their condition, it is still more important to anticipate over-ageness. To this end, all pupils, but especially those in the first three grades, should be studied carefully, and steps taken suitable to prevent the development in any of them of the condition of over-ageness. Taken thus early, the causes can be more effectually dealt with; a very brief segregation, even some special instruction in groups or individually, while over-ageness is in its incipiency, is often sufficient to insure normal progress thereafter. By such anticipatory measures, continuously applied throughout the grades, the present extent of over-ageness in the Portland schools may readily be cut in half, or better, within the next three years.

4. THE OTHER FACTORS, DETERMINING GROUPING

Knowledge and Ability Respecting School Subjects as a Standard of Classification

Knowledge of the prescribed subjects of study, with some regard for different degrees of ability to acquire such knowledge, seems at present to be the sole standard by which is determined the classification and the instruction, both in content and method, of all pupils who have not completed the elementary curriculum, barring, perhaps, a comparatively negligible num-

ber of pupils over seventeen years of age who may be specially admitted to the School of Trades. Thus it is that we find 264 children, from eleven to eighteen years of age, working side by side with 112 children under eight years of age, because they are all alike in that they all measure up to third grade work. We also find 385 children, from twelve to eighteen years of age, working side by side with 291 children of seven and eight years, because they are all alike in that they all measure up to fourth grade work. Again, we find 656 boys and girls, from fourteen to nineteen years of age, who, through necessity or choice, will complete their schooling within a year and go out to take their places among the world's workers, sitting side by side with 887 other children of ten to twelve years, most of whom, in preparation for their work of life, will continue their schooling for yet five to seven years, at least, many of them for ten years and longer; those 656 boys and girls and these 887 other children are sitting side by side and receiving the same instruction, administered in the same way, and devoted chiefly to the abstractions of arithmetic and to the dry, and to them generally meaningless, intricacies of technical grammar, and solely because those 656 boys and girls and these 887 other children are alike in this,—they have all just completed parts thirty-one, thirty-two, thirty-three, thirty-four, thirty-five, and thirty-six of the abstract arithmetic and technical grammar prescribed for grade six, but they have not yet mastered the continuation of similar work as prescribed in parts thirty-seven, thirty-eight, thirty-nine, forty, forty-one, and forty-two, as prescribed for grade seven!

And yet, knowledge of the conventional elementary subjects of instruction, especially reading, the use of language, orally and in writing, and of number, and the ability to advance in such knowledge, is a most useful criterion by which to determine appropriate classification and instruction. In intelligent practice this standard of knowledge and ability will be the determining factor in the placement and instruction of a large majority of pupils under fourteen years of age, and of many above that age; but nowhere and never should this be the only factor considered.

Influence of the Length of Instruction in Determining its Character

Due consideration of the probable time that a given pupil will devote to schooling should have much influence in determining what that pupil's schooling shall be. In the case of a normal child of six or seven years of age, just starting out on his school career, it is of little immediate importance to know whether that child will go to school for six or twelve years; his immediate treatment and instruction should not be appre-

ciably affected by such knowledge. But in the case of children of thirteen or fourteen years, and older, it becomes of prime importance to know whether they are likely to continue in school for one, two, three, four, or more years. The proposition, officially formulated and approved twenty years ago by high educational authorities, to the effect that instruction best suited to the preparation of pupils for admission to college was also best suited to prepare non-college-going pupils for their life work,³ finds few thoughtful defenders to-day; carried into practice, its chief recommendations are its cheapness and facility of administration, and the relief that it affords educational officers and teachers from all responsibility of knowing and of meeting the individual needs of their pupils.

All Public Instruction Should Be Designed to Fit the Recipient for Usefulness.

All instruction—certainly all instruction at public expense—whether of the elementary school, the high school, the college, the university, or any special school, should be dominated by the practical purpose of fitting the recipient of that instruction for useful service in the community. In the light of this proposition, it would seem almost self-evident that the instruction given a person who is to enter service at the end of one year should be quite different from the year's instruction that was known to be only preliminary to several year's further tuition before actual, useful service is to be demanded of the recipient. Even when one proposes, after one year's preparatory schooling, to render service in the same general field that he would enter after several years' preparation, it seems hardly conceivable that the single year of schooling could advantageously be made identical with the first of a series of years suited to a broad and thorough preparation for usefulness of a high and relatively uncommon order; but when the type of service that can best be rendered after one year's preparation is quite different from that which might best be rendered after several years' preparation—as is usually the case,—then by so much the more should that year's preparation differ from the first of a series of years' preparation. But if this form of *a priori* reasoning is not convincing, one may find in the hundreds of Portland boys and girls who annually complete their schooling with some of the elementary or lower high-school grades, no lack of concrete evidence of the inefficiency of the training for immediate service, of conventional grammar and high school courses that lead—that were designed to lead—eventually, if pursued long enough, to collegiate, technical and other professional university

³ Report of the Committee of Ten of the N. E. A.

courses, which finally prepare for superior grades of service the relatively few who can pursue them.

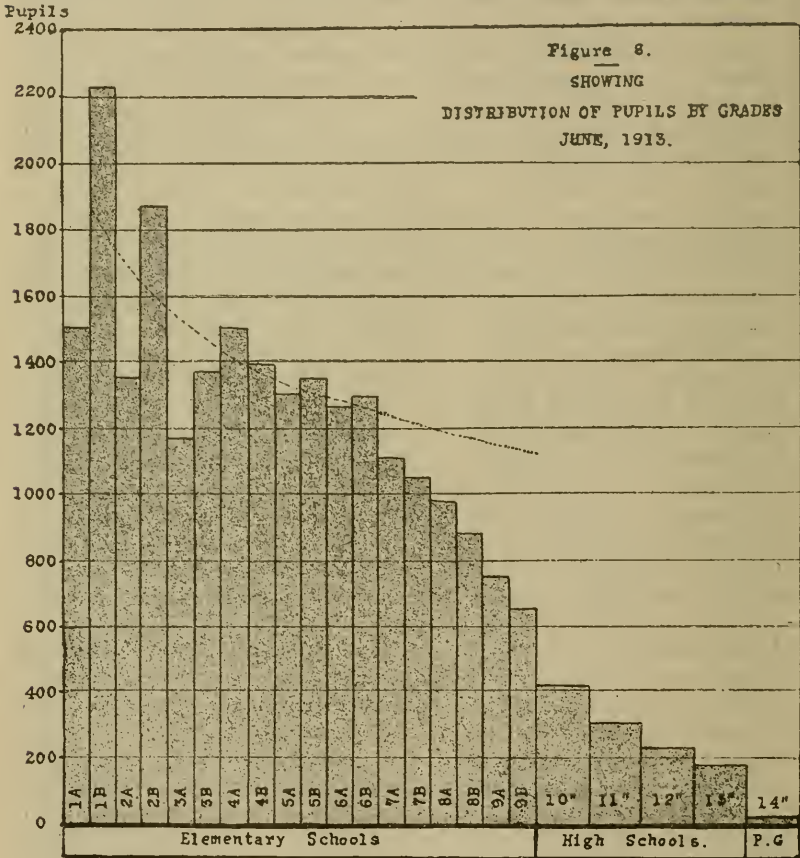
*Influence of Natural Capacity and Interests in Determining
Appropriate Instruction*

Appreciative recognition of the natural individual capacity and interests of a child or youth—we refer now only to normal children and youth—is so obviously important in determining the instruction best suited to develop that capacity and those interests into the highest state of usefulness—using this word with broad significance—that this matter would need no emphasis nor discussion here, were it not that it seems now to be entirely ignored throughout the school lives of more than half of all the pupils who enter the Portland schools, and accorded only late and quite inadequate influence in shaping the work of the remainder. Under the present system, what a pupil of that larger half likes, or what he dislikes, what he can do easily and well, or with difficulty and poorly, or not at all, is of no moment in shaping that pupil's instruction; what that instruction was to be, even to minute details, was prescribed for that pupil from part one to part fifty-four inclusive,—the same as for thousands of others—before he began his school career, yes, before he was born. Until that fifty-four times dissected body of prescribed knowledge is mastered even to the fifty-fourth part, no adaptation of instruction to individual capacity and interest may be made. Since more than half of all pupils who begin to travel along this educational pathway—straight and narrow—with its fifty-four milestones, never complete the journey, none of these ever reaches the point where he may turn off into divergent ways better suited to his needs. How many of the hundreds of youth who annually abandon this straight and narrow educational pathway,—beginning to drop off in large numbers from the thirty-sixth milestone, and continuing to fall out at every succeeding milestone, and between milestones, as is shown in Fig 8 (see next page)—do this because no recognition is accorded their individual capacities and interests, no one will ever know until the individuality and personality of pupils is given adequate study and consideration. When that is done, and ought to be done, and the remedies applied, there can be little doubt that a majority of that type who now complete their schooling about as soon as the law permits, will then find it advantageous to continue longer, and that all will be much better prepared for usefulness than now, whenever their schooling ends.

Overcoming the Handicap of the Non-English Speaking Child.

The handicap of the child entering school, without being able to speak or to understand the language in which all in-

struction is given, is obvious. Under a skillful teacher, this handicap is gradually overcome, but only after considerable loss of time and effort, not only for the foreign child immediately concerned, but also for English-speaking members of the same class. In the interest of efficiency non-English-speaking children should be classified by themselves, put in charge of teachers especially qualified to deal with them, and be instructed with due regard to their handicap, with the purpose of overcoming



(The thirty-sixth milestone, to which reference is made on page 149, comes at the end of Grade 6B. The dotted line indicates the way the enrollment should hold up to the end of the ninth grade, if the educational opportunity of Portland, as described on pages 92-93, were taken advantage of.)

that handicap as quickly and as thoroughly as possible. A year of such special instruction will usually be found sufficient to

qualify these pupils to enter regular classes, with advantage to themselves and without disadvantage to others. In that time they will have made much more progress, not only in the mastery of the English language, but in the other regular subjects of instruction, than they could have made in classification with English-speaking pupils.

Where the numbers are sufficient, it may be found advantageous to group non-English-speaking pupils by nationalities, although this is not at all necessary to their successful instruction. It will also be desirable that the teachers of these pupils have some speaking knowledge of the pupils' native tongue; but neither is this a prerequisite of success. Only let the instruction be objective, concrete, clear, and patient, and pupils of normal intelligence will rapidly acquire the language new to them. Better habits of pronunciation and enunciation, and more correct and accurate use of the language, can be gained under this special instruction than is wont to result when foreign children must get command of English, as best they can, in classes of English-speaking children.

Segregating Markedly Abnormal and the Subnormal Children

The importance of segregating pupils of marked defects, mental or physical, also those who, without special defect, are endowed with natural ability distinctly below normal, is now generally recognized, not only in theory, but in the practice of all progressive school systems. Results everywhere demonstrate the value of this policy. A detailed discussion of the types of abnormal and subnormal children, needing segregation and special treatment, is presented in Chapter XIV. No less important is it, though in practice, at least, not yet so generally appreciated, to recognize, with appropriate treatment, pupils of exceptional ability, general or special. Such recognition does not necessarily involve separate classification; individual encouragement and opportunity to do more and better work in general, or to pursue some particular line much farther than most pupils are expected or able to do, while working in regular classes with normal children, will often be better than segregation, not only for the specially endowed child, but also for the other children.

Influence of Sex in Determining the Grouping of Pupils.

While there is some slight difference of opinion, and very slight—relatively negligible—difference in practice, sex, as such, seems to afford little valid basis for any marked distinction, either in organization or in the content and method of instruction, previous to twelve, thirteen, or possibly fourteen years of age. From this age on, there is much more difference

both of opinion and of practice regarding co-education. Neither argument nor practice, however, has yet demonstrated at all conclusively the superiority either of co-education or of separation of the sexes during the early adolescent period,—as long as the subject matter of their instruction remains the same. This applies to pupils pursuing the conventional high school courses,—courses designed to fit for colleges, whose admission requirements disregard sex, and general academic courses made up of varying proportions of college preparatory subjects, but fitting neither sex for anything in particular.

The situation regarding co-education becomes quite different, however, as the specific educational needs of boys and girls are distinguished and recognized with types of instruction specially adapted to meet those needs. For example, practical courses in household arts are especially adapted to the needs of girls, while equally practical courses in the machine shop are especially adapted to the needs of some boys. The introduction of these, and similar courses meeting specific needs, varying with the sexes, necessarily involves the separation of sexes, so far as instruction in these courses is concerned. But the introduction of these specific, practical courses, some adapted to the peculiar needs of boys, others to the peculiar needs of girls, is beginning to influence materially, as it ought, the instruction in other subjects pursued along with these practical courses. The mathematics and science, for examples, that should accompany a course in the household arts are quite different from the mathematics and science best suited to a course in the machine shop; the same is true also, to some extent, of history, and even of English. Thus, without regard to the merits of the question concerning the mere association of the sexes while under instruction, their separation is being determined, and rightly so, through the pursuit of courses of instruction especially adapted to the preparation of members of the different sexes for those types of service that they can best render.

The separation of sexes brought about in this way necessarily extends only to the rooms in which instruction is given. Whether this separation should extend to the building occupied is an open question, best settled for the present by expediency.

5. FOUR MAIN GROUPS, OR TYPES OF SCHOOLS

As the school population of the district is studied individually and classified, for efficient instruction, with due regard to the seven factors that have now been discussed, this population will be found to fall into four fairly distinct groups, best represented under the names of the types of education best suited to the needs of the respective groups. Such a representation is given in Table 20, reproduced on the opposite page.

TABLE 20

Showing Classification of the Children and Youth of the School District, in Accordance With the Types of Instruction Best Suited to Their Respective Needs

Kindergarten.	Elementary.	Intermediate.	Secondary.
<p>Instruction covering one to two years, depending on maturity and rate of advancement of pupils.</p>	<p>Instruction covering six grades, and, for children of normal age, and ability, six years.</p>	<p>Instruction covering three grades and normally three years.</p>	<p>Instruction covering three grades and normally three years.</p>
<p>Children between four and six years. Estimated number—2,000 to 3,000.</p>	<p>1. Normal children from six to twelve or thirteen. Estimated number—17,000 to 18,000. 2. Children, six to fourteen, in special cases older, requiring separate classification, permanent or temporary, on account of age, language, some defect or general lack of ability, lack of opportunity, or health. Estimated number—2,500 to 4,000. (The larger number would include those needing to be placed in open-air rooms.)</p>	<p>1. Normal children from eleven to fourteen or fifteen. Estimated number—8,000 to 9,000. 2. Pupils of the over-age or retarded type, whatever the cause—whether lack of ability, lack of educational opportunity, language, or health,—from fourteen to sixteen. Estimated number—2,000 to 2,500.</p>	<p>1. Normal youth from fourteen to seventeen or eighteen. Estimated number—2,000 to 2,500. 2. Pupils of the overage or retarded type, from seventeen to twenty. Estimated number—1,500 to 2,000.</p>
<i>Special</i>			
<p>Children of all ages, of such marked physical or mental defects, such as deafness, blindness, mental weakness, crippled condition, that they must be indefinitely or permanently segregated, with instruction suited to their peculiar needs. Estimated number—300. (See Chapter XIV.)</p>			

The estimated numbers of each group can be considered only approximate, and very roughly approximate, at that. The exact numbers, which, of course, will be subject to constant variation, both absolutely and relatively, can obviously be determined only by study and experience. These rough estimates are made up on the basis of a consideration of the numbers of children of various ages now enrolled, and some experience with and knowledge of the proportionate distribution of pupils where plans of classification and provisions for adequate, differentiated instruction, similar to those here recommended, are carried out.

It will be noted that the total estimates fall between the total number of children of school age in the district, and the present total enrolment in the schools. This is due to the fact that a portion, but only a portion, of the children and youth whose ages fall outside the limits established for compulsory attendance, can be expected to enroll, even though the most advantageous provisions are made for them. Just what this portion will prove to be, of course only experience can show. Whatever it is at the outset, it is sure to increase rapidly, as children and their parents come to appreciate the new advantages being offered them.

Instruction Fitted to Different Groups of Pupils

The content and character of the instruction appropriate to each of the four parts into which the whole period of instruction is divided—the Kindergarten, Elementary, Intermediate, and Secondary—is not implied with sufficient definiteness by these terms. Without going into unnecessary detail, the scope and purpose of the instruction appropriate to each of these four stages of progress will be outlined and its adaptation to different types of pupils indicated. (See also Chapter XI.)

(A) THE KINDERGARTEN

For children at the kindergarten stage, that is from four up to, but not including, six years of age, no form of instruction has yet been worked out that has proved as suitable as that which goes under the name of kindergarten. While a considerable variety of procedure is now found bearing this general label, the same purpose, fundamental characteristics, and general methods are found in all kindergartens, and are too well known to need any detailed description here.

The provision of kindergarten instruction as a part of the public school system is chiefly confined to cities and the larger centers of population; it is almost unknown in rural districts. In the cities and larger centers, it is much more common in the East than in any other part of the country, though perhaps no city in the United States has made a more

conspicuous success in providing kindergarten instruction than has the city of Los Angeles. There can be no longer any question of the value of kindergarten instruction as the first stage in city public school systems; its value has been demonstrated abundantly during a period of more than twenty-five years.

Five Thousand Children of Kindergarten Age

According to the latest census figures, there are in the Portland school district, somewhat over 5,000 children of kindergarten age. Were kindergartens opened all over the city, so as to be accessible to all these children, it is scarcely probable that more than sixty per cent of them would be enrolled at any one time, and the maximum enrolment might not exceed fifty, or even forty per cent. Although eligible for admission at four, many would not enter until five or even older, in time to get a year, or half-year, of kindergarten instruction before entering the grades, while others would pass by the kindergarten entirely. The continuance in membership of those enrolled would also prove much less permanent than that in the grades. Hence, taking these things into consideration, and comparing the experience of places in which the kindergarten is a part of the school system, the above outside estimate of a membership of sixty per cent of the possible maximum, that is of 3,000, seems to be liberal, with fifty per cent, or 2,500, probably nearer what experience would demonstrate. This membership might be considerably, though not proportionately, reduced by requiring an age of four and one-half, or even of five years, as a condition of admission.

Cost of Kindergarten Instruction

Assuming that the salaries paid kindergarten teachers, specially trained, such as it would be necessary to employ, were approximately on the same basis as the salaries now paid primary grade teachers, the annual cost per kindergarten pupil might be somewhat more, or considerably less than the cost per grade pupil, depending upon the plans on which the kindergartens were conducted.

Two teachers, a head kindergartner and an assistant, can instruct a class of forty to fifty kindergarten children as efficiently as can a single grade teacher a class of thirty-five or forty pupils. A single session of two and one-half hours is sufficient for kindergarten children. Teachers may be required to teach only a single session and a single group of children in a day, devoting the free half-day to the preparation of work, and to making acquaintance with the mothers and the home life of their pupils, or they may be required to teach two

sessions, with a different set of children at each session. Both plans are in use, but the former is far preferable.

With the assistant receiving a salary one-half to two-thirds that of the head kindergartner, as would be appropriate, and with kindergartners teaching only one group of children each day, the cost of instruction per kindergarten pupil would be more—probably about thirty per cent more, on the average—than the cost of instruction per grade pupil. With kindergartners teaching two groups of pupils per day, other conditions remaining the same, the cost per kindergarten pupil would be probably thirty-five per cent less, on the average, than the cost per grade pupil.

The task of the kindergartner teaching a single session is unquestionably somewhat lighter than that of the grade teacher who teaches two sessions, each as long as the kindergartner's single session; while the task of the kindergartner teaching two full sessions is probably somewhat more trying than is that of the grade teacher. Were this plan of having kindergartners teach two sessions adopted, it might be well to reduce to two hours the length of the afternoon session, which should then be devoted to the younger children.

Whether kindergarten teachers conduct two sessions or one, the same rooms, as far as practicable, should be used for two sessions daily; this is in the interest of the economic use of the school plant.

Kindergartens Should Be Provided Eventually; Other Provisions Now More Important and Pressing

To make kindergarten instruction available for all children of the district of kindergarten age is a practical ideal which the public should approve, and toward which the school authorities may well work as rapidly as provision for other and more pressing interests will permit. Kindergartens are not of equal importance in all parts of the city. Where home conditions are unfavorable, in the more congested districts, where the opportunities for out-door play under wholesome conditions are restricted, there the kindergarten will render its largest service; and in such sections it should be established first. But the establishment of kindergartens, even in such sections as these, should wait on the provision of extensive, varied and relatively expensive opportunities for the more efficient education of at least four thousand youth now in the schools, and of an equally large number who have left the schools, because of the lack of instruction suited to their needs.

(B) ELEMENTARY INSTRUCTION

The subjects of instruction appropriate to the elementary stage of education, covering normally six grades and six years,

and to be pursued, for the most part, by children from six to twelve years of age, are the following:

1. The language arts.
 - a. Reading.
 - b. Writing.
 - c. Spelling and composition, oral and written.
2. Arithmetic.
3. Geography.
4. History of the United States.
5. Hygiene, physical training, and physiology.
6. Drawing, and elementary manual training.
7. Nature study.
8. Vocal music.

In the above list, there can be little question that the first two subjects, the language arts and arithmetic, are placed in the order of their relative importance for practically all children. With some little hesitancy, geography and history are given third and fourth places respectively; regarding the relative importance of the four remaining subjects there may well be differences of opinion, and even of fact, depending upon circumstances. With the exception of history, all the subjects here scheduled are included in the present course of study for the first six grades. Sufficient time for this subject might well be taken from the present allotment to physiology, two hours and five minutes per week, which is excessive.

The desirability of important variations from present practices, respecting both the content and methods of treatment of principal subjects, have already been implied in the criticisms of the present course of study and methods of instruction given in the preceding chapter. Only a brief positive outline of the principal contents and methods of treatment of these subjects need be given here.

The Language Arts

The several language arts should be closely correlated with each other, much more closely than seems to be the present prevailing practice. The learning of these arts should also be much more closely correlated with other subjects, especially with geography, history, nature study, and drawing. Reading should involve not merely the learning to read fluently and intelligently, which is now admirably achieved in the first two or three grades, but the reading of a large amount of good literature, and the formation of taste for good reading and the habit of reading with discrimination. From three to four times as many books as are now prescribed for the nine grades can well be read and studied thoroughly in six grades.

The use of language, in written composition, involves penmanship, spelling, and a practical knowledge of correct language forms, chiefly punctuation and capitalization. But all these forms are merely means to an end—the effective and accurate expression of ideas and feelings—and should be so taught and so learned. This means that content should always be dominant, form subordinate, in all instruction in composition. Only in subordination to content does form possess any real value. This is as true in oral as in written composition.

The Essentials of Arithmetic

The essentials of arithmetic involve merely the mastery of the four fundamental operations in the use of whole numbers and fractions, common and decimal. The process of acquiring this mastery should be made as concrete as possible, through the use of suitable objects and graphic illustrations. Constant and abundant applications of number and arithmetical processes should be made in the solution of problems whose facts and conditions come within the familiar experience of pupils; this work should involve practical knowledge of the standard tables of measurement in general use. Beyond the foregoing, the only work in arithmetic that is desirable in this elementary stage of education—and this is by no means essential at this time—is a practical understanding of that form of decimals known as percentage, and some practice in the applications of percentage to simple problems in interest, taxes, and discounts.

Practical Geography

The geography of this elementary period should have to do primarily with the United States, particularly with the great Northwest and the Pacific Coast; secondarily with the world, with most attention to those countries and peoples with whom we have, or are soon to have, the closest commercial relations,—Canada, the countries of Europe, South and Central America, Japan, and China. This subject should develop naturally, out of much first-hand study of the wealth of geographic phenomena of Portland and vicinity,—beginning in the third, even to some extent, in connection with nature study, in the second grade, and continuing throughout every grade. This study should be made practical, concrete, and comprehensible to the children, through the use of abundant illustrative material, pictures, and specimens, and also through the reading of geographical readers, as well as through the study of regular texts. No other subject possesses greater possibilities of interest.

Historical Biography

During this elementary period, every child should become familiar with the names and learn something of the lives and

achievements of the great characters, men and women, who have played the leading parts in the history of our country. Through the study of these characters, much will be learned of the significant events and movements in our country's development. This study should begin, even in the lowest grades, with stories of the great historic characters—Columbus, Boone, Washington, Lincoln, and a score of others. Easy historical readers, of which there are a few good ones, may be used in the third and fourth grades, but should not entirely supersede oral stories. Suitable for fifth and sixth grades, there are several good books that combine successfully biography and a systematic presentation of the most important features of our country's history.

Nature Study, Hygiene and Other Subjects

Nature study, based entirely upon the direct observation of natural phenomena, and closely correlated with school gardening, geography, drawing, literature, and composition, should receive some attention in every grade. As was pointed out in Chapter VII, a course rich in the elements of the different sciences, and culminating in specific instruction in agriculture and general science in the upper grades, should be marked features of the elementary school work in Portland.

The importance and character of instruction to be given in hygiene and physical training is discussed in Chapter XIV, subdivisions 7 and 8, and will not be taken up here. The remaining elementary subjects,—drawing, sewing, cooking, school gardening, manual work, and vocal music, are treated separately in Chapter X, and for the same reason will not be considered here.

The Desirable and the Essential Distinguished

The subjects of study briefly outlined above are those best suited to occupy the attention of the large majority of children from six to twelve years of age; some will be ready to pass on to the next, the intermediate stage of education, a little earlier; others will need to continue a little longer in this elementary stage. The subjects here outlined form the best, and, to a certain extent, the essential basis for the work of the intermediate stage. But only to a certain extent are these subjects essential; indeed, only a knowledge of the language arts and of arithmetic, and that not as thorough or as extensive as was outlined above, is essential in preparation for successful work of the intermediate stage. Provided these bare essentials have been acquired, even quite imperfectly, a child should not be kept on this elementary work long after the normal age for taking up intermediate work has been reached,—that is, not beyond thirteen, or, in extreme cases of immaturity, fourteen years of age.

(c) THE INTERMEDIATE STAGE.

This Calls for Differentiation

With the intermediate stage of education, to be entered upon normally by the majority of children at twelve, by some a year earlier, by others a year later, come the obvious beginnings of differentiation. The children have been differentiating themselves throughout the elementary stage; they have been manifesting and developing their individual capacities and interests; the term of compulsory schooling will soon be completed; the question of the probable future arises, and should be raised seriously, concerning each child. While no attempt should be made at this stage to predict definitely, much less to determine, the future of any child, it requires but the exercise of common sense to see at least the general direction in which the future of many children must lie.

Such indications of differentiating needs as now begin to manifest themselves demand corresponding beginnings of differentiation in the subject matter and method of instruction. Instead of a single course, which all pupils must pursue entire, there should be now offered several courses, identical, or similar, in respect to at least one-half their content, but distinctly differentiated in respect to a single subject, or a small group of allied subjects. Each of these courses should consist of three grades, and should involve normally three years' work. While they should all be planned to lead into the still further differentiated courses of the secondary period, certain of them should be so immediately practical that pupils, terminating their schooling with the completion of the compulsory attendance period, which corresponds with the normal completion of this intermediate stage, would be equipped with a considerable degree of specific preparation for definite service.

The intermediate courses, leading directly into secondary courses similar to the present high-school courses, would cover work equivalent to that of the first high-school year, as at present arranged. This arrangement reduces by one grade the length of the present grade and high-school courses, and shortens the school work from thirteen to twelve years. The equivalent of a grade can be readily and most advantageously saved by eliminating a considerable portion of the abstract arithmetic, and nearly all of the technical grammar, subjects which now consume one-third of the time, and much more than one-third of the energy, of both pupils and teachers in the three higher grammar grades.

Literary and Pre-Vocational Courses

Courses appropriate to this intermediate period are of two general types, that may be designated as *literary* and *pre-vo-*

ational. As these names suggest, those of the former type are more abstract, bookish, and theoretical, while those of the latter are more concrete and immediately practical. The literary courses are more closely allied, in content and method, to the present grammar and the first year of the literary high-school courses.

The subjects composing the literary courses should be as follows:⁴

1. English: Literature, written and oral composition, and the elements of grammar.
2. Mathematics: Arithmetic, algebra, geometry.
3. History: A more thorough study of United States history than that provided for the elementary period; also a study of European, especially English history, in its closer relations to the history of the United States; two years.
4. Civics: Government of city, state, and nation; one year.
5. Geography: Continued one year from the elementary period.
6. Elementary science: A continuation and systematization of the nature study of the elementary period.
7. Current events.
8. Hygiene,—personal and community; and physical training.
9. A modern language; two or three years.
10. Drawing: Free hand and mechanical.
11. Manual Training.
12. Household arts: Sewing and cooking.
13. Vocal music.

Work Adapted to Individual Needs

Of this rather formidable array of subjects, it should be noted that civics and geography are scheduled for one year only,—history, and possibly the modern language, for two years only; while to each of several other subjects, as elementary science, current events, hygiene, drawing, manual training, household arts and vocal music, not more than two exercises per week should be given. Moreover, no individual pupil should be held, contrary to his best interests, to the study of all these subjects; on the other hand, some specialization in accordance with a pupil's talents, interests, or probable future, should be permitted and encouraged. For example, not all pupils pursuing a literary course should take up a modern language; not everyone

⁴ See also the outlines for general, commercial, and vocational courses, submitted by Superintendent Francis, and printed in Chapter XI, Table 21.

should necessarily take either manual training or household arts; even the whole course in mathematics might well be omitted by some; while still others might devote more than the average time to any one of these or of the other subjects. The subjects here indicated should be used to serve the individual interests of pupils. The prime object of this stage of education is that every pupil in it be taught most effectively; not that this, or any other array of subjects, be mastered by every pupil.

It is entirely feasible to conduct a school in this way. To be sure, it cannot be done by routine; the exact work of every pupil cannot be predetermined years in advance. To educate pupils intelligently, not merely to see that the predetermined school mechanism runs smoothly, requires the constant study, thought, and wise judgment of both teachers and principals. But study, thought, judgment, and the assumption of educational responsibility, ought to be fundamental in the demands made upon every one immediately concerned in the education of children and youth.

Pre-Vocational Courses

The pre-vocational courses appropriate to this intermediate period should serve two ends, not dissimilar in their demands: (1) They should prepare for the vocational courses of the secondary period those pupils who continue in school beyond the intermediate period; and (2) they should give those pupils who conclude their schooling with this period some practical and definite preparation for entrance into some particular field of usefulness. These pre-vocational courses should be distinguished from each other, as well as from the literary courses, by the immediately practical study which should be prominent in each one of them. These practical studies, to meet Portland's needs, should look toward at least five radically different types of service, as follows:

1. Commercial:
 - a. Clerical service, involving bookkeeping and type-writing.
 - b. Selling.
2. Manufacturing and mechanical:
 - a. Woodworking trades,—particularly general carpentry and cabinet-making.
 - b. Metal-working trades.
 - c. Electrical trades.
 - d. Sewing trades.
3. Agricultural.
4. Home-making.
5. Printing and bookbinding.

Preparation looking toward the above five general types of service will give rise to at least five, and may give rise to several more, pre-vocational courses. Each one of these pre-vocational courses will involve the study of the following subjects, made concrete and practical, and correlated with the practical subject that distinguishes the course:

1. English: Composition and literature.
2. Mathematics: Chiefly arithmetic, applied.
3. Geography and history, with particular reference to commerce and industry.
4. Civics: Government of city, state, and nation.
5. Drawing: Mechanical, free-hand, design.
6. Hygiene and physical training.
7. Elementary science.
8. Current events.

Pupils' Capacities and Interests Tested in the Intermediate Stage

In addition to serving definitely the varied needs of individual boys and girls, as these have become evident previous to entrance upon this intermediate period, the variety and range of instruction offered in the literary and pre-vocational courses of this period should serve to test the interests and to bring out the special capacities of most of those pupils whose educational needs have not previously declared themselves, so that when the work of the secondary period is reached, it will be possible to determine intelligently, in the case of most pupils, what their secondary course of study should be. While considerable beginnings in differentiation have been made in this intermediate period, so much of the instruction has been essentially common to all the courses—the English, arithmetic, history, and geography—that any pupil, whose capacity and interest make it advisable, can change his course at any time during this intermediate period, or even at the beginning of the secondary period, and adjust himself without great difficulty to any other course that promises greater benefit to him.

(D) THE SECONDARY SCHOOL.

Secondary Instruction Determined by Length of Time Pupil Will Continue in School

The instruction of the secondary period must carry much further the differentiation begun in the intermediate period, in order to meet the further differentiated needs of the youth of this secondary period. The length of time that a pupil will probably continue in school now becomes one of the most important considerations in determining what that pupil's instruc-

tion should be. Indeed, because the probable length of a pupil's schooling is usually, to a large extent, the resultant of that pupil's capacity and interests, as well as of his economic circumstances, this factor of time may safely be given first consideration in determining, in a general way, the character of the course of instruction that will prove most beneficial.

Preparatory and Vocational Courses of Wide Range

Hence it is that the wide range of secondary courses of instruction, adequate to the diverse needs of thousands of youth in this secondary period, naturally fall into two groups, that may be designated respectively as *preparatory* and *vocational*. The former group of courses, as their suggested designation implies, should prepare for admission to the work of higher institutions,—colleges, universities, normal schools, and other schools for advanced special training,—those students who are to continue their education beyond this secondary period. The latter group of courses, the vocational, should prepare for immediate, definite service,—through a wide range of specifically practical instruction, adapted on the one hand to the wide range of individual capacity and interest, and on the other to the diversified needs of the community,—those youth whose schooling is to terminate with this secondary period.

All complete courses of this period should be so planned as to call normally for three years of work. Yet they should be flexible enough in arrangement and administration to meet individual capacity and conditions, especially permitting and encouraging part-time work, where circumstances make this necessary, and in such cases extending over a longer period than three years. The vocational courses should be so arranged that pupils who leave them at any point, of necessity or otherwise, will find themselves prepared, in proportion to the time and effort that they have so far devoted to their training, to render service in their chosen field.

Content and Purpose of Preparatory Courses

The content of the preparatory courses will be determined by the admission requirements imposed by the higher institutions for whose work these courses are to prepare. Such institutions generally are now tending, much more than a few years ago, to make their requirements quite general, leaving to secondary schools, and to candidates seeking admission, much discretion regarding the combination of subjects to be studied. However, to meet general requirements of admission to these higher institutions, and to afford a range of subjects suited to the varying capacities and interests of pupils, it will be necessary that the following five distinct fields of study be provided in the preparatory courses, and that the preparation of any individual pupil consist chiefly of work within these fields:

1. English: Literature and composition.
2. Mathematics: Algebra, geometry, and trigonometry.
3. Science: Physics, chemistry, and the biological sciences.
4. History: Ancient, mediaeval, modern, American.
5. Languages: Modern languages, and Latin.

Instruction in mechanical and free-hand drawing and design, manual training, and household arts should also be provided.

All the above fields and subjects of study are now included in the high-school curriculum. By selecting and combining in varying proportions from these subjects, an indefinite number of "courses" may be made, as the present so-called English, Latin, German, scientific and college preparatory courses have been made. The making of such courses should be largely individual, and determined merely by convenience; they should aid and not hinder the adaptation of work to the individual needs of every pupil. In practice there must be as many "courses" as there are pupils. True, many of these "courses" will be identical; but identity of courses should always arise as a resultant of adapting work to individual needs; it should never be a primary fact to which pupils must adjust themselves.

(For a further discussion of the vocational courses, see Chapters X and XI.)

Courses of Study Must Change Constantly

The range of instruction that has been outlined to meet the educational needs of the children and youth in the different stages of their growth must be taken as only roughly, approximately, and temporarily adequate. Indeed, these outlines may well be considered as merely tentative and suggestive. It is not for any one, either without or within a school system, to determine in detail the subjects of instruction and the combination of such subjects; this must be the inalienable and unceasing function of teachers, principals, supervisors and superintendent, working together to understand and to meet the ever-varying needs of their pupils, to fit them for the ever-varying demands of society for worthy service. Courses of study must be constantly changing. A fixed course of study is indisputable evidence of the neglect or surrender of the primary function of a true teacher—the discriminating education of individuality.

"Promotion" Must Be Determined Not by What a Pupil Has Learned, but by What He Needs to Learn

Just as the present scheme of promotion in the elementary schools, in complete harmony with the rigidly mechanical, all-dominating system, grows naturally, almost inevitably, out of that system, so the advancement of pupils from grade to grade

and from stage to stage in the educational program that has been here outlined must be in harmony with the principles underlying this program. The most fundamental principle of all, in this connection, is that instruction, both in content and in method, must be adapted to pupils' needs, to individual needs; not the instruction that a pupil has had, but the instruction that he needs; not what a pupil has learned, but what he most needs to learn, must determine the placing of that pupil.

Carried into practice, this means that when a pupil has reached in maturity and need the intermediate period, he is to be advanced to instruction appropriate to that period, whether he has completed the normal work of the elementary period or not; it means that when a pupil has reached in maturity and need the secondary period, he is to be advanced to instruction appropriate to that period, whether he has completed the normal work of the intermediate period or not. If such pupils are incapable of taking up work usually given in the intermediate or in the secondary periods, then work adapted to their needs must be provided. This is the simple principle that must prevail, that a child in the intermediate, or a youth in the secondary stage of development, belongs with other children in the intermediate or with other youth in the secondary stage of development. Instruction must always fit the stage of development, even to the individual needs in that stage of development; elementary instruction is not suitable for children of the intermediate stage, nor is intermediate instruction suitable for youth of the secondary stage.

The converse of the above proposition is almost equally true; intermediate instruction is not suitable for children of the elementary, nor is secondary instruction suitable for children of the intermediate stage. In practice, the number of pupils in danger of being advanced too rapidly is small compared with the number in danger of being kept back in stages of instruction below their needs. When courses of study are given breadth and depth, as well as length, there will be found few children whose education cannot most profitably be given in that stage of development to which they belong.

Within the different stages, pupils must be grouped into classes for instruction in accordance with their needs, those whose needs of instruction are similar being grouped together. Those whose needs differ materially, whether in respect to content of subject matter, method, or rate of progress, should not be grouped together. Regroupings should take place whenever pupils' changing needs require.

The Execution of the Plans Outlined Is Worthy of Real Teachers and Principals

It must be obvious that the execution of plans such as these plans of advancing pupils and of fitting work to their individual

needs, can be reduced to no mechanism; hence they cannot be depended upon to execute themselves, with a modicum of attention and inspection from time to time. The success of such plans will depend upon the constant and appreciative study of pupils, keen insight into their individual characters, the exercise of sound judgment, and the willingness to assume large educational responsibilities, on the part both of teachers and principals, under the wise guidance of supervisors and superintendents. Such demands are, indeed, difficult to meet, but they are worthy of real teachers and principals. No really competent and worthy teacher or principal will shirk such service as this, or declare such plans as these impossible. Indeed, there could be devised no surer way of distinguishing the competent and worthy from the incompetent and unworthy than this setting before teachers and principals a real problem of education, and giving them freedom and responsibility, under general leadership, to solve it.

Principals should be charged primarily with the responsibility of seeing not only that all pupils who ought to be enrolled with them are enrolled, and that the pupils actually enrolled in their schools are getting individually the kind of treatment they need, but they should also be charged with responsibility, to the extent of their control and influence, for the educational welfare of the children and youth of their respective districts who do not belong in their schools. When a pupil's educational need demands that he pass on from the elementary to the intermediate, or from the intermediate to the secondary stage of instruction, it is the principal's function to see that the passage is made successfully, even when this carries the pupil beyond the principal's official jurisdiction. No arbitrary limits should bound the service of principals or teachers. Co-operation should prevail in every direction throughout the system.

6. SUMMARY OF RECOMMENDATIONS FOR AN EDUCATIONAL PROGRAM ADAPTED TO LOCAL NEEDS.

1. In simplest terms Portland's educational problem is this: What shall be done for the forty-three thousand children and youth of the city that their value to themselves and to the community may be increased to the largest possible extent?

2. Always the first and most important step in the solution of this problem is an appreciative understanding of the capacities, interests, possibilities, of each one of these forty-three thousand individuals.

3. Such an understanding can be gained by no one, by no small number of persons; this is the great responsibility of the nine hundred teachers, principals, supervisors and superintendents.

4. An adequate educational program for the community must be based on the individual needs of the boys and girls to be educated, and the community needs for service.

5. Such a program does not call for individual instruction, to any considerable extent; it does call for the grouping of pupils into schools and classes in accordance with similarity of needs.

6. Seven factors must be considered in determining adequate grouping of pupils for instruction:

- a. Maturity, most readily but only roughly indicated by age.
- b. Knowledge, and ability to learn and to do.
- c. Probable time to be devoted to schooling.
- d. Natural capacity and interest.
- e. Command of the English language.
- f. Marked defects, abnormalities and subnormalities, physical and mental.
- g. Sex.

7. The significance of age:

- a. Children under six are educable, and suitable provision should be made for them.
- b. Children of a greater age-range than three or four years cannot be advantageously instructed in classes together; ten per cent of the pupils in the elementary grades in Portland need reclassification on account of age alone.
- c. "Over-age" is the resultant of one or more of a large number of diverse causes. All over-age pupils should be studied, and suitable treatment applied. It is still more important to anticipate and prevent the development of over-age pupils.

8. Knowledge and ability respecting conventional school subjects is a most useful criterion for determining appropriate classification and instruction, but it is not the only one.

9. As all public instruction should be designed to fit the recipient of it for largest usefulness, the time available for such instruction must be an important factor in determining what that instruction shall be.

10. Instruction is effective only as it is adapted to the capacity and interest of the recipient.

11. Ignorance of the English language is a handicap that calls for separate classification and special instruction.

12. Markedly abnormal and subnormal children should be segregated, both in their own interest and in the interest of normal children.

13. Separate classification according to sex is involved indirectly in carrying on instruction in preparation for fields of service peculiarly appropriate to the one sex or the other.

14. The school population falls into four large, fairly distinct groups, best represented under the names of the types of education best suited to the respective group needs:

- a. The kindergarten group.
- b. The elementary group.
- c. The intermediate group.
- d. The secondary group.

15. Instruction for each group must be adapted to the needs of the children or youth of that group:

- a. The kindergarten group requires the best form of kindergarten instruction.
- b. The elementary group needs instruction in:
 1. The language arts: Reading, writing, spelling, and composition.
 2. Arithmetic.
 3. Geography.
 4. History of the United States.
 5. Hygiene, physical training, and physiology.
 6. Drawing, and elementary manual training.
 7. Nature study.
 8. Vocal music.
- c. The intermediate group requires differentiated courses of instruction:
 1. Literary.
 2. Pre-vocational.
- d. The secondary group requires still farther differentiated courses:
 1. Preparatory.
 2. Vocational.

16. Courses of study must change constantly to meet the ever-changing needs of pupils, and to fit for the ever-varying service that society demands.

17. Promotion must be based not on what a pupil has learned, but on what he needs to learn.

18. The successful execution of this program demands the assumption of large educational responsibility by teachers and principals; it calls for appreciative study, the exercise of keen insight and sound judgment, and the unfailing co-operation, under wise leadership, of all.

Chapter X

THE PRESENT OFFERING OF THE SCHOOL DISTRICT IN VOCATIONAL STUDIES, WITH SUGGESTIONS FOR IMPROVEMENTS.

(Francis.)

1. PROMINENT SHORTCOMINGS IN THE ELEMENTARY SCHOOL WORK.

Portland's comprehension of the problem of elementary education, as shown in printed courses of study and the presentation of subject matter in the class-rooms, seems to me to be much too limited. Portland seems to be failing especially in the following particulars:

In Not Taking Advantage of the Life Experience of the Child

The school takes the child from a very wonderful set of experiences, which have so far been the determining factors in his life, and forces him into an environment that has little or nothing in common with these, or any other important life experiences. The principal business of the child in the first few grades is to play, and to grow,—not to read, write, spell, and cipher. These are incidental in importance. If they can be made a part of the play, it is well to use them; if not, they should be handled sparingly. Portland's schools are making life too formal, too serious, too uninteresting, and too unnatural for her children.

In Not Properly Establishing and Maintaining Kindergartens

There probably is force in the contention that children enter school too young; but there are no physiological, psychological, nor sociological reasons why a child should go to school when he is six years old that would not equally apply to his entering city schools at five or four years of age, if the instruction offered were suited to his needs. The six-year age for attending schools is traditional, and was probably originally fixed at the time when the child could overcome the physical difficulties of reaching the school. These have been removed in our modern cities. Mr. Ayres, of the Russell Sage Foundation, has proved by an exhaustive test that there is no difference in the mental attainment and strength of twelfth-grade pupils between those who have and those who have not gone through the kindergarten. Had the data been available and the test been made, doubtless the same conclusions would have been reached concerning those who have and those who have not gone through

the first grade. Given home conditions that approach the ideal for child growth and training, most students would agree that the age of entering school should be postponed, unless, of course, school conditions might be materially modified and made to more nearly approach ideal conditions for the developing and training of children. Certain it is that under present conditions in our large cities, complicated by social and economic forces, our cities must become partially responsible for children earlier than six years of age, and the kindergarten, with its ideals and practices, is a much more normal place for children than the grade schools.

In Not Properly Recognizing the Motor Instincts of Children

In the earlier grades the work is largely bookish, formal, mechanical, and unapplied. Children love to do things, and to make things. Most of their work should consist of these activities. The relative time and importance given to abstract, academic work and to applied work, in the Portland schools, should be reversed.

In Lack of Understanding of the Value of Play in the Development of the Child

"Play is the business of childhood." The supervision, while excellent, is inadequate; many of the schools are without playgrounds worthy of the name. I saw none equipped with sufficient play apparatus. I saw no play in the school rooms, with windows raised and children engaged in physical games, with intensity to the point of self-abandonment and mental relaxation, breathing good air, stirring the blood, and building bone and muscle. There were no before-school, afternoon and Saturday playgrounds, in charge of competent teachers. It will not suffice to have playgrounds established and conducted by the municipality, independent of the schools. They are too expensive, they reach too few children, and they cannot be properly correlated with the other phases of school work. Play as an element in education must become an integral and an important part of the problem of child development.

2. THE VOCATIONAL STUDIES IN THE ELEMENTARY SCHOOL COURSE OF STUDY.

Superintendent Spaulding, in Chapters VIII and IX, has dealt with the school instruction as a whole; it is my work to deal with that part of it which relates to the so-called vocational studies. These I shall accordingly consider, under the headings of primary manual arts, manual training, sewing, cookery, drawing, music, and school gardening.

(A) PRIMARY MANUAL ARTS

This should cover the manual work in the first four grades. Portland has as yet done nothing in this work. This I deem one of her most striking educational failures. It is difficult to think of a large city system in which the little folks are deprived of the privilege and advantages of working out, with their hands, simple concrete constructive problems. They should not be required to "study," but rather allowed to do things. I understand that it is planned to introduce this work during the coming school year, and that there is an inclination to place it under the supervision of the drawing department. While the two fields touch at many points, and should be correlated, I doubt the wisdom of combining them under one supervision at this time, unless an assistant could be secured for the drawing department who has special qualifications and preparation for the work, and who would be allowed to develop the work, without hindrance. This I think would be difficult to accomplish. It would be much simpler and safer to appoint a supervisor of the work, who would be responsible to the superintendent only for its success.

The outline and execution of a course in primary manual work should be guided by the following principles:

1. The interest of the child must be aroused and sustained.
2. It must be sufficiently versatile to appeal to the different personalities in the class-room. Not all children will be interested in doing the same thing at the same time.
3. It must avoid all "problems," conceived or invented to fit into a scheme of child development that happens at the time to find lodgment in the brain of the one making the course. Unsuspecting and unprotected children should not be imposed on by educational philosophers who have either forgotten their childhood or never had one.
4. It must connect closely with the life and experience of the child outside of the class-room.
5. It must correlate closely with his life and experience in school. This last principle is sometimes difficult to observe, as the child is so poor in both life and experiences in the class-room that nothing much of reality will correlate with them.
6. Teachers must be prepared to present the work. For this preparation the supervisor should be responsible. In fact, the supervisor's greatest, if not her only responsibility, lies in the selection and preparation of her teachers. The practice of going from building to building to see that teachers are following courses of study and properly presenting the work outlined, which is a very common type of supervision in cities, is a waste of time, energy and salary. Teachers who are qualified will do the work best when supervised least; supervisors who cannot prove helpful should be displaced by those who can.

This preparation should be inspirational, and should give the teacher a clear comprehension of and a correct attitude toward the problem, with suggestions only of how best to work it out. Too many explicit directions are bad alike for both teacher and pupils.

This work has been well outlined and carried out in the Los Angeles schools, where its large educational value has been fully demonstrated. The outline of work used there may prove of value in outlining such work for Portland.

(B) MANUAL TRAINING.

The Portland elementary schools offer manual training from the fifth through the eighth or ninth grades.

Commendable Features.

The work is to be commended for—

1. The Buildings and Equipment. I have seen none better in this country. The plan of providing separate buildings, especially designed for the work, has merit. Its only limitation lies in the expensive use of grounds already too small, with probably some inconvenience and additional expense in heating. These sloyd buildings are well planned to meet the needs and conveniences of the work, sufficiently removed from the main building to eliminate disturbance from noise, and give an air of completeness and business that is very desirable.

2. The liberal provisions in sloyd centers, furnishing each grammar school with one. This is a distinct economy of the child's time, saved from traveling back and forth across the city. It also prevents certain undesirable practices and dissipations that are very apt to occur with a class of younger boys, unaccompanied on these trips. One of its greatest advantages, however, lies in the fact that it allows the individual school the full use of its manual training plant.

A live, resourceful principal, working under an elastic and broad system of school administration, should save practically all of his boys to school and to themselves by assigning the "motor-sensed" to additional time in the shops. A very large percentage of the boys of upper grammar school age should spend at least one-half of their school day in manual work. The time of the school day should be extended, however.

A shop that is at the exclusive command of the school can also be made to serve the needs of the school in repair work, school furniture, etc. This has an economic value of but minor importance, but a social and educational value of great significance. The boy who is doing something for society, in return for the advantages society is offering him, is the only type of boy who can be safely depended upon to play the game in a big, square way as a man.

3. For the liberal allotment of time given the manual work.
4. In the character of the work done in some centers. In either quality or kind I have not seen the work done, in some of these centers, surpassed. I have never seen poorer work done, however, than that done in some of the other centers. The unevenness in the teachers was surprising.

Defects Observed

The work has some defects, which are characteristic of the Portland schools.

1. In grades preceding the eighth the work is formal, inelastic, uniform, and prescriptive. Little or no account is taken of the individuality of either the pupil or the teacher. It does not allow freedom in purpose, variation from type, color, decoration, or finish of objects. It removes from both teachers and pupils the opportunity and responsibility for devising, originating, and illustrating. It is limited in the variety of materials used.

2. It does not closely connect with life outside the school room. Opportunity is not given for the construction of large pieces of work, useful in the home or in the boy's home activities and interests.

3. It gives no recognition to work done independently by the boy away from school.

4. It fails to correlate closely with other school work.

These defects should be remedied by a revision of the work in the fifth, sixth and seventh years. The work in the Los Angeles schools, in these grades, embodies the suggestions for improvement made above, and the outline of work followed there may prove helpful in strengthening the Portland work.

(C) SEWING

Portland makes liberal time allowance for sewing, which is under the supervision of one person, in both grades and high schools. The city is to be commended for the liberal equipment of sewing machines provided for the grade schools. The results attained in the high schools are excellent, but not commensurate with the time expended upon the work. By reorganizing the work, equally good results should be attained, at a saving of one-third in time.

The elementary school child is required to give too much time and effort to exercise work perfecting the different stitches. This is following the older theory and practice of teaching the child the stitches, and leaving it to her to make the application, as against the more modern one that the girl can best acquire the practice and art of proper stitching through application to some useful article in which her interests are at

the time centered. Portland is following the extreme of the older theory. Doubtless some others are extreme in their advocacy of the more recent theory, but it is less destructive of the interest and joy the child finds in her work, without which two qualities school work lacks the essentials of education. It should be remembered that the purpose of sewing is the making of beautiful and useful things, and not the making of stitches, which should be taught only as a means to a larger end. Most girls love to sew if allowed to make things, but this joy and love may be killed if too much time is expended upon processes too remotely connected with the thing to be made. The making of simple garments should begin in the fifth grade, where sewing is introduced. In the Portland schools girls are not allowed to begin any real constructive work below the eighth grade. This delay is destructive of the girl's interest, and in particular wasteful of her time.

Some suggestions for a revision of the sewing course might be given. The work for the elementary schools should include:

1. Handwork, stitches, seams, hems, gathering, bands, darning and patching, plackets, button holes and sewing on of buttons and ornamental stitches, all applied to articles suitable to the lower grades.
2. The study of textiles.
3. Textile designs.
4. History of articles used, such as needles, thimbles, scissors, etc.
5. Laundering (in industrial centers).

A sewing bag made will illustrate hemming, as will napkins. A pinball will illustrate gathering and top sewing. A laundry bag will illustrate cross-stitch designing. A two-breadth gingham apron, French seams; a duster bag, felled seams. Things from home should be brought for darning and patching. Articles for home should be made, such as sofa pillow, table runner, table cover, or towels. Aprons, corset covers, and nightgowns may be made. Textiles should be studied, also trimmings. Proper laundry of different kinds of goods should be taught. The efficiency of the work in the Portland schools could be greatly increased by a revision of the work, along some such lines. The present model-work is uneconomical of time and effort.

(D) COOKERY.

The Portland schools do not introduce cookery into the course of study below the high schools. This defect is so serious that it is difficult to excuse it upon any grounds. Cookery should begin in the latter half of the sixth grade, certainly not later than the beginning of the seventh. Possibly no other subject in the course quite equals cookery in importance for the

average American girl, whether viewed from the developmental or utilitarian standpoints. In view of the large number of girls who never reach the high school, added to the fact that educationally cookery belongs early in the course of study, its immediate introduction into the Portland grade schools is urged.

It is highly desirable, for the reasons suggested in reference to sloyd work, that each grade school should have a cookery room. For the installation of suitable equipment, including plumbing, the cost should range between \$800 and \$1000 per room.

The work in the seventh grade should include lessons on measurements, dishes and utensils, combustions, water, food elements and principles, cereals, vegetables, milk, eggs, soups, meats, meat substitutes, and general cookery. In the eighth grade the work should include a study of leavening agents, sources of carbondioxide, fermentation, bread, exercises in practical cookery, hygiene and sanitation, and first aid to the injured.

(E) DRAWING.

The course in drawing prescribed for the elementary grades in the Portland schools closely resembles that of the average school system of the United States. It would be classified as a rational course, designed to interest the pupil and stimulate his activities along art lines. The same qualities that would rank it as rational and standard constitute its defects. Explicit directions are given in detail for each week's work, making no allowance for the exercise of initiative upon the part of the teacher, or contingencies that may arise in the school or home life of the child. These constitute two most important factors in all school work, and especially in drawing. The system that fails to take them into serious account is not truly educational. Only that course capable of broadest interpretation, and sufficiently flexible to allow of constant changes, is worthy.

Portland's printed course in elementary drawing lays emphasis on illustration, and this is commendable, but my observation of the work leads me to suspect that in practice this part of the course is neglected. I saw no strong indications that children were encouraged to illustrate their conception of a story read from books of literature, or told by teachers; of their impressions of mother preparing a meal, of brother playing ball, of teacher calling school, or of the circus parade. Nor, in the upper grades, of boys designing or sketching kites, motor boats, automobiles, or of girls working on color, line and proportion found in a dress, or hat, or furnished room. The course fails to connect with life, and correlate with school work.

In the first year formal instruction in color and landscape composition is given. This is an educational error. Such work should come later. Color work in the primary grades should be informal. Attempts at accuracy should be avoided, standards

abandoned, and space relations ignored. The large amount of time devoted to color, figure, and landscape work should permit of greater picture study than seems to be done.

Conventionalizing of nature forms is over-emphasized. The development of design exclusively from nature motifs is questionable, either from the standpoint of artistic or educational principles. Too many subjects are undertaken in the upper grades, and too little time is given to object drawing and perspective.

In the seventh grade differentiation of courses should begin, and limited optional work, to meet the needs and desires of individuals, should be allowed. Mechanical drawing for boys should be developed, and made optional with the free-hand. In properly organized work, adequately taught, boys should be able to do first-year high-school drawing in the seventh and eighth grades, and, as in the case in Portland, where so many boys remain in the grades through the ninth year, one and one-half years of strong mechanical drawing could be completed before reaching the tenth year of school life. Boys and girls, however, should not remain in the grade schools through the ninth year; this year should be placed elsewhere.

The course for girls in the seventh and eighth grades should lead into costume designing and home decorating. A very large proportion of our girls in the upper grammar grades and in the high schools should be using a major part of their drawing time in this phase of the work. So-called fine art is relatively of minor importance, compared with home and civic art,—every-day art that enters into the lives of all.

(F) MUSIC.

I was not able, on account of limited time, to sufficiently witness the work of music in the Portland schools to form accurate judgment upon it. By inquiry, however, I learned that it is not sufficiently provided for in music rooms, musical instruments, or teachers and supervisors. Every elementary school should have a room especially fitted for the teaching of music. It should be supplied with a piano and some other musical instruments, and should be decorated with proper pictures to give it a musical atmosphere. In the larger schools there should be a teacher who is specially prepared for the work, and who gives all of her time to it. The smaller schools can sometimes be grouped, and one teacher assigned to two or more schools. Each school should have its choruses, glee clubs and orchestras. Among the music supervisors of a city there should be one or more devoting their entire time to the development of school orchestras. A city becomes musical, not by the number of musical stars who delight high-priced audiences, but by the number of her children who have opportunities to develop the

native love of music and acquire some skill in its art. The expense item is argued against the fuller expansion of the study of music in our schools, but the present method of teaching it, with limited facilities and poorly prepared teachers, is incomparably more wasteful and expensive than the plan proposed.

Portland, in common with most other cities in the United States, is making the fundamental pedagogic mistake in music teaching of expending all of her time and effort in repeating, copying, and reproducing the music composed by others, and wholly neglecting music composition. This failure is due to custom and a preconceived belief that the child cannot express its musical self. But it can, and as well as it can express any other emotion, or intellectual qualities.

(G) SCHOOL GARDENING.

Some excellent work is being done by the children of Portland in school and home gardens. It is being done, however, under the inspiration, supervision, and at the expense of outside civic organizations. Their only connection with the schools is that they are doing for the school children the work that should be done by the schools. This arrangement can never be wholly satisfactory, and for the following reasons:

1. It is expensive. To be sure the money to conduct it does not come from school funds, but any work accomplished at an excessive cost must entail a loss to the community and to society.

2. It cannot be as effectively done, due to the fact that civic organizations cannot or will not select people as well qualified to present it.

3. It reaches a limited number of pupils, as must all activities conducted outside the school organization.

4. School gardening is a legitimate and necessary part of every city course of study, and should have a definite place and time given to it. The study should begin with the kindergarten, and extend through the high school. No place is quite so much in need of school and home gardening as our modern cities. Work in home gardening should receive as much attention, and be given equal credit, with work in school gardens.

Supervisor of School Gardens Needed

Portland should employ a supervisor of school gardens, with not less than three assistants. Their duties should include:

1. The securing of privileges to use vacant lots adjoining school grounds. This can usually be done without cost, as it enhances the value of the ground to have it cultivated and kept clean. I recommend against the practice of paying rent for these lots for school purposes, as an unnecessary expense. If the policy of not paying rent is uniform, vacant lots in suf-

ficient number will be given by property owners. The Board of Education should pipe for irrigation, if necessary, and fence property offered for a reasonable time, if fencing becomes a necessity. Usually, however, children can be taught to respect even the unprotected property of others; this of itself is a most valuable lesson for the average American child.

2. The responsibility for a general suggestive outline of work.

3. The issuing of frequent bulletins on the work, that will furnish information on the time and method of planting and cultivating vegetables, shrubbery, and flowers, for home and school gardens.

4. The supervision and inspection of home gardens, and the recommending of the credits due those cultivating them.

5. The holding of regular meetings for the discussion, with teachers, of the educational and agricultural problems involved. These meetings should be attended by at least one teacher from each building, who is assigned the responsibility for the work of her school. Such teacher should be given either free time, or financial consideration, or both, for this work.

Most important of all, the supervisor should be the inspiration of the work, and should be able to educate the department and the public upon its scope, purposes, and importance. Such a person will probably command a good salary, but he will always be worth more to a city than he will receive from it. A number of American cities are employing, through their "Ad Clubs" or Chambers of Commerce, trained agricultural advisors for the farming community surrounding them. This may be good and profitable, but even better and more profitable would be agricultural advisors and teachers for the children in the schools.

Portland is most favorably situated for this line of school activity. I doubt if there is any other one subject of equal importance to the city. A great city, located in the center of one of the greatest agricultural districts of the country, it becomes her imperative duty to turn the attention of her children to the soil. Thousands of them are fitted by temperament and inclination to become successful farmers. This applies to girls and to boys alike. Probably no other vocation holds out so many chances of success to both men and women, within the next half century, as does the cultivation of the soil. More significant than this is the fact that no nation can hope for permanent success, security, and prosperity if the educational, social, and economic forces within her are drawing her boys and girls in excessive numbers away from the land. "Back to the soil" is a cry that has come none too early in this country, and to be effective it must center in our public schools. This is the practical phase of the question. The aesthetic, ethical, and educational are equally potent for the development of school and home gardens in American cities.

3. THE VOCATIONAL STUDIES IN THE SECONDARY SCHOOLS.

The Portland high schools are the regulation type of American academic high schools, plus a limited amount of modern applied work. The nearest approach to vocational work is to be found in the commercial work, and second to this is the sewing for girls. The other manual work is more scholastic in its nature than practical. The indications of real life elements are scant.

The Principal and the School

In conversation with the principal of one of the high schools I got the impression that he is beginning to see his problem, and will, if given opportunity by the administrative authorities, begin the development of some progressive, worth-while work. Uniformity in the high schools is carried to extremes. The first greatest need in the system is the placing of greater responsibility upon the principal, supporting him in rational changes he may undertake, and holding him for results. This plan would challenge the best powers of those occupying these positions. A failure to respond to the new opportunities and responsibilities would justify a change of principals. Great care should be exercised, however, in giving these men a fair trial. They should not only be allowed latitude in inaugurating new courses, and radically modifying old ones, but their recommendations on teachers should be practically decisive in their selection or rejection. It must also be remembered that these high schools cannot be brought to a reasonable degree of efficiency in a limited time. The problem has so many important factors that it becomes large and complex. The principal of a large high school who succeeds in reorganizing his school and heading it right, without too much friction, is a big man, and has made a great contribution to the permanent welfare of his city and to the cause of education at large.

Special Lines of Work Offered.

The Portland high schools, in addition to the general instruction, outlined at length in Chapter VIII, offer the following vocational work:

(A) THE COMMERCIAL COURSE

The work offered follows the traditional lines of bookkeeping, penmanship, commercial arithmetic, stenography and typewriting, and commercial law, with somewhat more liberal em-

phasis placed upon commercial geography, history and principles of commerce, and economics than is to be found in the average commercial course. Two only of these high schools, the Lincoln and the Jefferson, offer the commercial work.

As Portland's interests are largely commercial, the commercial work of her schools should be of the very best. It does not, however, excel in any particular. In comprehension of the problem, it is very mediocre. The presentation of the work, in places, is excellent; in spots it is inexcusably poor; and on an average it is only fair. The text-books used are standard, but they are entirely too religiously followed. The time allotment for the different subjects is reasonable; that given to stenography and typewriting is generous. The results, while fairly satisfactory, are not commensurate with the time given to the work. The work done should be done equally well at a saving of one-third in time, and time is an important element in business. Commercial students should not be so crowded in the earlier part of the work as to encourage superficiality or inaccuracy, and should be put under exacting tests for accuracy and speed before finishing the course. Profligacy of time is a common weakness in school work; commercial work offers an excellent opportunity to minimize the evil.

The principal criticism to be passed upon the commercial work in the Portland high schools is its failure in points of contact with real things. Little or no effort is being made to take advantage of the excellent opportunities offered to vitalize the work, by putting it in touch with the business phases of the school and the commercial life of the city. No opportunity is offered young people employed in business to supplement their experience by commercial work in the high schools. Classes should be organized for these people, and provision made for those who can attend school part time only. No preacademic requirements should be made of them. If necessary, classes at irregular hours should be organized for them.

Pupils of the commercial department seemed to be as little familiar with and concerned about the city commercially as those of other departments. There was a general lack of intelligence concerning the commercial enterprises in which Portland men are engaged, and opportunities offered future business men in these fields. No special instruction was given on the qualities and qualifications necessary to meet the demands in business in general, or in special lines of business. The course of instruction, as presented, seemed to limit its purpose to producing young men and women who could take positions as subordinate accountants, clerks, or stenographers. No large conceptions seemed to dominate the work.

No attempt, either, seemed to be made to follow these young people after leaving school, to discover what positions they secured, and what success they had in filling them. The commer-

cial department also assumed no responsibility for the business of the school in handling, accounting for, and auditing the business transactions necessary in paid entertainments, athletics, class dues, society funds, cafeteria moneys, etc. The departments were not even equipped with the regulation office furniture and fixtures for so-called business practice, much less for large business preparation. Portland seems to need more commercial teachers who are alive and in intelligent and sympathetic touch with the great commercial movements of their own city; teachers who have energy, courage, comprehension, and vision, and whose suggestions and recommendations will be heeded.

In addition to the regular work offered in bookkeeping and stenography and typewriting, advanced classes should be organized, covering a year's additional work. These should be optional with other subjects, and be given full credit. These advanced classes in stenography and typewriting could do all of the clerical work of the school, and much for the different departments of the city schools. In bookkeeping they could handle all of the school business. Pupils from these classes should be sent out into the city, when possible, to do part-day work for business and professional men. This would give the school an opportunity to discover the defects of the individual pupil and of the work he did in school, and help in remedying both. This outside work should receive full recognition in school credits.

(B) THE WORK IN DRAWING

Drawing in the Portland high schools is a continuation and development of that work in the grades, with but slight modifications. It possesses the same merits, and in general has the characteristic limitations. The work in the high schools lacks support, both in equipment and teachers. Upon the basis of what high schools, of Portland's enrollment, should have, they are supplied with about one-half of what should be required to meet the needs of good work in drawing. If the present facilities meet the full demand for the work, upon the part of pupils, it is probably due to failure in offering courses that appeal to them.

Work in materials should be liberally enlarged. Most designs made by pupils should be worked out in the materials for which they are designed. To dream dreams is an excellent thing, provided they may be brought to pass. The habit of working on problems, in our public schools, that are never solved in the terms of human experiences and human life, constitutes the greatest weakness and danger to future generations.

The work in clay overemphasizes modeling, to the neglect of pottery. Modeling has a life significance for a very limited

number of people, while pottery enters into the lives of all. Pottery has been a major factor in the art standards of the race, while modeling has been a very minor one.

Fabric designing should be increased, and weaving and metal work should be introduced.

Drawing offers one of the finest of opportunities for taking the school into the home, and one of the school's greatest functions is to go into the home. Portland high schools should have a distinctive, well organized, and broad four-years' course for girls in home planning, decorating and furnishing, costume designing, and study of fabrics. Suggestions of these studies are found scattered throughout the regular course in drawing, but they are too widely distributed, too lacking in coherence, and too little related to be of value to the girl in the problems she will have to meet in her life work.

The Portland schools also offer opportunity for serious, coherent, and worthy courses in cartooning, and designing and illustrating for advertising. It is argued that this work is technical, and belongs to a technical high-school, but every technical high-school should have in its courses enough of the liberal to put its pupils in sympathetic touch with the universal principles and problems, and every cultural high-school must teach enough of the applied work to give its students a grip on the mighty forces at play in modern civilization. The high school, after all, can reduce its problems to two: (a) to help its pupils to find a worthy center of interests, and (b) to enable them to work these interests out into deeds.

The mechanical drawing offered in the Portland schools is quite elementary, and should be done in the grammar grades, allowing the pupils who continue the work in high schools to go into the mathematical or technical phases of the subject. There is hardly any limit to what high school boys can do in either, if given time for it, and if the work is properly developed and presented. On the technical side, boys can attain an earning skill in architectural, civil, and mechanical drafting and tracing. Unless taught by those qualified to present the subject, however, the work had best not be undertaken.

(c) SHOP EQUIPMENT, AND ITS DISTRIBUTION

The extent to which industrial work shall be carried in individual high schools of a city system is both an economic and an educational problem. The cost of shop equipment, supplies used, and teachers' salaries is heavy, where the work is fully organized. Whether it is best to fully equip one school in the system, and allow all pupils desiring the work to attend this school, or to partially equip each of the schools, and offer the advantages of shop work to pupils of all schools, is a question of some importance. On the side of economy and efficiency

of those taking the work in one fully equipped school, the former plan would be adopted. This would be done, however, at certain important educational sacrifices. The high school selected, when left to the option of parents and pupils, is influenced fully as much by geographical and social reasons as by educational advantages. Where educational reasons determine the choice of a school there is always the probability of mistakes in the choice. Insufficient opportunity has been afforded the boy to determine his aptitudes and powers. Many good mechanics, engineers, and farmers are being spoiled through lack of opportunity in school to discover their ability in these lines. The cosmopolitan high-school has a marked advantage in American education. A third and a more nearly ideal plan is to establish one fully-equipped technical high-school in the system, and organize the others into cosmopolitan high-schools, with simpler shop equipment assigned to meet the requirements of treating manual training as a developmental subject. In a school of this kind the resourceful practical teacher will find it possible to do much constructive practical work. I recommend this plan for the Portland high schools. If adopted, the equipment in the two schools now offering shop work should be strengthened to meet the needs of a regular cosmopolitan high-school. Under the plan now followed the facilities and courses are markedly inadequate. Basement rooms are used, and in one of the buildings these are poorly lighted and ventilated. The woodshop equipment is incomplete, and in one building is antiquated. There is a lack of any dignified and effective attempt at forge and machine shop equipment. The small percentage of boys electing the work is noticeable, and a general unbusiness-like air pervades the manual training rooms. One gets the impression that manual training is looked upon as an addendum to, rather than an integral and vital part of, the school. It is failing to make itself felt as one of the virile active factors in high school work and life. This too despite the fact that Portland has some good strong men handling the work.

(D) DOMESTIC ART

Sewing is on an excellent footing in the Portland high schools, and the kind and quality of the work produced would be creditable to any city. To attain these results very liberal time allowance has been given, and excellent equipment furnished. Some one in the schools has been influential in caring for the interests of domestic art. The character of the work has had a marked effect upon the large number of girls choosing it as one of their optional subjects.

(E) DOMESTIC SCIENCE

Domestic science is also well provided for and very creditably done in the Portland high schools. A year of domestic

chemistry, and a year of household mathematics, should be added to the course.

4. THE SCHOOL OF TRADES.

The Portland School of Trades is one of the best of its kind, and is doing excellent work. Work in the machine shop, pattern-making, electrical construction, mechanical drawing, and sewing deserves especial commendation. Considering the fact that Portland is largely a commercial city, and that its School of Trades is so poorly adapted either in location or building to the work undertaken, the enrollment is much above the average in schools of this type throughout the country. Despite the high quality of work done, however, the Portland School of Trades is not effectively meeting the problem presented to it. This failure is due to:

(a) The location and character of the building in which the school is conducted. These are such as to discourage those in need of the work offered from attending.

(b) The reluctance of parents in sending their children to any school which has preparation for manual work as its aim. The old pernicious fallacy of attaining an education to escape work is yet strong, and widely distributed.

(c) Portland is not, and does not promise soon to become, an industrial city.

(d) The school itself lacks imagination, breadth of vision, and spiritual life. There is lack of music, dramatics, and public speaking. The cultural phase of education receives entirely too little attention in it. No other type of school is so greatly benefited by, nor responds so readily to, these, as a vocational school. Such work should not be made a serious part of trade school work, but a very effective and interesting part of it.

For these and other reasons, I do not believe Portland can develop a great trade school, or one that can do the work that should be accomplished. Other larger cities and greater in industrialism have failed to establish effective trade schools.

I recommend, therefore, the disposal of the present trade school plant, and the establishment of a first-class technical or polytechnic high school, with the present trade courses offered as a part of it. This would result in greatly enlarging the field of work. If another block of land adjoining the Lincoln high school were secured for this, it would have many advantages. It would bring the technical and literary students in touch with the trade pupils, and give the trade pupils the literary and social advantages of the technical school. There is the great and constant danger of the trade courses being neglected and lost if operated in a technical school. This can be avoided only by the choice of a principal who sees the whole field, and who will select skilled tradesmen to develop the trade

work. I should not make this recommendation for a city the size of Portland, with highly developed industries, or one that promised to become an industrial city within a reasonable length of time.

5. AN AGRICULTURAL HIGH SCHOOL.

An agricultural high school should be organized, with ample grounds and equipment. This is one of the most important suggestions made for vocational work in the Portland schools. The school should be distinctly an agricultural school. Its science, art, shop work, home economics, economic and social problems, and mathematics should be developed from an agricultural standpoint. The danger to be avoided in organizing such schools lies in the selection of a principal and corps of teachers, who, because of previous training, will make the school cultural and academic at heart, and tolerate agriculture as a side issue. The cost of the school will depend largely on the location and size of the site, and the character of buildings provided. The site should include not less than fifty acres, preferably more. The buildings, except the central administration building, should be characteristic of the farm, and hence need not be expensive. The courses offered should include truck farming, grain and hay-raising, stock raising, dairying, farm implements, farm accounting, orcharding, soil analysis, distribution of farm products, household economics, farm architecture, and forestry.

6. SUMMARY, AND RECOMMENDATIONS.

Portland makes the following provisions for vocational education in her school system:

1. School gardening, conducted under a civic organization, independent of the system.
2. Drawing, commencing with the 4th grade, and extending through the high school.
3. Manual work for boys, beginning in the 5th grade as sloyd, and continuing in the high school as general woodshop and machine shop work.
4. Academic mechanical drawing, in the high school.
5. Sewing, beginning with the 5th grade, and carried into the high school.
6. Cooking, taught only in the high school.
7. Commercial work, offered only in the high school.
8. Trade work in carpentry, cabinet making, pattern making, machine shop work, electrical construction, architectural drawing, mechanical drawing, printing, cooking, sewing and millinery, offered in the Portland School of Trades.

With the exception of commercial work and cooking and sewing, in the high schools, and work in the School of Trades,

the applied work mentioned is more cultural and academic than vocational in character and purpose.

The following changes are, I believe, necessary to put vocational work in Portland on the most efficient basis:

1. Primary manual arts should be introduced into the first, second, and third grades, and the work in manual training in the upper grades made much less formal.

2. Cooking should be introduced in the 6th, not later than the 7th grade.

3. The elementary course in sewing should be modified to include more garment making, and less exercise work.

4. The work in music, and the training of the powers of expression, need much amplification.

5. The Board of School Directors should assume full financial and educational responsibility for school gardening, and place the work under an efficient supervisor, with sufficient help to carry it out.

6. Five or more intermediate schools should be organized, to cover the 7th, 8th and 9th grade work. These should offer distinct courses in commercial and industrial work, and act as prevocational schools. Some of them should specialize in vocational branches, as indicated earlier. One, at least, should offer half-day courses from 9 to 12 A. M., or from 1 to 4:30 P. M., for pupils who must earn something while attending school. Courses of this kind might well be extended through the tenth year.

7. If the intermediate school plan is not adopted, freehand drawing in the 7th and 8th grades should specialize, to meet the needs of girls, in costume designing, home decorating and furnishing, pottery, and leather and metal work; and mechanical drawing should be offered to boys. The drawing in the high schools needs redirection and additional facilities for work.

8. Vocational work for girls should receive a much greater expenditure of time, thought, and money than it now does.

9. A vocational-guidance director should be appointed for the Portland schools, whose duties should include—(a) A study of the industrial and commercial conditions of Portland and its environment, to discover the trend of commercial and industrial development; (b) Through communication with business men, to determine what the schools could do better to fit young people to become efficient in different lines of work; (c) To advise boys and girls in requirements, necessary preparation, and prospects in different vocations; (d) To supervise the organization of vocational courses; and (e) To help in the selection of vocational teachers.

10. The commercial courses in the high schools need reorganizing, and in particular need to be much more closely connected with the business life of the city. In a city such as Port-

land, where the business life is of such fundamental importance, the commercial work ought distinctly to excel.

11. In a city, too, with such important agricultural surroundings and interests, there should be a first-class agricultural high school, well provided for practical instruction.

12. The Portland School of Trades should be merged into a technical high school, retaining the trade courses.

Chapter XI

NEEDED REORGANIZATIONS AND EXPANSIONS OF THE SCHOOL SYSTEM.

(Francis.)

1. A FUNDAMENTAL REORGANIZATION.

To enable the city to do the best and the most for its children, the school system should be reorganized, and into the following units:

- (a) Kindergartens.
- (b) Elementary Schools.
- (c) Intermediate Schools.
- (d) High Schools.

(A) KINDERGARTENS

The kindergarten should give instruction to those below the age of six, and this work should merge naturally and gradually into that of the first grade. This can best be brought to pass through a supervisor, in charge of both kindergarten and first grade work. The kindergarten work should be made to approach that of the first grade, but more especially should the first grade work be modified to more nearly meet that of the kindergarten.

(B) ELEMENTARY SCHOOLS

The elementary school grades should cover six years of school work, and set for themselves the accomplishment of two purposes:

(1) To furnish a rational, normal environment, in which the preadolescent child may live and grow without fear, oppression, or repression, for six years of his life. Beauty, faith, joy, interest, and play should characterize it all. He should imagine, sing, dance, laugh, play, act, draw, construct with his hands, sow, cultivate and reap, imitate, love, breathe, and eat.

(2) Incidentally he should attain efficiency in reading the printed page, mastering the fundamentals—addition, subtraction, multiplication and division—in number combinations, learn to write a legible free hand, and to spell with a reasonable degree of accuracy. In acquiring these attainments, however, his little mind must not be befogged by dead academic stuff, nor his buoyant spirits depressed with fear, envy, hate, duty, or responsibility. "Ought" may be the greatest word in the English vocabulary, but it does not belong to childhood.

(c) THE INTERMEDIATE SCHOOL

This should be composed of seventh, eighth, and ninth grade pupils, and should set for itself the solution of the problems of early adolescence. There probably is no more important time in a child's life than this, and the elements at play require especial study by sincere, earnest, liberal, and humanistic people. The only rational time for a radical break in the school life of an individual is when he is leaving childhood and entering into manhood. The present radical changes between grammar school and high school, and between high school and college, are artificial, hence wasteful and destructive.

Character of the Intermediate School

In courses of study offered, the intermediate school should closely resemble the high school. In the manner of presenting the work in the seventh and the low eighth grades, the best grammar school methods should be closely followed. The transition from the elementary school into the intermediate school should be made gradual, and natural.

Location

The intermediate schools should be in different sections of the city, and in the center of a group of elementary schools, to accommodate the children finishing the sixth grade in these schools. To meet the needs in Portland I should think seven intermediate schools would be necessary. Possibly the geography of the school district is such as to require eight. In a district so extensive as Portland, presenting some problems that are rural, it will be necessary, for a while at least, to carry the seventh and eighth grades in a few of the outlying schools. It would not be practicable, therefore, to undertake to wholly eliminate the ninth year from the high schools. In a city growing so rapidly as Portland the ninth-year pupils new to the city will always be sufficient in number to justify continuing ninth-year work in one or two of the city high schools. From the nature of the work in the intermediate schools such pupils would sustain a loss in convenience and time if compelled to adjust themselves to the work.

Buildings

Ideally these should be constructed as intermediate schools. In such case they should be built according to high school plans, and practically as high schools. Provisions for science work would be limited to rooms and equipment for general elementary science or physiography, and shop work would not extend beyond the woodshops. In one or two of these schools, however, provision should be made for elementary trade courses, and rooms provided and equipped for printing, plumbing, electrical

wiring, automobile repairing, book binding, and other trades in which there is good local demand for men and women. A cookery room in some one of these schools, depending upon the type of children attending, should be especially fitted for teaching the chef trade.

History, languages, English, mathematics, commercial work, drawing, music, public speaking and entertainments, play grounds and gymnasiums, libraries, cafeterias, etc., in intermediate schools will require the same kind, although in some cases not so extensive, facilities as given to high schools.

When funds are not available for the erection of new intermediate buildings, it is often practicable to convert a grammar school into an intermediate school. Of the eight intermediate schools in Los Angeles, seven were established in what were formerly grammar school buildings. Certain changes and additions will be necessary, such as enlarging and more fully equipping sloyd rooms for shops (Portland's grammar school manual training buildings could easily be modified to meet such requirements); plumbing, wiring and equipping a room for general science; providing an auditorium, when not already provided in the building; and other changes that will be needed. It cost Los Angeles, on an average, approximately \$20,000 a building to convert her grammar schools into intermediate schools. The most expensive changes, however, would have been equally necessary to make these buildings ideal grammar school plants.

Cost

The cost per pupil in the intermediate school should reach a figure approximately half way between that of the grammar school and the high school. If grammar school education costs \$40 per pupil and high school \$80, the intermediate cost should be about \$60.

Intermediate School Purposes

In addition to the general educational purpose, the intermediate schools should set for themselves the following problems:

1. To enable boys and girls to discover their powers, aptitudes, and likes; or at least to discover some of them. Through the development of these, they may be led to discover other and better ones. The first and most important thing for a child, in early adolescence, is to become interested in something that will call out his best qualities and powers, and develop his staying habits. Whether he permanently follows these interests or not is of minor importance. His own reaction toward them at the time is of most concern. The nonchalant indiffer-

ence of the average seventh and eighth grade child toward his work is a menace to his own success, and to the stability of the society of which he is to become a part.

2. To prepare the pupil for high school work. It is a fact patent to every practical student of our educational systems that this is not being successfully done in the average grade school. In his attitude toward school problems; in his lack of sustained studious habits; in his practice of moving rapidly and impatiently from one study to another, and superficial way of handling all; in his inability to think consecutively, or independently, on any subject;—our grammar school boys and girls are laying foundations that must be repaired, or destroyed and rebuilt, before they can hope to become worthy students.

3. To bridge the unnecessary gap between the grammar and the high schools. The marked school death rate in the seventh and eighth grades, to which Portland forms no exception (see Fig. 8, page 150), can be accounted for by subject matter in the courses of study, methods of presentation, and general school conditions not congenial to early adolescence. In the first year of the high school, where it is serious, it must be accounted for by the wholly new and foreign conditions which the child meets on entering, and for which he has had no adequate preparation. The intermediate school, through the adoption of modified high-school methods, prepares him to meet high-school conditions.

4. To economize the child's time. This can be done only through elimination by substitution of both subjects and subject matter, and by the greater interest upon the part of pupils that will stimulate greater activity. Under a wise organization of the system, and proper organization and presentation of courses of study, boys and girls should reach the tenth year of schooling with at least a year saved in time. The practice, so common, of dawdling away the time and interests of children is little short of criminal.

5. To organize, guide, and wisely develop the social instincts of the child. There is no other time in his life when his social instincts are so important and in such great need of care and training. The grade school of mixed childhood and adolescence offers limited opportunity for this work, and the home either does not know enough or refuses to assume responsibility for it. It is safe to estimate that 75 per cent of the social difficulties met with in the high school originated when the pupil was in the grade schools. Our public schools can no longer refuse to recognize the power of social instinct in the education and development of the child.

6. To conserve the interests of the child not going to high school. This is probably the most important problem the intermediate school has for solution. It is the most difficult, and

affects a large number of boys and girls. If properly worked out, it will result in a large percentage of these boys and girls entering high school, at the close of their intermediate course. Lack of interest in work offered is more responsible for pupils leaving school than are economic conditions. What are our boys and girls prepared to do upon leaving the eighth grade? is a common query, although the answer is well known to the questioner, and to all others. The intermediate schools must prepare such young people to catch hold somewhere in the great complex social, industrial, and commercial world into which they pass upon leaving school. No other plan than the establishment of the intermediate school seems feasible in the accomplishment of this result.

Advantages

Among the advantages not evident in the purposes of the intermediate school the following might be stated:

1. Equalization of opportunities between the grammar and high schools. Present discriminations are strikingly illustrated by the difference in cost per pupil. That there will be some increase in cost as the pupil advances in his course is to be understood, but that it should cost two to two and one-half times as much to educate a high school pupil as it does to educate a grammar grade pupil is absurd, and should not be endorsed by educators nor tolerated by the public.

Development of the American high school in the middle West and West within recent years has been remarkable, and the enrollment has grown proportionately with the expenditure upon buildings, equipment, enlargement of courses, and salaries of teachers. The development of the elementary schools, while important, has not kept pace with that of high schools. In the upper grades the progress has been less than anywhere else. We have reached a place in our educational history when greater attention is demanded for these upper years.

2. The logical development of vocational work. The intermediate school is the most effective means yet proposed for working out the vocational problem in this country. Distinctly prevocational schools, established in limited numbers by some American cities, are scarcely touching the great prevocational problem, nor can they. Practically every American boy and girl must be exposed to both manual and mental activities, and experiment with both, before anyone, including himself, can determine his natural aptitude. Vocational guidance that does not offer opportunities in courses of study, found in the school system and available to all, is, at least, a partial failure. Partial might be omitted from the description of most of this work. Nor will it do to postpone this experimenting with a child, or have him experiment with himself to find his bent, until he reaches high school. The work should begin with adolescence

and be continued into the high school. The wise and natural distribution of population into avocations, for which they are suited and prepared, is one of the greatest problems of the schools and of the age.

3. It offers to pupils the advantages of departmental work, which cannot be worked out with the same degree of efficiency in a regular grammar school.

4. It gives some options to pupils as to subjects studied.

5. It simplifies the problem with repeaters, since the child is required to go over, the second time, only that work in which he has made a failure.

6. It results in keeping a large number of pupils in school for an additional year. Desire to remain and graduate with their class, or to carry a study to the point where it may be used in an earning capacity, will keep in school a majority of those who would otherwise drop out at completion of the eighth grade. In Portland, with the compulsory period extending up to the sixteenth birthday, such schools would offer splendid opportunities for usefulness.

7. It postpones the time one year when the child will be required to cross the city to reach high school. This saves carfare, time, and sometimes character.

For the sake of increasing the efficiency of its schools, I strongly hope that Portland will early establish the intermediate school as a part of its educational organization.

Teachers

As the work in intermediate schools is departmental, especially trained teachers should be employed. Their education should be as thorough and comprehensive as that of high-school teachers, and their salaries should be the same as paid to high-school teachers. The strongest teachers in the department should be assigned to intermediate work. It requires a better teacher to successfully teach seventh-grade pupils than to teach twelfth-grade. Only the big teacher is simple enough in her presentation to be understood by younger children. The teacher of intermediate grades will be better fitted for her work if she has had experience in grade schools. So would high-school teachers. Teachers must be brought to see the importance of intermediate work, and be put in sympathy with it. This is not always easy to accomplish, despite the fact that the truth of it must be self-evident. Teachers who would have their importance measured by the grade in which they work should begin with the first grade if they would be greatest. The best principals of the city should be placed over these schools, and their salaries should approximate those of high-school principals. The initial difficulties of reorganization are greatest, and call for the strongest men and women. No system should undertake to

establish intermediate schools with mediocre teachers. It is better to establish them one at a time, or to wait.

Opposition

If the plan of organizing intermediate schools is adopted, both the Superintendent and the Board of School Directors must be prepared to meet certain opposition, to which they must turn a deaf ear. Every new movement for the improvement of our educational system, as in other affairs of human life, must be prepared to meet with opposition from those who do not understand the nature of the proposal, or whose personal and selfish interests are touched. Opposition to the intermediate schools will come chiefly from three sources:

1. From principals of elementary schools who are not chosen for the new positions, and who object to losing "the pride of their schools." One would sometimes be led to think that schools existed to glorify principals, instead of to do the best possible for the children in them. Under the Portland salary schedule, there would probably be some opposition from principals who objected to having classes taken from their schools. This would soon settle itself in such a growing city, as other classes would soon take the places of those removed.

2. Opposition from teachers in upper grades, who are not qualified to remain in intermediate schools, and who would regard the dignity of their position as lowered if put into lower grades. The Portland salary schedule, with its greatest pay for upper-grade work, would cause such teachers to suffer a decrease in salary, unless adjustments were made, and this would naturally cause further objection.

3. Opposition from parents who have children below the seventh grade, attending a school which was rebuilt for intermediate school purposes. In such cases it is sometimes wise to organize a primary school of the first, second, and possibly third grades, either in the same building or in temporary buildings located on the school grounds, or in the immediate neighborhood. In most cases these can be gradually abandoned, unless distances are such as to work a hardship on the little folks compelled to attend another school. Opposition will disappear soon after the intermediate school is in operation. The enthusiasm of children attending the school, and the pride of the neighborhood in it, will be strong enough to overcome the first dissatisfaction of those who opposed it.

Courses of Study

Courses offered should, in the main, meet the requirements for carrying out the purposes stated. They should be wide enough in range to somewhere grip the interests of every child.

They should offer high-school work in languages, commercial subjects, drawing, music, mathematics, science, home economics, history, literature, and shop work.

Broadly speaking, the intermediate school is a high school moved to the seventh grade, with due regard for the limited experiences and training of the child of twelve or thirteen years of age.

To give a clearer idea as to the nature of the intermediate school, and to show better its advantages over the grade school as an educational institution, outlines for a general commercial and a vocational course are presented in the table following on this page. Reference should also be made to the outlines for literary and pre-vocational intermediate-school courses, submitted by Superintendent Spaulding, and reproduced in Chapter IX, pages 196-198.

TABLE 21
Courses of Study for Intermediate Schools

I. GENERAL COURSE
Seventh Year

<i>Required Subjects</i>		<i>Elective Subjects</i>	
English	5	Select one of the following:	
Arithmetic	5	French	5
Geography, B 7	5	German	5
History, A 7	5	Spanish	5
Physical Training	1	Latin	5
Music	2	Bookkeeping	5
Drawing	2	Stenography	5
Penmanship	2		
Manual Training:		(Note: Two languages to be	
Girls, Cooking	2	selected only by permission.)	
Sewing	2		
Boys, Woodwork	4		

Eighth Year

<i>Required Subjects</i>		<i>Elective Subjects</i>	
English	5	Select two of the following:	
History and Civics	5	French	5
Physical Training	2	German	5
Oral English, B 8	2	Spanish	5
Music, A 8	2	Latin	5
Physiology and Hygiene	2	Bookkeeping	5
Manual Training:		Stenography	5
Girls, Cooking	2	Mathematics:	
Sewing	2	Arithmetic, B 8	5
Boys, Woodwork	4	Algebra, A 8	5
		Drawing: Freehand or Me-	
		chanical	5

Ninth Year

<i>Required Subjects</i>		<i>Elective Subjects</i>	
English	5	Select three of the following:	
Physical Training	2	French, German, Spanish, or	
Music or Oral English	2	Latin	5
		Bookkeeping	5
		Stenography	5
		Algebra	5
		Commercial Arithmetic	5
		Ancient History	5
		General Science	5
		Manual Training:	
		Girls, Cooking	5
		or Sewing	5
		Boys, Woodwork	5
		Drawing: Freehand or	
		Mechanical	5

II. COMMERCIAL COURSE

Seventh Year

<i>Required Subjects</i>		<i>Elective Subjects</i>	
English	5	Pupils may select one of the	
Arithmetic	5	following:	
Bookkeeping	5	French	5
Stenography	5	German	5
Penmanship	2	Spanish	5
Geography, B 7	5	Music and Manual Training	6
History, A 7	5		
Physical Training	1		

Eighth Year

<i>Required Subjects</i>		<i>Elective Subjects</i>	
English	5	Select one of the following:	
History and Civics	5	French	5
Bookkeeping	5	German	5
Stenography	5	Spanish	5
Penmanship	2	Oral English, B 8; Music,	
Physiology and Hygiene	2	A 8, and Manual Training	6
Physical Training	2		

Ninth Year

<i>Required Subjects</i>		<i>Elective Subjects</i>	
English	5	Select two of the following:	
Commercial Arithmetic	5	French	5
Bookkeeping	5	German	5
Stenography	5	Spanish	5
Physical Training	2	Music or Oral English and Manual Training	6
		General Science	5
		Algebra	5
		Penmanship	5

III. VOCATIONAL COURSE

Seventh Year

<i>Required Subjects</i>	<i>Elective Subjects</i>
Same as General Course.	Same as General Course.

Eighth Year

<i>Required Subjects</i>		<i>Elective Subjects</i>	
English	5	Select one of the following:	
Manual Training:		U. S. History	5
Girls, Cooking	5	French	5
Sewing	5	German	5
Boys, Woodwork	10	Spanish	5
Drawing	5	Bookkeeping	5
Girls, Freehand		Algebra	5
Boys, Mechanical			
General Science (includes Hygiene)	5		
Physical Training	2		

Ninth Year

<i>Required Subjects</i>		<i>Elective Subjects</i>	
English	5	Select one of the following:	
Manual Training:		Ancient History	5
Girls, Cooking	10	French	5
or Sewing	10	German	5
Boys, Woodwork	10	Spanish	5
Drawing	5	Bookkeeping	5
Girls, Freehand		Algebra	5
Boys, Mechanical			
General Science (including Hygiene)	5		
Boys, Elem. Physics			
Girls, Elem. Chemistry			
Physical Training	2		

(D) HIGH SCHOOLS

In addition to reorganizing the high-school work and the School of Trades, along the lines suggested in Chapters IX and X, the school authorities should keep in mind plans for ultimately extending the high school to include a thirteenth and fourteenth year. The thirteenth is already provided, in name. For this work good courses, covering a wide range, and comparable to the first two years of college work, should be provided to meet the needs—

1. Of those who are intending to go to college: These may complete at home their junior college work, which is more nearly high school than college work, do it under better conditions of instruction, and save expense to parents and the public. This would result in a greatly increased college attendance, since two years away from home and home influences, at heavy expense, is not nearly half so long or so expensive as four years. It would also result in many remaining two years longer in the schools. The high schools, with their wide range of subjects, hold out strong inducements to graduates who would not attend school longer under less favorable circumstances.

2. Of those who do not intend to go to college: With the introduction of the intermediate and the extension of the high school, practically eight years of high-school work is offered at home. This makes it possible to establish courses of study, complete within themselves, and of a character that their completion will fit young people to give a good account of themselves in the industrial and technical vocations.

2. TYPES OF ADDITIONAL SCHOOLS NEEDED.

In addition to a fundamental reorganization of the school system, along the lines just outlined, to enable the schools better to meet the educational needs of the children of the city, the Board of School Directors should also add to the present school system a number of special-type schools, for the purpose of better meeting the needs of classes of children for whom the present grade schools are at best poorly adapted. In Chapter XIV, subdivision 10, Dr. Terman has treated, in some detail, the need of special classes for deaf, blind, crippled, stammerers, backward, and feeble-minded children, so that these will not be considered here. The remaining special-type schools which I would recommend are:

(A) THE UNGRADED ROOM

Portland's scheme of grading, classifying, and promoting pupils, if effectively worked out, should minimize the need of ungraded rooms. I was not as favorably impressed with the results of the scheme, however, as with the scheme itself. Even

though it could be effectually worked out, there would still remain an important percentage of boys and girls sufficiently irregular to require a teacher especially qualified to discover and develop them. Experience is an important requisite for such a teacher, but a keen perception of human nature, and broad sympathy with human qualities, are much more important.

Each large school should have a primary and a grammar-grade ungraded room. Smaller schools could be managed with one ungraded room. The enrollment should not exceed eighteen.

These rooms should not be used as a depository for troublesome pupils, nor considered as a means of handling backward or defective children. While these types will naturally be well represented in the ungraded rooms, the child who is irregular because farther advanced in some of his work should also find these rooms profitable places in which to work. Unless care is exercised, teachers will unload their difficult problems on the ungraded room, but will keep the promising pupil, although irregular in his classification. One of the neglected phases of our educational work is proper provision for the exceptionally bright child.

Ungraded rooms will appear to be expensive because of the limited number of pupils per teacher, and the extra salary she should receive. The practice of measuring the expense of a school system by the annual cost per pupil is palpably fallacious. Two most important items are omitted: (a) the percentage of pupils who are regularly passed through the school without loss of time in repeating grades or subjects, and (b) what they are getting in return for the years spent in school. The system that carries its elementary pupils at an annual cost of \$30, but with a large percentage repeating one, two, or three years of work, is expensive from a financial point of view, to say nothing of the loss of self-confidence, hope, ambition, time, and life of the pupils failing. The cost might be reduced to \$15 or \$20, and still be appallingly expensive because it wasted the time of children, and the public's money, and gave little or nothing in return. Some systems are using the Batavia plan, instead of the ungraded room. A special teacher is employed and assigned to a room to which the irregular pupils are sent. It is her duty to balance them and put them in line with regular grade work. This plan has some merits, especially in high-school work, where it should be freely used. It lacks, however, the personal-influence quality so important in work of this kind with elementary school children.

(B) TRUANT SCHOOLS

Portland should organize four or more truant schools, distributed throughout the city, and a central school to which the boys from these schools may be sent when prepared to leave the

district truant school. These schools must act as the eddies to catch the driftwood of the educational stream, where it may be treated long enough to again risk it in the main current. Parenthetically, it might be observed that human driftwood is worth saving, and much of it is the best afloat, depending somewhat, of course, upon the character of the main current. To the truant schools are sent those so out of harmony with the conditions that prevail in the regular schools, that they cannot be handled with economy by regular teachers and in regular class-rooms. Those who are chronically disobedient and disorderly present special problems, requiring special study and treatment.

There are two ways of attacking the problem: One is to subject the boy, in the truant school, to such unpleasant treatment that he will gladly return to the regular school and submit to conditions imposed upon him; the other is to recognize him as a highly specialized, poorly organized individual, whose powers of correlation are weakened; to impose upon him conditions so few in number and loose in character that he will find more difficulty in violating than in observing them, to treat him with such genuine and tolerant kindness and consideration that he must recognize a friend interested in his welfare, and discover the things in which he is already interested, upon which the building of his character may be started.

I advocate the latter plan. This initial treatment must be largely humanistic, but sympathy, kindness, and interest must lead the boy toward some legitimate and profitable work in which he takes an interest, and which he can do with credit. The transition from the undesirable and unprofitable must be gradual, in some cases slow, but it must be constant and sure. For this reason boys should not be kept too long in the local truant school, in which organization, equipment, and teaching must necessarily be simple and limited. As soon as they have discovered that the world is not their enemy, but is friendly, that gentility pays, and that there is something worthy which they can do when prepared, these boys should be sent to a central special school.

This school should differ from the local school in closer organization and enlarged opportunities for the boy to develop his interests and efficiency. It should have music, art, and manual work as its chief characteristic phases. Its music should consist largely of chorus, glee club, mandolin, band, and orchestral work. A large percentage of boys who find their way into schools of this type are musical by nature, and music offers the best means of softening and refining their natures. The right kind of music teacher could lead these boys to sing or play themselves into heaven, which, I take it, is a state of being rather than a geographical location. Art work should consist largely of illustrating, cartooning, work in metal, leather, and clay. Manual work should include cabinet work, forging, wait-

ing, chef cooking, printing, elementary electricity, cobbling, pipe-fitting, automobile repairing, chauffeuring, and gardening. What English work is done should be largely public reading, orating, debating, and dramatics, with a wide range of suitable books for home and leisure reading. The school should be liberally provided with playground, gymnasium, and swimming-pool facilities.

From this central special school, boys should be graduated, when prepared, into trade schools, high schools, and technical high schools, according to the interests and powers they have developed. Such a scheme of handling irregular boys should result in saving practically all, and its returns to Portland would make it one of the most attractive investments the city could undertake. To secure qualified teachers for these schools is a difficult thing. Unless those with comprehension and a vision can be secured, however, the schools will fail.

How to deal with girls of this type is a much more difficult problem. The same general principles are involved, however, and the problem should be worked out along the same lines. Fortunately there are not so many bad (?) girls as boys, or if there are, society has a more effective, although a more unnatural, way of compelling them to conceal their badness.

(C) VACATION SCHOOLS

What to do with the leisure time of the city-bred American boy and girl is one of the serious modern questions. The average city parent cannot or does not find profitable employment for his children during school vacations. As a consequence they choose their own, which is usually unprofitable, and often harmful. The solution of the difficulty probably lies in city schools operating throughout the year. For awhile, at least, attendance at summer school will remain optional. Portland has already recognized the importance of summer schools, and the experiment with them, I understand, has been successful. Portland shares, with all other cities, the need of developing and enlarging these schools.

There are two distinct types of vacation schools developing in this country. The first undertakes to offer opportunity to those who wish to make credits in one or more subjects, either that they may enter school in the fall, regularly, with their class, or may forge ahead in one or more subjects, and finish their school work in advance of their class. Either motive is stimulating, and the results highly gratifying. The second type of vacation school concerns itself more with occupying the time of the child in some useful constructive work, and gives but scant attention to regular school work and methods. Portland has not yet organized this second type of school. I believe the city should do so.

If regular school work and methods are exclusively followed in the vacation schools, they can but partially succeed in meeting the problem, which is largely one of keeping children interested and occupied in some activities that will contribute toward their development, and add to their efficiency as citizens. The negative side is that it prevents their engaging in activities that will neutralize their qualities and powers of good citizenship. This second type of school is more educational than the first, and acts as a most effective means of educating teachers and principals. How to keep pupils in school, attendance upon which is voluntary, can be successfully answered only by those who are thinking more deeply than is required merely to help in carrying out a prescribed course of study, or working in a system already established.

The question concerning a school of this type will naturally be, "How does it profit a child educationally, and aid him in his progress through school, to spend his time in a summer school, singing, dancing, playing, swimming, drawing, cooking, sewing, gardening, and working in wood, metal, or clay?" Those who measure the educational progress of a child by the rapidity with which he passes through the grades, would find little to commend in this kind of a school. Those who look upon education as a developmental process will welcome the opportunity offered to diversify the system of education by a more liberal introduction of life elements.

(D) NIGHT SCHOOLS; SCHOOL ENTERTAINMENTS

Nowhere in this country has sufficient thought been given to and adequate provision made for night-school work. Portland should enlarge this phase of its educational work by opening more centers throughout the city, and changing and diversifying the work given.

The class of pupils that will take advantage of night-school work is strongly influenced by the geographical element. Foreigners are reluctant to leave the neighborhood in which they live and are acquainted, and laboring people either seek rest or recreation, unless the school is near and it requires little effort to reach it. The neighborhood moving-picture show and mission church illustrate this.

The courses offered should be diversified more, and somewhat of a change made in the presentation of the work. Portland is attempting to provide only for those who wish to, or those who must finish the work offered in the regular grades of the day schools. This is covering but a fractional part of the work that should be done. Classes for foreigners in English, elementary mathematics, spelling, American history and civics, elementary law, etc., should be added to the subjects offered. Special classes for foreigners preparing for the examination to become American citizens should be provided. Arrangeme

can sometimes be made with officers and courts to accept this work in lieu of an examination. The elementary night schools should offer commercial work in bookkeeping, stenography and typewriting, penmanship, arithmetic, and business correspondence.

Where possible, the city library should be asked to establish at the evening school a branch library, which should be kept open on certain nights of the week, and be furnished with books that will be read by people of the neighborhood. To be reasonably efficient, libraries, like schools, must study the neighborhood they serve. This we understand the Portland library has done in a remarkably efficient manner.

Entertainments

The entertainment feature should be developed in the Portland night schools. Some cities are making this a separate feature of school work, oftentimes holding entertainments in buildings in which there is no night-school work offered. This plan I believe to be illogical and wasteful, since entertainments should be diverting, restful and relaxing, but first of all educational. The social feature, that of bringing people of the neighborhood together, is probably the most important part of neighborhood entertainments given in the schools. All of these features can be best understood and provided for by a principal and corps of night-school teachers who have made a study of the neighborhood, and understand the elements that compose it. In addition to these, one of the strongest reasons for combining the entertainment feature with the other night-school activities is that people who come to be entertained will become interested in some subject or subjects offered, and will join classes for regular night-school work. A live principal, who is allowed to choose his teachers and use the entertainment feature in building his night school, is in position to make a lasting contribution to the cause of education, and wield a powerful influence on the neighborhood in which he is permitted to work.

These entertainments should include: Moving-picture shows, stereopticon travel talks, lectures on live topics, formation of choral clubs, glee clubs, mandolin clubs, orchestras, boys' and girls' literary and debating clubs, neighborhood improvement societies, reading clubs, games, boxing, folk-dancing, and social dancing. It should be fully recognized that the introduction of social dancing in the school building will meet with vigorous, sometimes influential, opposition from those who are more concerned with maintaining a creed or a sentiment than they are with working out a neighborhood and social problem. This opposition can often be neutralized by the appointment of a civic committee to co-operate in the work of the school, the members of which shall effectively represent the opposing ele-

ments. These people mean well, and the important thing is to get them to study and understand the problem.

Night High-School Extension

The night high school of Portland should enlarge and modify its courses to offer material and substantial help to those engaged in:

(1) Electrical work, such as wiring, telephony, and even electrical engineering.

(2) Mechanical work, such as drafting, machine-shop work, designing, installing, engineering.

(3) Architecture, such as drafting, tracing, designing, stress, strength of materials, writing specifications, etc.

(4) Business practice, such as clerking, accounting, salesmanship, advertising, clerical work, etc.

(5) Home-keeping, such as cooking, dressmaking, dry-cleaning, laundering, tailoring, millinery, home accounting, and food chemistry, etc.

(6) The trades—carpentry, bricklaying, plumbing, dealing with materials, cost, source of supply, principles involved, qualities necessary to succeed, field of promotion, wages, etc.

(7) Contracting, involving accounting, labor, source and cost of supplies, transportation, margins, etc.

The work offered should, in nature, be more theoretical and scientific than practical, and should supplement the work of the student who is engaged during the day in the practical phase of the work. To fully develop the work along the lines suggested will require an expenditure of time and money, but it will pay great dividends to the city, if properly worked out. All of these suggested lines of work are legitimate parts of a system of public education.

(E) EXTENSION OF THE SCHOOL TIME

The school day is too short, the number of school days per year too few. School plants cost money; economy in their use requires longer days and more of them. Custom is the only reason for opening school at 9 A. M., closing at 3 P. M., and shutting the school house Friday afternoon to open again Monday morning. On the basis of an eight-hour day, five and a half days in the week, almost fifty per cent of loss in time is sustained in our school system, not taking into account vacations and holidays. If these should become a part of the problem, the loss would approximate sixty-five per cent.

Most grammar-school buildings, and practically all high-school buildings, should keep their doors and some of their departments open from 8 until 5 every week day, and should close only on Sundays and legal holidays. Attendance should, for a while at least, be optional and work offered to upper-grade

pupils only. This work should consist largely of manual training, music, art, local excursions, physical exercises, and play. Recent development of the school playground is most gratifying, but it should be accompanied with an equal development of manual work for adolescent boys and girls, giving them an option between work and play.

This extended day should be introduced gradually. At first the sloyd rooms, shops, and cooking and sewing rooms should be opened in a few of the buildings, and the teachers given extra pay for doing the work. To be sure, many of the teachers are remaining overtime without pay, with the pupils who care to stay for extra work; but to put it on a substantial and regular footing, the work should have financial consideration. This need not be burdensome, as a sufficient number of teachers who would not otherwise remain regularly will do so for a small additional pay, and those who would remain without it deserve it most.

(F) SPECIAL ART SCHOOLS

It would prove a profitable educational investment if Portland were to establish two special art centers, one for elementary and the other for intermediate and high-school pupils who show especial aptitude for drawing. Such pupils should be given one or two full half-days per week for this work, which should be recognized in lieu of other work in promoting them. The most capable and inspirational teachers available should be in charge of this work.

(G) NEIGHBORHOOD, OR DISTRICT SCHOOLS

The neighborhood school is practically a new thing in education, although the principles underlying it have been recognized in many school systems. The term here is employed to designate a school organized especially to study and meet the needs of its pupils and their parents, taking into account their heredity, experiences, and environment. Portland could use at least two such schools, with advantage,—one to the north and one to the south of the present business center, on the West Side.

A brief description of one such school, which has been in operation for five years, will serve to illustrate what is meant. The pupils attending this school are practically all foreigners, or of foreign parentage. Italians predominate, although there are many Mexicans, and some of almost every nationality.

The distinguishing features of the school are:

(a) A day nursery, built, equipped, and conducted by the Board of Education. The building has five small rest or sleeping rooms, furnished with little beds, where the babies are put away when they grow tired and sleepy; toilets for little folks; a bath-room in which each child is given a bath at least once a week,—the only one some of them ever get; a small dining-

room, with little tables and chairs; and a small kitchen, where warm luncheons are prepared for them two or three times each day. The food for these lunches is contributed by merchants, through the solicitation of a woman's club; all other expense, including the hiring of a nurse, being met by the Board of Education. In the main room of the nursery children play with tops, blocks, etc., and a small yard outside is fenced off from the main school grounds. This is partially covered with a roof to protect the children from the sun, and is supplied with abundant sand in which the little fellows play.

The demand for day nurseries arose from economic conditions at home, which compelled mothers to be away part or all of the day, helping to earn a living for the family. The older girls, coming under the compulsory attendance school law, were also compelled to remain at home to care for the small children. Now they bring them to the day nursery in the morning, and take them away in the afternoon. Although this practical phase of the problem, arising from economic conditions, resulted in establishing day nurseries, the social and educational results of the work are far more significant. The force of this can be appreciated only after visiting the places where these children live or stay when not in school. Even the kindergarten age is too late to save many of them from the conditions under which they must exist as babies and little children.

(b) A penny lunch, established by the same organization that is instrumental in supplying food provisions for the day nursery. The Board of Education furnishes the building, equipment, and pays the cook, and the woman's organization supplies the food. A penny secures for the child a good, large bowl of good, rich soup, with a half loaf of French bread. A second serving is allowed, and usually requested. The penny charge is made to avoid the charity feature. Children paying the penny feel that they are not paupers. When they do not have the penny, however, they are served at the request of the principal. The average number taking advantage of the penny lunch will approximate 350. The school enrolls about 600. For many of the children this is the best, if not the only, substantial meal they will get during the day. The experiment, which has been in operation for five years, proves the economy of feeding, at public expense, school children who are underfed at home. The school efficiency of such children is sufficiently increased to save the cost of the whole experiment in the decreased number of years it requires to get them through the school, disregarding wholly the benefits to be derived from their school work, and the effects upon their future lives. (See also Chapter XIV, subdivision 5.)

(c) A home-economics building, designed to meet the needs of the community. A large sewing room, well supplied with machines, which are used by the pupils of the school and the

women of the neighborhood. Girls who have left school, and mothers and wives of the community, may be seen any day in the school year making garments for themselves and the home, and receiving what help the teacher can give them. Those made by the school girls, in cost of materials and kind of garment, are adapted to the home from which the girl comes. Three teachers of the school make yearly visits to all of the homes, and learn the needs of the people. Work in cooking follows the same plan. Preparation of Italian and Spanish dishes is taught, food is studied, and economy in materials practiced. In both cooking and sewing, girls are allowed to begin the work earlier and give more time to it than in regular schools. The first consideration in the work is to make it serve the neighborhood.

(d) A room has been equipped with different kinds and sizes of looms, and rugs in abundance are made and taken into the homes. Sometimes these rugs constitute the only respectable bit of home furnishing, and their effect upon present and future citizenship cannot be measured. Mothers are allowed the use of the looms freely, and many take advantage of the opportunity.

(e) A laundry room is equipped for effective work, and is used by school girls and neighborhood women to do home laundering.

(f) Two sloyd or woodshop rooms are in use continuously. The making of home furniture constitutes most of the work. In connection with these there is a shoe-mending equipment in which hundreds of pairs of shoes are repaired during the year.

(g) The older girls are taught how to care for children, and use the day nursery as a laboratory.

(h) Home work begins with the primary grades, and in primary manual arts the idea of home is developed through the use of store boxes and cardboard made into houses, with windows for light, curtains for ornament, tables, chairs, beds, and tubs for use. In this school the little folks know more, although they experience less of, about right sanitation and proper living, than do those of wealthy communities. If the large cities of this country are ever to permanently rid themselves of slums and slum districts, it must be done through proper teaching in the public schools.

(i) School and home garden work is highly developed.

(j) A considerable percentage of Mexican people are careless of their time. The older boys of the neighborhood, who have left school, are encouraged to spend their leisure time on the school grounds, where they may play at any time during the day. Some of these become interested in manual work, art, or music, and are led back into school work.

Two questions naturally arise concerning a school of this kind: (1) What becomes of the regular school work,—the "Three R's"? and (2) how is the cost affected? The answer to

the first is that a marked improvement is noticeable in the academic work of this school since its reorganization. The second point, which unfortunately is oftentimes the determining one, will for the present discourage this departure in school organization. The cost per pupil will increase from 20 per cent to 33 1-3 per cent. This can be more than justified, though, by the increased efficiency, which should easily reach 50 per cent. In the school described it has been 100 per cent.

(H) A SCHOOL FOR JANITORS

There is one other type of special school which I should like to recommend to the consideration of the Board of School Directors, and that is a school for janitors. From appearances, the janitor service in Portland is excellent, the buildings being scrupulously clean. Since janitors, however, so nearly approach teachers in importance in school work, every large city school system should provide a school for janitors. Term of service, attendance at the school for janitors, and personal efficiency in the work should be recognized in a graded scale of wages paid. To pay all the same rate, regardless of intelligence displayed or service rendered, is a mistake. (See also Chapter XIII, where a similar recommendation is made.)

3. SUMMARY OF RECOMMENDATIONS.

1. That the school system be reorganized, to secure greater educational efficiency, into the following units:

1. Kindergarten, one year.
2. Elementary schools, six years.
3. Intermediate schools, three years.
4. High schools, five years (three or four years now; five ultimately).

This can be made a truly American system, fitted to meet the social, professional, industrial, and commercial needs of American boys and girls.

2. That ungraded rooms should be established in connection with each elementary school of any size, to afford the necessary provision for the exceptional children in the school.

3. Four or five special or truant schools for boys, irregular in their studies, habits, and deportment, should be established, graduating their boys into a central special manual school, from which they should be admitted to one of the high schools.

4. The vacation school system should be gradually enlarged and extended, and changed somewhat in type. The playgrounds should be closely connected with such school work.

5. The night-school work should be enlarged, enriched, and materially extended in scope, and its purpose in part changed.

6. The school day should be extended, and Saturday forenoon included for vocational work in grammar schools, carrying the seventh and eighth grades, and in the intermediate schools and in the high schools.

7. Two special art schools, one for intermediate and one for high-school pupils, should be established.

8. There should be established at least two, and gradually a number more, of neighborhood schools, to meet the peculiar needs of certain centers within the city.

9. A school for the instruction of janitors should be added, standards for the work established, and a wage scale based on efficiency instituted.

PART III

Buildings and Health

Chapter XII

THE BUILDING AND SITES PROBLEM

Portland's Building Problem

Two main problems confront the Board of School Directors of the Portland school district in the matter of school buildings, viz.: (1) How can they secure the construction of the best, safest, and most economical school buildings; and (2) how can they make those already constructed meet most helpfully the educational and hygienic demands of school life? In this chapter the first of these questions is considered, and in the following chapter Dr. Dresslar has answered the second.

The Portland school district is today feeling the effects of a period of very rapid expansion. Such a period is always a trying one for a school district, or for a municipality. New needs appear and provision is made to meet them, but, before the necessary buildings can be erected, still greater increases in the population have made still more class-rooms necessary. Each new school building seems only to create a demand for more.

Rapid Increase in School Population

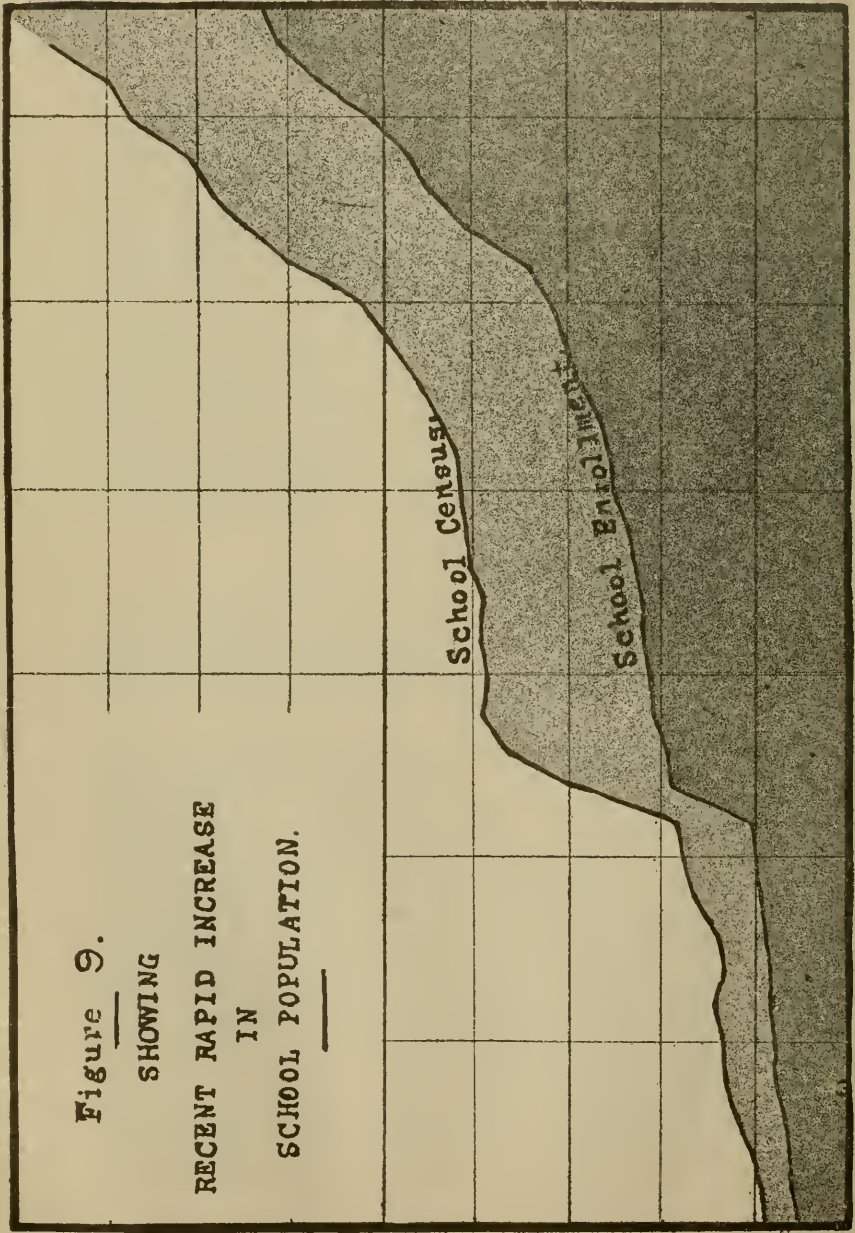
The rate at which the school population of Portland has increased is well shown in the diagram on the following page, in which the increases in school population (census, four to twenty years of age) and in the enrollment in the schools for the past twenty-three years are compared.

It will be noted that the increase in school population was slow and gradual, until 1891. Then there came suddenly a rapid increase, for a few years only, after which the curve drops back to its former slower rate of increase. In 1901 a new increase in school census began, and this has continued. Since 1905 the increase has been rapid for both the school census and the school enrollment. This is shown by the rapid mounting upward of the curve. So great has been the recent increase in population that, in the seven years from 1905 to 1912, both the school census and the school enrollment have increased about 15,000 children, and, from 1905 to 1913, the schools increased more in enrollment than they had in all the years from the time the first school was opened in 1847 up to 1905.

The present rate of increase in the enrollment of children in the schools, based on the recent figures, is six children a day for every day in the year; a new class-room every six and two-thirds days; and a new school building, as large as the new Josiah

Figure 9.
 SHOWING
 RECENT RAPID INCREASE
 IN
 SCHOOL POPULATION.

45,000
 40,000
 35,000
 30,000
 25,000
 20,000
 15,000
 10,000
 5,000
 0



13
 10
 05
 00
 95
 90
 85
 80

Failing school, every four months. At least three such buildings, or their equivalent in scattered units, ought to be constructed each year, to meet merely the present needs. These needs will naturally increase with the growth of the city, and soon four and five such new buildings will be required each year.

Such a rapid growth as this means a great strain upon the school department finances, and the Board of School Directors has shown much foresight and has served the city well in keeping the school facilities abreast with this remarkable increase in the school population. So well has the board done this work that there are today no half-time classes in Portland, all children who need school accommodations are provided for, and the private and parochial school enrollment of the city is relatively small. This is, indeed, a commendable record of accomplishment. The Board of School Directors is also to be commended for the foresight they have shown in purchasing sites; in planning buildings large enough for future needs; in erecting them in units, as needed; and in evolving recently a building department and a standard type of building construction.

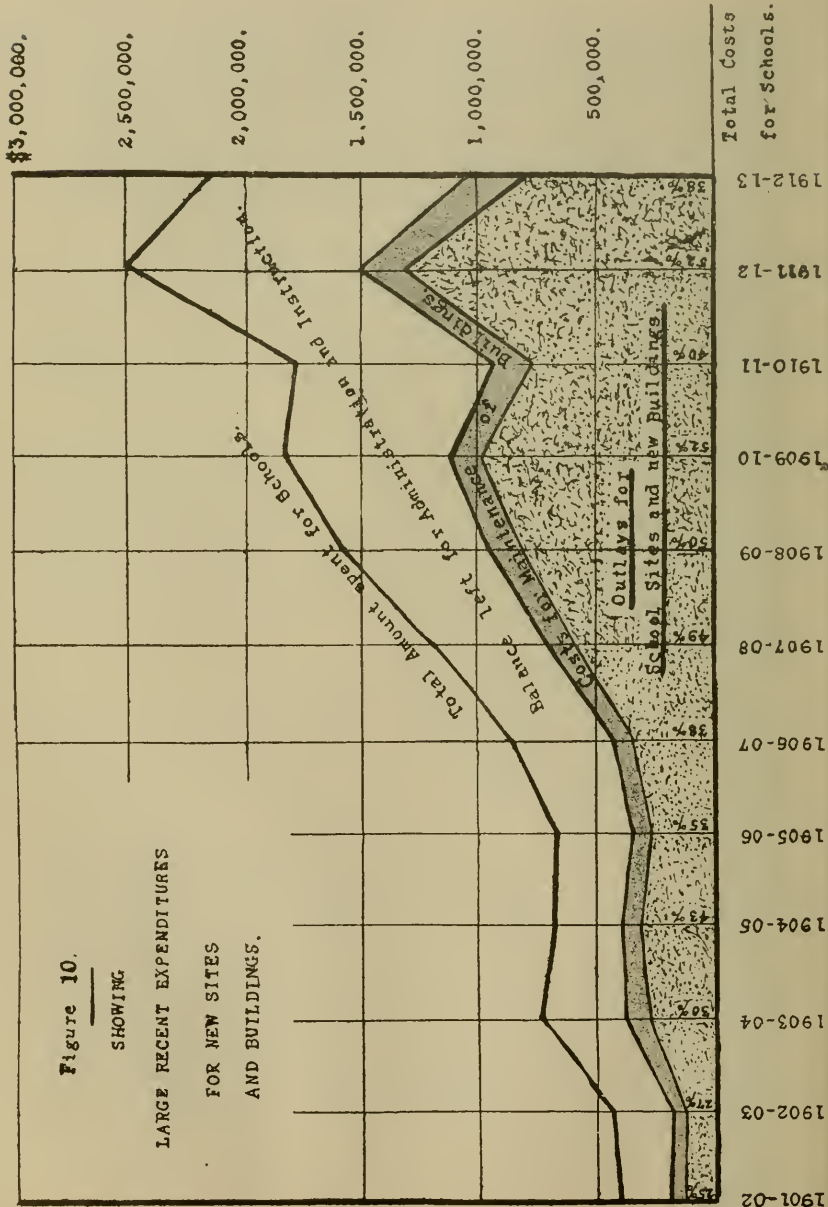
The costs for school buildings vary so much from city to city, with varying labor conditions and material costs, that one not familiar with the city cannot say whether the building costs are high or low, so the Survey did not consider this question. The architectural and supervision work, done under the recently created Superintendent of Properties, seemed, however, to be well and economically handled, and calculated to produce good buildings at low costs.

Recent Increase in Building Outlays

Such a rapid expansion of the school system has meant large outlays for sites and for new buildings, as is shown in Fig. 10, given on the following page.

From a somewhat normal expenditure of one-fourth of the school money for sites and new buildings in 1901-02, the Board has been compelled to increase such expenditures up to over one-half of the yearly expenses. The annual costs for maintaining the school plant created (insurance, janitors, fuel, light and power, water, telephone, and repairs) have naturally also steadily increased, as is shown. The result has been that, by 1912, only forty per cent of the money expended for schools was spent for the real work of the schools,—instruction and the administration of instruction. The year 1913 shows a decrease in expenditures for sites and buildings, but it is probable that this drop is temporary only, and that following years will again witness large expenditures.

There is no reason to think that the growth of Portland and the increase in school population will, in the next half-century at least, suffer anything more than temporary checks. On the contrary, with the opening of the Panama Canal, the coming of



immigrant families with larger numbers of children, the gradual decrease in the percentage of unmarried men in the city, and the general settlement of the Northwest, there is every reason to expect that the present increase in both school population and school enrollment will not only continue, but will also increase in rate. There is also reason to believe that both the city and the school district will be materially increased in size, by the annexation of outlying territory, which in turn will require additional expenditures for school facilities. If Portland were not a rapidly growing city, with a large future ahead of it, the school-building problem would be much easier than it now is. It is relatively easy to provide for the needs of a stationary community.

The building problem is still further complicated by a recent city ordinance requiring fire-proof construction for all school buildings. This has added fifty-five per cent to the cost of construction. With the increased cost of labor and materials, it is probable that each class-room provided today costs sixty per cent more to construct than it did six or seven years ago. An important problem facing the Board of School Directors today is how to continue to keep up with the increasing educational needs of the school district, and not make the taxes too high, or cut the percentage of money devoted to instruction and administration too low, or both.

Shifting of Population

Besides the rapid increase in school population, Portland is also confronted by a marked shifting of population. This adds somewhat to the difficulty of the problem. On the West Side, North Portland is rapidly changing, in its lower and level portions, from a residential to an industrial, commercial, and shipping center. It is probable that the center of the manufacturing district of the city will in time be located here, near the river, and below the bridges. One school (Atkinson) was abandoned in 1911, as a result of a change which had taken place within five or six years. The Chapman and the Couch schools also show the effect of these changes. That portion of North Portland now consisting of good residences and apartment houses is likely to become, within a relatively short time, a dwelling place for laboring people of the poorer class, while the hills are likely to be settled by a residence class of means. Just what will be the future school needs here is somewhat uncertain.

In the central portion of the West Side, the present commercial center, business will rapidly expand to the south and westward. Residences are now being crowded out by hotels, retail stores, office buildings, and large apartment houses. This will continue westward to the hills, and southward as needs increase. School needs here will materially decrease. The Lowns-

dale school is now practically unused; the Ladd and Shattuck will decrease in size; and the Lincoln high school will probably, before long, be surrounded by business houses.

South of this region is an area, lying between the low ground along the river and the hills behind, and known as South Portland, which bids fair to remain, for a long time to come, the residing place of the recently arrived immigrant. Here slums will develop, and here educational needs will be large.

The hills behind, with their magnificent outlook, will in time be covered with residences of a good type, and be the residing place of professional and business men of means. Still further to the southward, out to the angle formed by the Clackamas and the Washington County lines, is an area which will probably be annexed before long, and which will probably develop into a middle-class suburban residence region. Educational needs here will rapidly increase after annexation.

The East Side of the city is destined to be its great residence district, and this will be expanded by further annexations. To this side there is now a constant migration of people from the other side of the river. Many of these are people of small means, who are buying homes on the installment plan in this newer part of the city. There is also a marked movement of people away from the river districts of the central East Side, the people moving further to the north, east, or south. It seems probable now that a large section of the lower lands along the Willamette River, to the north of the bridges on the East Side, will develop into manufacturing and shipping areas, and that another large section along the central East Side will develop into a secondary business district, for warehouses, certain types of large business, and small stores. The Shaver, Eliot, Holliday, Buckman, Hawthorne, and Stephens districts are almost certain to decrease rapidly in school children, and some of these schools will probably have to be abandoned before they are worn out. As the people move from the old school districts, new class-rooms must be provided elsewhere to receive the children. In time, also, and probably sooner than Portland people now expect, it will be found that the Washington high school is not at all well located.

Still further to the eastward a large residence population will in time be found. Mt. Tabor Park probably will be very near the center of the future residence district of the East Side. Another residence region on the East Side will be to the north, with the Ockley Green school probably not far from its center, and still others to the south and the southeast, with the Eastmoreland and the Lents schools not far from their centers. Into each of these districts there is today a constant migration of people from the West Side, and from the central East Side, near the river.

Probable Future Needs

While this shifting of the population complicates the building problem somewhat, it also makes certain things seem clear. The great residence region is almost certain to be on the East Side, and the great majority of employed persons will make their homes there. In the four East Side residence districts, just described, there will be the greatest need for schools. Another residence section, probably of large future needs, lies on the West Side, and to the south and west. In each of these five districts large school sites should be secured, the best of school buildings erected, and good playgrounds, athletic fields, parks and recreation centers provided. On the West Side, too, there will be an increasing need for schools on or near the hills, and a decreasing need for them in the level portions from the Shattuck school north to the region of the Davis school. The Davis, Failing, and Holman schools seem well located for the apparent needs of the near future. The Davis and the Holman schools should be provided with much larger sites, as all three of these schools doubtless have an important future work to do.

Size of School Lots

The school lots for nearly all the school buildings in the city are too small. This may be seen from the following table:

TABLE 22

Size of School Sites in Portland

School sites of less than 1 acre	18
School sites from 1 to 1½ acres	10
School sites from 1½ to 2 acres	15
School sites from 2 to 3 acres	13
School sites from 3 to 4 acres	3
School sites from 4 to 5 acres	1
School sites of over 5 acres	2
<hr/>	
School sites of less than 1 acre	30%
School sites of less than 2 acres	70%

This is partly due to the fact that the regulation block of Portland is much smaller than that in most cities, and, instead of insisting on two or four blocks, and condemning the enclosed streets, the Board of School Directors has in the past been compelled, either from lack of money or lack of the support of public opinion, or both, to depend often on a single block, sometimes less, for school lots. There are some commendable variations from this, notably those of the Creston, the new Hoffman site, the Jefferson high school, the Hawthorne, and a few others.

Recently the board has shown commendable wisdom in buying larger school sites. Forty thousand square feet of land (the

typical 200 by 200 Portland block) is altogether too meager for any ordinary city school lot. Even if a lot of this size has the proper exposure, and is safely situated with reference to noisy and dusty car lines, or smoking and buzzing mills, very little available playground is left when even a moderate-sized building is properly placed on it. When a building of eighteen classrooms and an assembly room is placed on a lot of this size, it becomes necessary to set the building so close to the street that it will cover practically one-half of the ground. What ground is left is usually so divided and cut up by the building that its usefulness for playground purposes is reduced to a minimum.

According to the rules of the London School Board, 100 feet of play space is required for each pupil. Many of the schools of Portland cannot approximate to this standard. If we deduct one-half for building, the number of square feet of free space left, per pupil, for certain buildings, is approximately:

Eliot School	27 square feet
Shattuck School	28 square feet
Albina Homestead School	30 square feet
Couch School	30 square feet
Hawthorne School	36 square feet
Washington High School	36 square feet
Sunnyside School	40 square feet
Chapman School	40 square feet
Buckman School	41 square feet
Stephens School	41 square feet
Woodstock School	51 square feet

Even this space has, not infrequently, been further decreased by "landscape gardening," so that the streets are about all that is left for playgrounds. All of the above schools, if they are to be continued in use, are in need of larger playgrounds.

Larger Playgrounds Should Be Provided

One of the most serious menaces to the morals and general welfare of city boys is the lack of ample playgrounds. It has been shown again and again that lack of playgrounds and juvenile delinquency, in the great cities of the East, are closely related. Portland is now in a critical stage of its development. There are still large and well-situated tracts of unimproved land within the city limits, and, while in some instances exorbitant values are assigned, for the most part large school lots are available at fairly reasonable prices. The Board of School Directors should acquire larger school grounds, and should undertake to give to the children ample opportunity for satisfying one of their most fundamental instincts. No boy who is denied opportunity for

vigorous play with his fellows can reach his highest possible development, either physically, morally, socially, or democratically. The large, new playground at the Creston school will do more to keep the boys and girls in school, and inspire them while there, than all the sermonizing the whole teaching force might employ to impress upon them the significance of a thorough education. More room for the children is one of the best possible investments which a city can make. Unless this land is acquired soon, increasing values and fewer opportunities will greatly reduce the probability that this rapidly growing commercial city will ever take proper care of its children. The school buildings and playgrounds are the logical places for recreation centers, and the educational department of a city can administer and supervise this part of a city's duties better and to more purpose than any other department, for in its essence the work of a recreational center is primarily an educational undertaking.

The importance of planning for the future at this stage can hardly be overestimated. If the Board of School Directors had some comprehensive fixed plan furnished them, with reference to parks, boulevards, car lines, and other public necessities, it would help them greatly in the task of selecting suitable sites for school buildings, in preventing encroachments from disturbing noises and more serious dangers, and in preventing the wasting of funds on permanent buildings to supply what will prove to be only temporary needs. Portland needs rational and practical plans for immediate and future guidance.

The High Schools

The high schools of the district will in time be called upon to render a much larger service than they at present render, and this ought to be kept in view in securing land and in planning for the future. The Jefferson high school is probably well located, and is supplied with about the proper amount of land. The Washington high school will, before long, be found to be poorly located; the site is too small, and the building is also poorly adapted to modern high-school needs. Eventually this can be sold, and a new site, out near Mt. Tabor, secured for a new high school. A third high school on the East Side will be needed before long, in the southern portion of that part of the city. A site for an agricultural school, somewhere out on the East Side, should also be secured before land becomes too valuable.

In providing for such schools for the future, plenty of land should be secured. A site of eight to ten acres is not too large for the needs of the ordinary cosmopolitan high school of the near future, while for an agricultural high school a site of at least fifty acres should be secured.

On the West Side, the new Lincoln high school site is too small, and the one and a half blocks ought to be increased to four at once, before the land becomes too valuable. The present building is none too large for present needs, and will soon be much too small. Surrounded as this school soon will be by business, care ought to be exercised now to secure sufficient land, and to develop such an institution as might be located best in the business part of a city.

Here should be developed a group of high-school buildings ministering particularly to city needs. On one block should be erected a large building, somewhat similar to the present one, for a technical or polytechnic school, and the present trade school should be consolidated with it. On another block should be erected another similar building to house the present commercial work, and in which a large and well-equipped commercial high school of the best type can be developed. On the fourth block could be erected excellent gymnasium facilities for the students of all these schools, or the block could be held in reserve for future high-school needs. On the annexation of new territory, additional high schools probably will need to be developed in such.

With these conditions before the Board of School Directors, their problem is how to keep up with the increasing material needs of the school district, and provide it with the best, safest, and most economical school plant, but not cramp in doing so the development of the instruction for which the buildings have been erected.

The Best Buildings

The type of school building best suited to school work is still in process of constant change. The best buildings of a decade ago are being replaced by much better buildings today, and we have no assurance that the same will not be true of a decade to come. In fact, everything seems to indicate that we are now in a period of rapid change and development. The old Portland high school building (Lownsdale) was doubtless regarded as an excellent school building when constructed, in 1883, but thirty years later we regard it as practically unfit for school use. The Couch, Shattuck, and the old Failing schools are other examples of buildings, good in their day, but now obsolete and scarcely fit for instruction. Some of the more recent buildings, also, while still reasonably sound and secure, represent today a very poor type of school-house construction. The new Failing school and the Lincoln high school buildings represent the best buildings Portland has so far produced, and, after allowing for certain defects and omissions, these must be regarded as excellent buildings, and ought to prove useful for a half century at least. There is no assurance, however, that ten years from

now school-house construction may not be so improved upon that these will then be regarded as of a somewhat inferior type.

No one knows, for example, but that open-air schools may not, in the near future, supplant all other types of elementary school buildings. Unit buildings, all one story high, with connecting arcades and a detached heating plant, have also been introduced in some cities. In still other cities, one-story structures are now being built. Until very recently, too, intermediate schools (as described in Chapters IX and XI) were not thought of; today the large educational value of such schools has been so clearly demonstrated that it is only a question of a few years until all progressive cities will include such as a part of their school systems, and will erect buildings specially designed for such instruction. Until very recently one large high-school building, such as the Jefferson high school, was built to include in it all the instruction given; today our best high schools are securing large acreage and building a series of unit buildings, each adapted to certain purposes, and all grouped according to some good architectural plan. The first cost for such buildings is not very much larger; the cost for upkeep is lower; the fire risk is less; and the educational and administrative aspects are much improved.

So far as our present knowledge goes, however, the new Failing school, with certain modifications along the lines suggested by Superintendent Francis (Chapters X and XI) and Dr. Dresslar (Chapter XIII), to adapt it better for special instruction, is the best type of elementary-school building for Portland's use which the city has so far evolved. The Lincoln high school is also the best high-school building so far constructed. Much credit is due the Board of School Directors for having evolved and erected such satisfactory and substantial types of buildings. Until something better is evolved, it would be well to follow such types in future construction.

Other Types of Rooms In School Buildings

In building new buildings after these types, though, care ought to be taken not to follow too closely the type of interior represented in the Failing school, good as it is. More rooms for special purposes, such as science room, music room, and domestic science room, ought to be provided. An assembly hall that is larger, and more capable of being used for school assemblies and for neighborhood meetings, ought to be built, and it would be well if this were on the ground floor, and so arranged that it would be possible to use it in the evenings or at other times without entering other parts of the building. A room for a branch public library might also be included in such a school, with advantage. Baths, in the basement, ought also to be added.

The Safest Buildings

Such buildings are also somewhat safer than a wooden, or a wood and brick construction, though not enough so to be of any special importance. The fire drills in use in the Portland schools are the best I have ever seen. In less than one minute from the first signal, buildings containing 600 to 700 children are completely empty, and the children are lined up in ranks with their teachers across the street. Monitors, too, have searched the building and reported to the principal that all rooms, cloakrooms, and halls are clear. The monitors and principals can then leave the building, within the minute. The concentration of the heating plant in one central location; the concrete walls and floors in the basements; the watchfulness of janitors; fire plugs and hose within the buildings; the large doors swinging outward, and provided with safety openers; the excellent fire drills; the easy grades of stairs; and the limitation of buildings to two stories;—all these factors make the chance of a child being burned in a wooden building in Portland about as small as in a fire-proof building.

Since the Collingwood, Ohio, disaster, in which a number of children were burned to death in a poorly constructed wooden building, many ill-advised laws have been enacted in various states, relative to the construction of school houses and other public buildings. While distinctly favoring fire-proof construction for all large and permanent school buildings, there is nevertheless such a thing as overdoing the matter. In a city such as Portland, where the centers of population are shifting so rapidly, there ought to be some opportunity, at this stage of the city's development, to build small semi-fire-proof buildings, especially when these are well removed from danger from without. Otherwise, the Board of School Directors may be compelled to risk making wasteful expenditure of public funds. When a basement is carefully fire-proofed; chimneys are safely built; all electrical wiring done under rigid inspection; stairways made of fire-proof construction, and ample in number; and sufficient exits are planned, with safety locks on all doors, the danger from fire within the building is so very small that the city ordinance now in force seems too rigid.

The Most Economical Type of Building

The first cost for wooden construction in Portland seems to be about one-third less than for fire-proof construction. The first cost, however, is not the whole cost. The cost for insurance, upkeep, and repairs is less for a fire-proof building than for a wooden one. The useful life of a wooden building is from twenty-five to thirty years; a fire-proof building ought to last a century, and ought not, with present types of con-

struction, to become obsolete for school purposes for at least twice the length of life of the wooden buildings,—provided always that the school population does not move away and leave it. This is a constant danger which every growing city faces; if it does, the one compensation lies in the increased value of the land.

The new reinforced buildings of the Failing type are reported as having cost about \$7,000 a classroom, and the wooden buildings recently erected as having cost about \$4,500 a classroom. This is an increase of 55 per cent in cost, for a building which ought to last at least twice as long, and cost less for insurance and repairs in the meantime. Figured only on twice the length of life, though, and also disregarding insurance and upkeep, the fire-proof building is seen to cost, at most, but three-fourths that of a wooden building, and is thus a more economical type of building in the long run, if one is sure that the centers of school population will remain somewhat fixed for fifty years to come.

This difference in costs may be illustrated from present Portland school buildings. For example, the Jefferson high school building cost but 60 per cent of that of the new Lincoln high school, a building of somewhat similar capacity, but the Lincoln high school will outwear the Jefferson high school two or three times; has practically no fire risk; and will cost but little for repairs; while repairs at the Jefferson high school will be both large and costly. Based on first costs, the Jefferson high school is a 40 per cent cheaper building; based on repairs and maintenance costs and a life of only twice as long, the Lincoln high school will probably prove to be 50 per cent cheaper building than the Jefferson. Similar differences might be shown as between the new reinforced concrete Failing building and one of the more recent wooden-construction schools, such as the Lents, or the Glencoe. The only difficulty about fire-proof construction is that mentioned above, namely, of being certain where the school children will live fifty years hence. Even this is not as important as it at first seems, as there might be an actual gain in selling the site then.

The difference in initial costs between wooden and fire-proof construction may be shown further by the following comparison of costs for sixty new class-rooms, a year's needs at present, and built according to the new and the old plans:

1. Fire-proof construction, 60 at \$7,000 each..	\$420,000
2. Wooden construction, 60 at \$4,500 each.....	270,000
	\$150,000
Increased initial cost for former.....	\$150,000

Paying for Buildings by Tax or by Bonding

The large initial cost for fire-proof buildings, and the plan of paying for them all in one year by a tax, is what makes school building in Portland seem so costly. At the present time Portland needs about sixty new class-rooms a year for its elementary schools alone. Soon the number may be seventy, eighty, and perhaps even more. On the basis of the present assessment of property in the school district, the increased initial cost for sixty class-rooms in fire-proof construction will raise the yearly tax rate for schools in the district only about $\frac{1}{2}$ mill (5 cents on the \$100 of assessed property); and a tax of $1\frac{1}{2}$ mills (15 cents on the \$100) will pay for the sixty fire-proof class-rooms complete, with no bonds and no future interest charges. The rate will probably never exceed this, as increases in values will counterbalance the increased number of class-rooms required. In other words, to build and pay for, at once, without bonds, a large, reinforced-concrete, 22-class-room building, such as the new Failing school, would cost a citizen only about 55 cents for every \$1,000 of property for which he was assessed,—a trifle more than the cost of four good cigars.

The greatly increased costs for schools in Portland, within recent years, have not come so much because of increased costs for instruction, or for fireproof school buildings, as because of: (1) the necessity of buying so many new school sites, and of enlarging old ones; (2) the need of erecting so many new class-rooms to meet the needs of a rapidly growing city; and (3) to the very wise policy of the people of Portland in paying for most of the buildings at once, by a tax, instead of shouldering the debt onto the future by the issuance of bonds. In the case of Portland, where from two-thirds to three-fourths of the present school buildings will need to be replaced by new structures within the next quarter of a century, the wise results of such a building policy, if it can be afforded by a city, will be evident.

If we could see anything to indicate that the people of our American cities will in the near future reach the end of the development of their school systems, or that a city such as Portland would, in thirty years, be largely through with building school houses, it might be wise to spread the payments over a period of years. Those who have studied the problem most, however, can see no such end to the educational process. As was pointed out in Chapter VII, the whole conception of modern education is changing very rapidly, and there is every indication that education, in the broadest sense of the term, will in time become the greatest business of a city or a state. In a quarter or a half a century public education is almost certain to be extended into fields of constructive human welfare of which

TABLE 23
Additional Costs for Buildings Under Bonding

Bonds issued for	Time.	Rate.	Principal.	Interest paid.	Cost when paid.	
					Total cost.	Per cent of original cost.
Albina District, No. 31	25 yrs.	6 %	\$ 10,000	\$ 15,000	\$ 25,000	250%
Mt. Tabor District, No. 5	20 yrs.	4 %	7,000	5,600	12,600	180%
Lents District, No. 12	10 yrs.	6 %	6,000	3,600	9,600	160%
Refunding, District No. 1	*20 yrs.	5 %	90,000	90,000	180,000	200%
Jefferson High School	10-20 yrs.	4½%	250,000	174,375	424,375	170%
Lincoln High School	10-20 yrs.	4½%	350,000	244,125	594,125	170%
A 20-room building, of fire-proof construction	10-20 yrs.	5 %	140,000	108,500	248,500	178%
Same	15-25 yrs.	5 %	140,000	143,500	283,500	203%
Same	20-30 yrs.	5 %	140,000	178,500	318,500	228%

* Two 10-year periods.

we do not now dream. Everything that tends to conserve child life and advance child welfare, and hence the welfare of the race, as well as most of that relating to the improvement of adults and home life, will in time be regarded as a legitimate function of public education. Those cities will be best able to meet the large educational needs of the future in a really large way which do not handicap themselves too heavily by bonded debt now. Of the 37 cities studied in Chapter VI, but 14, or 38 per cent, had any bonded debt for schools in 1910.

The advantage of paying for school buildings as built, and escaping interest charges if this can be done, may be seen from the table printed on the preceding page. This is calculated for the present bonded debt of the school district, as stated in the Annual School Reports, and also for a 20-class-room, fire-proof-construction, Failing-school-type of new building, with bonds maturing at different periods.

While such permanent-type buildings as the Failing school or the Lincoln high school, by reason of their longer usefulness and lower maintenance costs, might very properly be paid for by bonding, still, in view of the large per capita bonded debt of the city proper (see Chapter VI, Table 13), it is certainly wise for the school department to pay by annual tax for as much building as can reasonably be done. This policy, so long as it does not unduly cramp the proper development of the schools for which the buildings are built, is a wise one to follow.

It perhaps would be wise to segregate the funds for building-and-site outlays from the funds for annual maintenance, as is suggested in Appendix A. This would give the Board of School Directors authority to levy certain definite and separate taxes each year, estimated as sufficient to meet the needs of ordinary growth, for the purchase of sites and for the erection of school buildings, and other separate rates for maintenance, instruction, and administration. Buildings and sites which could not be provided for under such a plan ought to be provided for by bonding, and at the same time the proper development of the educational work within the buildings would be guaranteed.

Chapter XIII

THE SCHOOL PLANT

(Dresslar.)

Construction Units

Before one undertakes to measure anything with any degree of accuracy, he must decide on some unit of measurement. Fortunately there are a number of relatively fixed standards which should be universally applied in the construction of what is known in our country as public school houses. These standards have to do with the dimensions of class-rooms, the lighting, ventilation, heating, blackboards, and color of the walls. They also include, though somewhat less exactly worked out, the construction of assembly rooms, stairways, floors, halls, cloak-rooms, toilets, baths, and water supply, the cleaning of school-buildings, and many other details. Local conditions, however, must always be considered in the application of general rules to any specific situation. These will be mentioned in the various parts of this section, and their bearing on the problems in hand discussed in their proper connection.

It will be impossible in this brief report to set forth in detail all the reasons for the recommendations made; but it is hoped that the general reasonableness of the demands will appeal to those who read for help, not merely for criticism.

The School-house Site

The site selected for a school-building should be a safe distance from noisy factories, lumber mills, or any similar disturbances. For example, the Terwilliger School should never have been located where it is, or if the mills in the immediate neighborhood were located where they are after the school was built, the city authorities were at fault in allowing them to do so. The usual excuse given for locating a building too near such noisy, dusty places, is that the lot selected was the only available site. This is rarely a satisfactory excuse, for the State has devised means to get what is needed. Another more specific excuse often given is that the school-building must be built in the neighborhood where the children live. This also is rarely a convincing reason. It would be far better for the majority of the children to walk a half mile to a quiet place for a school, than to have a school-building at their very door where they will be compelled to work all day assailed by noise, dirt and dust. A good walk to and from the school-building is healthful, and often more serviceable than the gymnastic exercises prescribed and carried out in the school-rooms. The

plain duty of every school board is to shun noisy, smoky mills of every sort when selecting a site for school-buildings.

Avoid Noisy Streets

It is a serious mistake to build a school-house on or near a car line, whether this be a steam-car line or an electric car line. We found in Portland many school-buildings located on streets used for street-car lines. Some of the buildings are so near the car lines that not only is the noise greatly disturbing to quiet and effective work in the school, but in dry weather clouds of dust are swept up and some of it must necessarily be drawn into the class-rooms. On account of its humid climate, Portland is probably less distressed by dust than most of the great cities of the country; but even here, where the soil is light and silt-like, dust will in time be a very troublesome factor. Dr. Robert Hessler, who has spent many years investigating the relation of city dust to disease, has recently come to the conclusion that a large amount of ill-health, which cannot be diagnosed as catarrh, tuberculosis, or influenza, is due to dust. He has dared to name it *coniosis*, that is, ill-health resulting from being "full of dust." Aside from the distress of noise and the dust troubles, school-children are uselessly endangered at intermissions, and on coming to school and going home, when they are compelled to congregate near car lines. Children cannot be as careful as adults, and all adults who read these lines will easily remember their own narrow escapes. Everything is to be gained, and nothing to lose by separating school-buildings and school-grounds at least one block from street car lines. I found by actual measurement that one large school-building, the Peninsula School, was so close to a car line, that several classrooms were not over 50 feet from the track.

Naturally it is more serious to build school-buildings near steam-car tracks, both on account of noise and smoke and on account of danger.

Care should be taken also to select streets upon which no heavy traffic is carried by wagons. At present this recommendation may not make much appeal to the citizens of Portland, because of the tremendous use made of the river in transportation. But the time will come very soon when much heavy hauling will encumber the streets, and accordingly increase the noise and danger. Many large school-buildings in eastern cities are so situated that the traffic is so annoying that good school work is impossible. In some cases the schools have been so disturbed that it seemed necessary either to close the streets, or to abandon parts of their school-buildings. The school authorities of Portland have the opportunity now to forestall most of such difficulties, and they will be derelict in their duty if they do not use every precaution to meet these future contingencies.

Orientation of School Buildings

School-buildings in the latitude of Portland should be so planned and so located on the lots that as many of the classrooms as possible may command the east or west light. Many of the old buildings and some of the newer ones have been constructed with apparently no conception of the significance of this requirement. In order that this recommendation may not appear to be the result of mere personal opinion, I wish to enter into some detail to explain this very important demand:

In the first place, every school-room should have the opportunity of the purification afforded by direct sunshine, at least some part of each clear day. Warmth and moisture without sunshine furnish the best possible conditions for the growth of bacteria, pathogenic and non-pathogenic, and it is running in the very teeth of the laws of health to construct school-rooms which will command only a northern light exposure. Furthermore, the north light, while it is generally well diffused and soft, is not so strong as either the east or west light. Especially is this true during the short dark days of a Portland winter. It is better during the long and bright days of summer, but this is, in the main, the vacation season, and hence the possible gain thereby is minimized. During the week ending May 17th, there were many cloudy, rainy days, and despite the fact that the sun rose early and set late, I did not see a class-room, depending solely on north light, which was properly lighted. This was especially true of those buildings in which the windows were improperly set. (See the recommendations on lighting.) Very often the rooms were so dark as to cause the children to strain their eyes in doing the ordinary work of the school. For the two reasons, therefore,—lack of sunshine, and the dangers due to insufficient light—classrooms with north light should be avoided.

At this point the reader may have concluded that because of abundant sunshine and strong light, class-rooms with windows opening toward the south would be the best. Were it not for other difficulties introduced, this conclusion would be justifiable. Let the reader place himself at a stationery desk, where he can have little opportunity to adjust himself to the light, and where a stream of sunshine falls across the desk, or somewhere in the line of his vision. He will then understand one of the difficulties of a south exposure. But it may be argued that shades can be set to cut out the direct sunshine while school is in session. In reply I would say this is difficult, without so reducing the amount of light for so much of the day that those pupils who sit at the desks farther removed from the windows will be hindered in their work. I have yet to see, anywhere in this country, a classroom for the elementary

grades satisfactorily lighted by depending on south light. Moreover, I took occasion to interview many teachers in the Portland schools, working in classrooms with south windows, and not only found that they were often greatly disturbed by direct sunlight falling on the desks of the pupils near the windows, but also that they were not able to adjust the shades, and keep them adjusted, to cut out the direct sunshine and at the same time not darken the room too much for those seated farther from the windows. This was especially true in classrooms which had been built too wide for the height of the windows.

East and West Lighting

Classrooms with east exposure are generally better for the upper grades, because such rooms get a sunning before school hours, and usually offer only an hour's difficulty with direct sunshine, between 9 and 10 o'clock in the morning. During the remainder of the day the shades can all be rolled up and the strong light from the eastern sky admitted without any hindrance.

Those classrooms facing the west are generally better adapted for the use of the primary grades, especially on the first floor, because these grades are dismissed before the afternoon sun would cause any serious disturbance. They can also be used for the upper grades with but little more trouble with direct sunshine than those opening toward the east.

All classrooms facing east or west have another advantage. They permit the early and late sunshine to cover almost the whole floor by reason of the low lying sun, and thus get a more general purification than even a south exposure could command in the latitude of any part of our country.

To briefly recapitulate, I recommend that lots should be chosen, and buildings planned and located in such a way as to get the greatest possible number of the classrooms with east or west light. This recommendation is of the utmost importance to the health and comfort, and, therefore, to the educational progress of both teachers and pupils. A very large number of the best buildings in Portland are incorrectly lighted, simply because this fundamental requirement was not followed. If it becomes necessary (it should not often become necessary) to open some rooms to the north or to the south, these should be assigned for art rooms, manual training rooms, libraries, laboratories, and offices, but avoided for classrooms, especially for the elementary and primary grades.

Unilateral Lighting

Every class-room should get light from but one side, and this either from the east or west. It was a pleasure to find

that most of the better buildings of Portland complied with this requirement in the lighting in their class-rooms, but, as noted above, many of them depend on light from the wrong direction. The demand for unilateral lighting is simply a demand to prevent the necessity of right-handed children,—and we are a right-handed race—from being compelled to write in the shadows of their own hands. Left-handed children should be taught from the first to write with their right hands. This is not a difficult task if taken from the start, and it will save many annoyances all through life.

Windows

The glass surface for lighting a class-room should, in properly constructed rooms, approximate one-fifth of the floor surface. If any special local conditions are likely to render the problem of lighting difficult, this ratio should be increased to one-fourth. That is to say, if the product of the length and breadth of a class-room be divided by 4, (or 5,) the quotient will give the amount of glazing the room will demand for sufficient light. This will be true, however, only on condition that the windows are properly placed, and this is one of the most difficult problems school men have to contend with. Architects are inclined to insist on appearances, regardless of

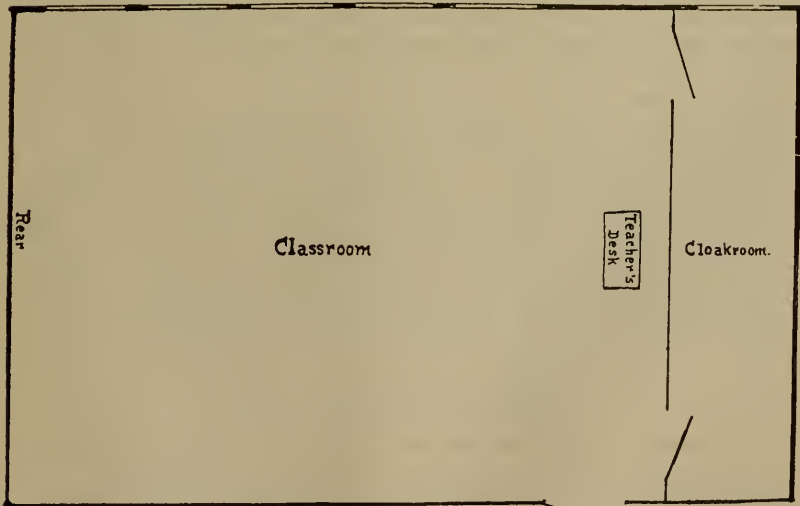


Fig. 11. Proper Window-Placing in a Classroom

the rights of children. In order to make this point clear and forceful, Fig. 11, showing the proper position of windows in a class-room, is introduced.

The center of population of a classroom, if such a phrase may be used in this connection, is somewhat to the rear of the center of the room, because there must be an extended open space in front, near the teacher's desk, to give needed room. Hence, the center of the window area should also be to the rear of the center, for the sake of the proper distribution of light over the desks. Furthermore, the main source of light should be to the rear, instead of to the front of the children. The only light that is useful to the children, while engaged with books or writing paper, is that reflected from the surface of the pages upon which they are at work. Hence, as much "dead wall" is needed in front as we can get, and at the same time set the requisite amount of glazing.

The almost universal tendency of architects is to set the windows in the middle of the wall space, leaving as much "dead wall" space in the rear of the room as in the front. The demand for symmetry and balance prevails with them against the demand for hygienic lighting. Most, if not all, of the newer and better school-buildings of Portland were constructed to meet this aesthetic demand of balance, instead of the rights and needs of the children. I have no hesitation in insisting that it is the duty of all architects who undertake the construction of our school-buildings to find some way to meet this legitimate requirement, even if it must be done at the expense of balance. All of the buildings of the type of the Lents school have wide windows set to occupy the central part of the wall. When the shades are all rolled up the light from the front window shines, to some degree, directly in the eyes of many of the children, and therefore is likely to do more harm than good. If the front windows were moved to the rear the change would be most agreeable to the children. Fortunately, in this type of building, which is the prevailing type in Portland, the windows are set four feet from the floor, and as a result the difficulty mentioned above is partly neutralized. I experimented with the children in a large number of these rooms, and found an almost universal preference in favor of the lighting when the lower half of the front window was entirely shaded with an opaque shade.

Ribbed and Frosted Glass

I found a somewhat general tendency to use ribbed glass in the upper sash, or to employ frosting to prevent the direct rays of the sun from disturbing the pupils while at work at their desks. This is, in my judgment, a serious mistake. Ribbed glass is useful in scattering the light in rooms or halls not supplied with sufficient window area; but it always produces a rather harsh glaring effect, and is very troublesome to children whose eyes, for one reason or another, are weak and oversensitive. I do not hesitate to say that all of the rooms facing east,

west, and south, in which ribbed glass is used, would be more acceptable with clear glass. Some of the wide north rooms are probably better with it. The custom of "frosting" the windows is wholly unjustifiable, for it keeps out much of the best light all the time, whereas the purpose was merely to shut out the glare of the direct sunshine. Proper use of the right kind of window shades is always to be preferred to "frosted" glass, even where the windows are on the south side.

Transoms

It is worse than a waste of money to place transoms over the inside doors in school-buildings. This custom is an architectural remnant, but it clings, very much as the appendix in the human body. In the construction of nearly all the school-buildings, both old and new, much money has been spent on transoms which are absolutely useless, both from the practical and architectural point of view. After making careful inquiry as to their possible use, from teachers and janitors, and after finding that most of them fastened so that they could not be opened if desired, my opinion was confirmed that it is always better to leave them out. They add to the expense of the building, and serve only as places to catch dust and dirt. In no case did I find them clean, and in some cases they introduced trying reflections.

I recommend, therefore, that in all school-buildings to be constructed in the future, transoms be omitted.

Size of Class-rooms

Many, indeed most of the classrooms of the Portland schools, are unnecessarily large. In the first place, a very large number of them are too wide. I found by measurement that at least 26 feet is the prevailing width in the wooden buildings. These classrooms would accommodate the same number of pupils if they were reduced 3 feet in width, and the children would be better off. Some, also, are 38 to 40 feet long, when 30 feet would be much better. Due to the fact that this extra width has cost much money, in the construction of a large building, and costs more to heat, ventilate, keep in repair, and keep clean, I wish to give a few reasons for recommending that in all future plans the class-rooms should be narrowed to 23 or 24 feet.

(1) When class-rooms are lighted from one side only, as they should be, the light will not carry well across a room more than twice the height of the windows. In fact, in the latitude of Portland, where they are many dark days in winter, it is more than probable that a width of 24 feet will mean the seating of some children too far from the light to do their work economically and safely.

(2) The large classrooms, almost universal in the buildings now in use, require more fuel to keep them warm, more power to ventilate them, more work to keep them clean, and in every way increase the daily running expenses.

(3) It is more difficult for children to hear, and for the teacher to be heard; more difficult for the teacher to speak, to keep the children's undivided interest, and to manage the school; and especially more difficult to get the requisite illumination on the blackboard.

(4) Finally, when the size of the room is approximately that recommended, there is less likelihood that the classes will be over-crowded, to the detriment of the work and the health of all concerned.

No extended discussion need be introduced here with reference to proper length of the room. It is enough to say that if it is longer than 30 feet, the children in the rear of the room will have difficulty in understanding the teacher, and especially in reading charts, maps, or what is written on the blackboard, in the front of the room.

Height of Class-rooms

The height of the classroom deserves some special comment. A large number of the better buildings were planned with classrooms 14 feet high. Some of the older ones, the Portsmouth will serve as an example, have classrooms with ceilings more than 15 feet above the floors. The new and splendid Lincoln High School is still worse. The height of the classrooms on the first floor of this building is 16 feet 8 inches in the clear. That of the classrooms on the second floor 15 feet, while that of the third floor is 13 feet. Consider a moment what this means. All of the walls, pipes, ducts, and chimneys, of this building are 5 feet taller than any possible need, and this extra amount has cost many thousands of dollars, to no purpose whatever. Granted that the first or main floor of a great high school building should be dignified, a ceiling 14 feet high would have been ample. The second story could have been reduced to 13 feet to advantage, while the third (there should *never* be a third story in high school buildings) could have been reduced 6 inches. But, while the expense of construction was thus uselessly increased, this is really the least serious part of the situation. Every time a girl climbs from the first floor to the third she climbs at least 5 feet higher than she would have been compelled to climb if the building had been planned with the actual demands of school life in mind. This is a very serious hardship to throw upon the thousands of girls who will attend this school during the hundreds of years it ought to stand. Furthermore, more time is

wasted in passing, much more fuel is used daily in heating it, there is more expense in upkeep, and in many other ways difficulties and expenses have been introduced by making these classrooms too high.

I wish to say, as emphatically as I can, that there is no need for making the height of any classroom in grammar schools more than 12½ feet, and if the Board of Education will follow this rule in all future buildings, they will get better buildings at greatly reduced expense.

Floors of School-Buildings

Due to the fact that the underwriters have induced the authorities to permit no oil to be used on the floors, many of the buildings are showing the effects of this prohibition. It is my opinion that the janitors should be allowed to use a light oil, when directed in its application. The main opposition to the various kinds of floor oils which have been used has arisen from the fact that too much is used, and also that the floors were not properly prepared to receive it. If floors are thoroughly cleaned of all dirt and dust, and the oil spread on thinly and evenly so that it will all be equally absorbed into the boards, it will not soil the skirts of the women. It, however, should be put on when the schoolrooms will not be in use for a few days, so as to give opportunity to be taken up by the floor boards. When so handled, the dust accumulating on the floor draws just enough oil out of the floor to render the under particles heavier, but will not saturate it. Under these conditions, and with the additional use of the sweeping compound in use, the floors can be swept with a brush without stirring up clouds of dust. Besides, the oil preserves the floors, keeps them from splintering, prevents them from shrinking, and makes them more sanitary.

Doubtless the sole reason for the objection urged by the underwriters is the probable added danger from fires when oil is used. Theoretically there may be some truth in their contention, but the increased danger due to proper oiling is so slight that it should not outweigh all other considerations. Besides, I know of no proof to the effect that losses by fire have been more common in school buildings so treated than in those where oil has not been used. I hope, therefore, some understanding may be reached between the Board of Education and the underwriters which will permit the careful and proper use of some good floor dressing. Otherwise, it is only a question of a short time when all the wooden floors of the school-buildings of Portland will be in a bad condition. One thing certain, the added danger to the children in the schools, with the excellent fire drills now so well organized in all buildings, would be infinitesimal.

School Desks

The children of Portland are generally well developed, and large. This fact, coupled with another fact that great numbers are overage for their grades, renders the problem of properly adjusting the seats to the children somewhat difficult. I found many large boys, and not a few girls, that were sitting at desks entirely too low for them. These children, some of them the most promising in school, are being compelled to sit day after day in cramped and fatiguing postures. Others were in seats entirely too large for them, and could not touch the floor with their feet. This ought to be remedied at once. Many other desks, while large enough, or even too large for the children who occupied them, were set in a faulty manner. The seat board should extend under the edge of the desk about two inches, in order that the child may have the support of the back rest, and yet not be too far away from his work. Janitors and others who place desks, should be taught exactly how to set them.

I recommend that many more adjustable desks be supplied, and all desks be set under the guidance of some one who knows exactly where and how to place them. This is a proper place for an extension of the supervision and authority of the Superintendent of Properties.

Blackboards

The prevailing blackboards furnished the schools are exceedingly unsatisfactory with reference to high light, and the consequent difficulty the children have of easily seeing what is written on these boards. They reflect so much of the light that they are very troublesome and trying on the eyes, both of the teacher and pupils. In addition, most of the blackboards are too green, and are not restful to the eye. The best blackboard material available in this country is a good quality of natural slate. Glass blackboards are used extensively in England, and when properly prepared and set are better than slate, but are more expensive and not as easily available as slate.

I recommend, therefore, that in all future buildings, a good quality of natural slate be used, and set under careful supervision. The prepared blackboards now in use in the great majority of schools should be supplanted by slate, and set as follows: In the classrooms designed for the first and second grades, the boards should be set not over 27 inches from the floor; in those rooms used for third and fourth grades, 28 inches, for the fifth and sixth grades, 30 inches, and for seventh and eighth, 32 inches above the floor. In high schools, 36 inches above the floor is better. The blackboard on the end of the room near the teacher's desk is better set, for all rooms, three

feet above the floor. The width of the board may vary from three to four feet, setting the narrower slabs in the rooms for the lower grades, and the wider ones in the rooms for the upper grades and high schools. The boards for the teachers of all grades are better when four feet wide.

Much relief from chalk dust may be secured by setting and hinging in the chalk trough, narrow strips of $\frac{3}{8}$ inch wire mesh, so that the chalk dust may fall through, and the erasers and chalk thus be kept from coming in contact with the dust. This will keep the erasers and chalk cleaner, and prevent the children from soiling their clothing and scattering this harsh, unwholesome dust throughout the schoolroom.

Stair Banister

A great majority of all the buildings have open grill-work banister, either of iron or wooden construction. There are two good reasons why it is much better to use the solid form of construction. In the first place, banisters of the open form are exceedingly difficult to keep free from dust. The janitors are compelled to use brushes or cloths to clean them thoroughly. This they have not time, or at least do not take time, to do. Hence they are almost invariably dusty. In the second place, especially in high schools and the upper grammar grades, girls in passing up or down are often needlessly exposed to the gaze of those on the floor below, and, hence, a moral situation is involved. A solid banister removes this difficulty. For these two reasons, I wish to recommend the use of solid banisters, similar to those now being constructed in the Jonesmore School.

Assembly Rooms

In most of the better buildings of the city there is an assembly room on the second floor, but it is apparently much more used as a gymnasium than as an assembly room. This is unfortunate. The assembly room ought to be used every day as a meeting place for all the grades above the third, if not for the whole school. Here is where school spirit is kindled, where principal and teachers may meet with all the children, and foster that spirit of unity and helpfulness fundamental in a democratic government. A few minutes devoted to chorus work, and some form of devotional or ethical service, will set standards for the day and send the children to their respective rooms in a mood for more serious and purposeful study. There is no fault to find with the gymnasium work I saw, for it was excellent in every way. But a special room should be built to be used for this work, when the weather is too inclement to go on the playgrounds, and the assembly rooms used for assembly purposes.

I earnestly recommend that in all future buildings the assembly room be on the first floor, and used daily for school exercises in singing, speaking, or illustrated lectures, and also made available for general neighborhood gatherings of an educational or a social nature. An assembly room on the first floor is much more usable, safer, and more accessible than one on the second floor. Practically all of the newer and better school-buildings of this country have this room on the first floor, furnished with fixed seats, large stage, good light, and ample ventilation. This change has come about as the result of the changing conception of the uses to which a school-building may be put.¹ It stands for education in its broadest sense; not merely for the education of the children, but of adults as well. It is the only building in which all of the people, children and adults, have a personal interest, and in which all may meet on a footing of equal freedom. An assembly room, so situated and always ready, can become the center of a tremendous influence, both inside and outside the ordinary school work. The logical neighborhood center should be the school-building.

Floating Ceilings

Some difficulties are being introduced in the concrete fire-proof buildings which ought to be corrected by the architects. I refer to the fact that the acoustic properties are very bad. So far as I could determine this rather serious difficulty is largely due to "floating" ceilings of cement plaster on suspended steel lathing material. Troublesome echoes are especially noticeable in the rooms and halls of the Rose City Park School, and will be equally serious in the Jonesmore School now under construction. The ceilings of these buildings, unless deadened in some effective way, will always act as a sounding board. I took occasion while in Portland to recommend that precaution be taken immediately to deaden the ceilings in the Jonesmore School, before it was too late. I hope some economical way can be found to relieve this difficulty in the Rose City Park School. Echoes were also noticed in the Fernwood School, though the trouble there seemed not to be so pronounced. In addition to the resonance of the ceilings, it is probable that the walls between the classrooms add to the difficulty.

Open-Air Schools

I was disappointed in that I did not find a single open-air room or school in the public schools of Portland. From what

¹ See Chapter XI, part 2, subdivision d,—NIGHT SCHOOLS.

I saw of the children, I am sure there are many who would be greatly benefited if they were taught in open-air classrooms. The climate of this city offers unusually good opportunities for the establishment and maintenance of open-air schools, with comparatively little expense and few precautions. It is almost a crime to shut up the puny, anaemic children in a hot school-room, where, even under the best conditions, the air cannot be kept as pure as it is out of doors. Open-air schools are no longer experiments. They have proved very beneficial under trying and hard conditions, as, for example, in the winter climate of Chicago and Boston. In the mild climate of Portland better results may be attained, with less trouble and fewer objections.

The late Dr. Arthur Cabot predicted last year that "the time will soon come when all schools will be open-air schools." Whether this prophecy will prove to be true no one can say, but it is certain that great gain would accrue to our children if larger numbers were taught in the fresh air. There is a rapidly growing sentiment, based on sound doctrine, that if open-air schools are good for sick children, they would be better for well children. Why wait until they become anaemic, scrofulous, tuberculous, or even sluggish before we give them freedom and fresh air? Open-air schools have not only proved beneficial for the great majority of children whose physical conditions are below standard, but they have likewise proved that the mental life is quickened and the work of the school is done with more zest and better results.

I sincerely hope, therefore, that a sane and systematic attempt will be made to introduce at least one open-air classroom in all the larger elementary schools of the city. Little expense is needed to turn in-door classrooms into fairly good open-air rooms. The simplest, if not the best way, is to select an east or west room, replace the present sliding sashes with a one-piece sash, hinging them to the top of the frame, and with pulleys and cords open them inward, drawing them up to the ceiling. This, of course, will necessitate that the frames be specially prepared and finished, so that when the sash is closed beating rains will not harm the building. Pivoted sash are also used, but these are frequently in the way when opened, and they are likely to produce troublesome reflections. (See also the following Chapter, Subdivision 4.)

Temperature of the Schoolrooms

The temperature of the classrooms was, during the two weeks of my examination, almost invariably too high. I found many rooms considerably above 70° F., some above 75°, despite the fact that the outside air was always lower. It is my opinion that the maximum temperature of the schoolrooms of Portland should not exceed 67° F., when fires are used. In

fact, I feel that this is a very conservative estimate, for in the humid climate of this city 67° F., is relatively warmer than 70° F. in the dry winter-air of classrooms in most of the central and eastern states. The climate of Portland is similar to that of England in many regards, except that winter days are not quite so short, and the summer days are not quite so long, and less humid. The maximum temperature recommended for the school-rooms of England is 65° F.

If this recommendation for the reduction of the temperature in the Portland schools is followed, the children will be able to do their work with less lassitude, with keener interest, and with much advantage to their health. Dr. Thomas Harrington, Director of the Department of School Hygiene of the Boston Public Schools, has recently made an investigation as to the influence of heating and ventilation on anaemia, glandular enlargement, and sickness among teachers and pupils, and has found that among 3009 cases of pronounced anaemia, 2377 cases were in classrooms where the temperature was 69° and over; 321 cases were in classrooms with a temperature of 68°, while only 235 cases were in classrooms with a temperature between 64° and 67° Fahrenheit, inclusive. While this investigation proves nothing for Portland, it is in line with the recommendation made. Besides, Portland is far better conditioned as to climate for maintaining a low temperature than is Boston.

It is a serious handicap to the physical and mental development of the children of Portland to permit the temperature to approximate 70° F. in the classrooms, as is now commonly done.

By investigation and inquiry I found that, in the main, where thermostats were installed they were set to keep the minimum at 63° and that they often permitted more than 70°. Many of the thermostats were not sufficiently sensitive to regulate within the limits of two degrees. I recommend that instead of being set for a minimum temperature of 68° that they be set for a minimum of 65°, and kept sufficiently sensitive so that they will never allow a higher temperature than 67°. I wish to recommend further that those who are in charge of the thermostats be strictly charged with the duty of keeping them in better condition, and within these limits, and that all schools depending on a central heating system, not now supplied with thermostats, be so equipped at once.

Hot-air Furnaces

The prevailing method of heating the classrooms is that of the hot-air furnace. There can be no serious objection offered to this method in the climate of Portland, *providing* the furnaces are kept in good repair, and providing also that a plenum-fan system of ventilation is used in connection with

them. Those furnaces out of repair may leak, when coal is used for supplementary fuel, and some of the gas may pass into the warm air about the heater and thence into the school-room, especially when the fan is not running. If a good pressure is maintained by the fan, there is very little or no danger when the furnaces are in good repair, and especially when wood alone is used for fuel.

The hot-air furnace system is well adapted to the climate of Portland, where comparatively mild humid weather prevails the greater part of the school year, and if rationally used will prove effective and fairly economical of fuel.

In this connection, I wish to recommend that the warm-air ducts leading from the plenum chambers to the classrooms be covered with a good quality of asbestos paper, to prevent so much loss of heat in cold weather. I found that this precaution had been taken in only a few of the buildings. There would be a great saving in fuel, less work for the janitors, and more wholesome conditions furnished in the schoolrooms, if these were covered in all the buildings. Despite all a janitor may do basement doors are frequently open, and in cold weather there is opportunity for the loss of much heat through radiation from uncovered warm-air ducts.

It is my opinion that high-pressure steam plants should not be installed in any buildings where steam power is not a prime desideratum. It is expensive to install, and requires, or should require, a licensed engineer, in order to minimize the danger to the children and to secure the proper care of a high-pressure boiler. If a detached building is used for a high-pressure steam heating-plant, the danger will be much reduced. A high-pressure steam system is often thought necessary for manual training buildings; but even in such buildings, electric power is to be preferred, and in Portland should add little or no extra expense to the total cost.

One advantage of the hot-air system in a climate as generally mild as that of Portland arises from the fact that when but a little artificial heat is needed to secure the temperature desired, such a system requires less fuel than a steam heating system which always requires sufficient fires to get up steam. However, a system of indirect steam heating insures more regular heat in cold weather than can easily be maintained with the use of a hot-air furnace.

My observation seemed to show that if ample fan power were installed; if thermostats were placed in all the buildings; if the warm-air ducts were properly protected against rapid radiation; and if the thermostats were better adjusted, and persistently kept in repair, the heating systems in practically all of the better school-buildings of Portland are ample. Owing to the fact that my examinations were made in mild weather, it is impossible for me to speak with absolute certainty on this

point. Janitors, though, generally agreed that they were able to meet the demands in the coldest weather. In those buildings depending on gravity to introduce warmed air into the classrooms, even heating is not possible because of the fact that open windows will have to be depended on for ventilation.

Ventilation of Schoolrooms

Contrary to the common belief, it is more difficult to ventilate in a satisfactory way a closed schoolroom in a mild climate than the same sort of a room in a cold climate. In the former case more reliance must be placed on a fan, for the difference between the temperature of the outside air and that desirable in a classroom is so slight that comparatively little aid is given through the force of gravity. In the latter case the pressure from without toward the warm schoolroom is great enough to aid materially in the introduction of fresh air. All schools of the type now in use in Portland must, therefore, be supplied with adequate fans to drive in the air, and ample outlets from the schoolrooms to secure sufficiently rapid change of air. Some of the buildings are not supplied with fans at all, and others are supplied with fans of insufficient capacity to meet the demands, without running them at too rapid a rate. The ventilation at the Chapman School was insufficient on the day of my visit, and seemed to be due either to the lack of fan capacity, or to errors in the construction of ducts leading to the classrooms, or to both of these combined. The same criticism might be applied with equal force to several other schools.

I earnestly recommend that in all buildings erected in the future larger fans be installed, and larger ducts, inlets and exits, be used, so that abundance of fresh air may be secured with the fans running at a moderate speed. More care should be taken on shaping the mouth of the inlet duct so that the air will be evenly and quickly spread over the rooms without creating drafts in particular parts of the rooms. One reason for complaint on account of drafts in cold weather is due to the thermostats chiefly used. They either call for warm air or cold air. When cold air is driven in the difference in temperature is quickly noticed by those on the farther side of the room. This difficulty can be overcome either by regulation through tempering coils, if steam is used, or through a tempering furnace if the hot-air system is used. Various forms of mixing dampers are also in use to overcome this objection. If the air driven in is well tempered, there is little danger from such drafts as are felt at times from fans. The fact is the body is in constant need of a fresh air bath to keep it in good condition and to prevent that heavy, stuffy feeling, partly due to the accumulation of heat in the tissues.

In all buildings to be erected in the future I would urge that the wire shields on both the inlet ducts and the exit ducts be left off, for they offer far more friction to the incoming and outgoing air than one would imagine. Invariably, when the entrance to the exit duct is covered with one of these wire screens, the lower part of the duct is the gathering place for all kinds of lint, dust, and dirt, the flotsam and jetsam of a busy schoolroom. The janitors cannot get it out without going to a great deal of trouble, and this they rarely have time to do. In every classroom in Portland where these screens are used there is an unsightly, dirty place. In all buildings constructed in the future it would be better to finish the opening of the exit ducts so that they would not call for any screen to make their appearance acceptable, and so that they may be kept clean and wholesome without difficulty. The inlet ducts should be finished with gratings so constructed as to cause the incoming air current to be deflected toward the ceiling and ends of the classroom, and thus well distributed over the room. Such gratings will suffice for all the protection these ducts will need.

There has always been some objection on the part of teachers and patrons to the plenum-system of ventilation, and these criticisms have often been justifiable. Unless the fans are large enough to deliver abundance of fresh air, to distribute it impartially, and to keep it moving in the schoolroom, good and satisfactory ventilation cannot be accomplished. But there is a psychological effect that counts for much in the judgment of teachers and pupils with regard to the efficiency of this form of ventilation. They imagine the air is bad because the windows and doors must be closed. This suggestion can only be overcome by good ventilation and experience. Whenever, however, there is persistent complaint, I have found that generally there is some real ground for it. If 2000 cubic feet of pure air per pupil is supplied and well distributed each hour in the classrooms, complaints generally cease, and the children will be well cared for, providing the temperature maintained is not too high. The effect of overheating is often mistaken for lack of ventilation. Under the conditions I have suggested, with large fans and ample inlet and exit ducts, the plenum-fan system is the best method now available for schoolroom ventilation.

The ventilation of the toilets and urinals of all the older buildings, and many of the newer ones, is very bad. In fact, most of them get no ventilation save through doors and windows. In many cases the attempts made to ventilate them through ducts leading to the chimneys are simply delusions. These means are not effective. In some cases this is serious, and will be spoken of more at length under the topic on toilets and urinals.

Fresh Air Intakes

Most of the better schools, receive their fresh air from a point well above ground, and this is a wise precaution. But the fresh air passages between the fans and the outer air in many of the buildings were used for storage of paint cans, oil cans, old benches, and various other kinds of debris. This ought not to be allowed at all; for this passage should be absolutely clean, and free from anything that would retard the flow of air toward the fans. Also, many of these passages or rooms for the fresh air intake were not properly enclosed, and as a result many classrooms are being partly supplied with air from the basements, instead of from the proper source. I found one building where the janitor had the door leading from the basement to this fresh air chamber propped open, so, as he said, he could hear the fan running. Naturally, he was furnishing a large per cent of basement-air to the classrooms. Such lack of knowledge on the part of a janitor is a good illustration of the need of a course of training for janitors.

I wish to recommend, therefore, that the fresh air intake rooms be kept clean; that they be made practically air-tight, from the other parts of the basement; that as far as possible the fresh air be taken from the level of the second floor, as it is in the main now taken; and that, other conditions equal, it be taken from the south or east side of the building. If this last suggestion is used in future buildings, a surprising amount of fuel will be saved, for the air on the south side of a building is generally several degrees warmer in winter than that on the north side.

Registers in the Floors

It is helpful to have some form of register in halls, both for heating the halls and for warming the feet and drying the clothing of the children. But it is a mistake to make these in the floor, for mud and dirt will fall from the children's shoes, and, after drying, it will be carried upward by the currents of warm air and scattered in the rooms. A better method of placing the registers is to open them along the front side of benches fastened to the walls. They can then be used for warming the feet and drying the clothes of the pupils, without introducing dust and dirt into them.

Toilets and Urinals

The form of toilets mostly in use are those depending on the automatic discharge of a common tank for a number of seats. Generally these seats are placed back to back across the toilet room, and, as stated earlier in this part of the report, are very poorly ventilated.

Without going into the details of describing these, there are certain specific recommendations which I wish to make for future buildings, and for refitting some of the buildings now in use:

(1) Those basement rooms selected for the toilets should command abundance of light, and, if possible, abundance of direct sunshine. The buildings should be planned with this requirement in mind.

(2) The toilet stalls and urinals should be set in single rows around the walls and not in double rows across the room. This method will make the supervision a great deal easier, render the room much lighter, much easier to keep clean, and discourage a vast amount of carelessness. This method, however, under certain conditions, requires slightly larger rooms, and more appropriate glazing.

(3) The height of the walls of the toilet stalls need not be over 5 feet. The height of most of those in use is 7 feet or more. This is not only a useless expense, but it is a harmful expense. Stalls of this height obstruct the light, render ventilation more difficult, and make it very much harder for the janitor to keep them clean.

(4) All stalls should be provided with a short door, not over 3 feet high, set about 10 inches above the floor, and so hinged that it will swing in when the stall is not in use. This will afford privacy, without keeping the stalls closed when not in use, and greatly facilitate inspection and sanitation.

(5) Some of the flush tanks in use are too large and do not flush often enough to keep the receiving troughs clean. Only sufficient water to sweep them clean should be discharged at one time. Some of the largest tanks could be safely reduced, if at the same time they were set to discharge oftener. This change would require no more water, and would keep the rooms more sanitary. In Germany, where this type of toilets is frequently used, the flushing is often regulated by clock-work, so that the flushings are more frequent during intermissions than at other times.

(6) The urinal troughs in use are bad, and this system should not be installed in any future buildings. The best now on the market for schools are ventilated downward, and the sides and backs made of hammered or "carrara" glass. Glass does not absorb the urine, is easily kept clean, and will wear indefinitely. The metal partitions now in use cannot be kept from corroding and accumulating solid material, which soon becomes offensively odorous. Much relief could be secured by cutting off the lower parts of these metal sides.

(7) At least two sizes of seats should be set in each toilet room of future buildings, so that both the smaller and the larger children could be decently provided for. In most of the toilets in the present buildings the little people are compelled

to use seats too high for them. The different sizes should be segregated, for reasons not necessary to state.

(8) In the buildings now supplied with urinal troughs some benches should be supplied for the small boys to stand on, for in many of the buildings they are set too high for the smaller boys.

(9) In future buildings adequate provisions should be made to ventilate all seats and urinals. In the older types of toilet fixtures, largely used in the Portland schools, direct and complete ventilation is impossible because the pipes are too small, often very long, and dependence is entirely placed on the heat from the furnace chimney to create a draft in the outlet adjoining. If these ventilation flues for the toilets could be heated directly, or if an exhaust fan were installed in them just above the intake of the ducts from the toilets, the sanitary conditions of the toilets would be greatly improved.

(10) Some schools are over supplied with seats and urinals, while others have not enough. I found in the Holman school that the number supplied was totally inadequate. This condition should be remedied immediately. It is impossible to calculate with exactness just how many toilet fixtures are needed for a given number of pupils, because the age of the pupils is a large element in the demand. Besides, where many children go home for their luncheon, another variation in the demand is introduced. Likewise, fewer are needed when the programmes are so arranged that the classes are not all dismissed at recess at the same time. But approximately one seat for 15 girls, and one for 25 boys, will not miss the requirement far. The number of urinals for the boys should be greater, say one for 20 boys. These figures, as indicated above, are not applicable in all cases, but will serve as a helpful rule for general guidance.

(11) The ventilated and automatic washout seats (those in which the seat-lid springs back and flushes the bowl as soon as the child arises) are the best. However, these need frequent adjustment to make sure of flushing. I found a number of this type out of adjustment, and unflushed after use. The principals should frequently inspect all toilets, and report immediately any disarrangement.

(12) In some of our schools trouble from the spread of venereal diseases has been met with, and for this reason the open-front type of toilet seat should be used in all future construction.

(13) It is but fair to report that while many of the toilet rooms are improperly lighted, supplied with the older types of fixtures, badly set, and improperly ventilated, the janitors for the most part are keeping them as clean and sanitary as conditions will permit.

Baths

Aside from the high school building, I found little or no attempt to supply baths in the school buildings of Portland. I wish to recommend that, especially in those schools utilized by the children dwelling in the more congested districts of the city, such, for example, as the Chapman, Couch, and Failing schools, that provision be made for shower baths, and that the children be offered the opportunity and the time to bathe at least once a week. This will do many of them more real good than the same amount of time spent in any other way, and it will be of great educational value to both pupils and parents. It would not be an expensive undertaking to install shower baths in many of the large basements already provided. School baths are no longer in the experimental stage.

Vacuum Cleaners

School-room dust is not only disagreeable, but dangerous, and as rapidly as possible vacuum cleaners should be installed in all buildings. Some tested form of central vacuum suction should be employed, so that the dust can be discharged either through water or carried off through a high chimney. Vacuum cleaners, however, will not prove acceptable or satisfactory unless the pipes are properly placed, and a strong, regular suction produced. I wish to recommend, in as forceful a manner as possible, that a suction pipe be installed near the floor line in the middle of one end of each class-room, preferably the end where the teacher's desk is located, so as to make it unnecessary to use a long, heavy hose, and also to make it easier for the janitor to move along the aisles between the desks. The cost of installation will be some greater with this method, but by reason of reduction of friction in the short hose the effectiveness will be much increased, and the labor of the janitor greatly reduced. The main expense of a vacuum cleaner is the running expense, and it is good economy to spend more to save much. Besides, the work will be better done. The older method of locating the suction pipes in the halls has proven entirely unsatisfactory, and measurably ineffective. In most of the Portland buildings having vacuum-cleaner appliances there are entirely too few hose attachments.

I noticed that in some of the buildings the janitors had fitted one or more of the suction pipes with devices to free the chalk erasers of dust. This is to be commended, and such janitors deserve recognition for this kind of service.

The use of feather dusters in school buildings should be prohibited. They serve only to stir up the dust, and thereby make the school rooms more unwholesome. Dust cloths should be used instead. The janitors should be furnished with an abundance

of some form of "dustless dust cloths" and "dustless wall mops," and be required to use them.

Drinking Fountains

Practically all of the buildings are supplied with drinking fountains. Most of them are satisfactory. Some are insanitary by reason of the fact that the stream does not rise high enough above the cup to prevent the children's lips from touching them. Those being installed by the department mechanics are very good, but in some buildings need adjustment to insure an equally strong flow from all the cups. Some are too hard to press; others shoot a large stream on slight pressure.

Slates

To find the continued use of slates in the schools of Portland was wholly unexpected. There was a time when slates were a necessity, but that time has long since passed. The cost of paper and lead pencils is now so small that most cities include them in the regular list of supplies, and furnish them to all the children of the elementary grades free. Slates are at best noisy, dirty, unsanitary, and, at the present time, wholly unjustifiable. Besides, better teaching can be done with the use of paper and lead pencil or pen, for the use of paper for written work of all kinds puts a premium upon neatness and carefulness which slates cannot command. I have no hesitation, therefore, both in the interest of cleanliness and sanitation, as well as in the interest of better teaching, to recommend that the use of slates in the schools be abandoned immediately. The Board of School Directors ought to supply, without cost to the children, an ample supply of paper, lead pencils, pens and ink, for all of the elementary schools. (See also Chapter VIII, 7.)

Janitor Service

The janitor of a modern school building is, next to the principal, perhaps the most important officer in the school. The time has passed when any one who is sufficiently strong to sweep and build fires should be considered capable of being a good janitor. With the advent of modern systems of heating, ventilation, sweeping, humidification, disinfection, and general oversight of buildings, an intelligent and trained man is needed. Unless a janitor understands thoroughly the theory and construction of thermostats, the use of fans, the best method of sweeping, dusting, and general sanitation, he cannot render efficient service, however willing he may be. A modern janitor needs specific training, not only in the tricks of his trade, but in the theoretical and practical understanding of all these things.

A Janitors' School

I wish to recommend, therefore, that the Superintendent of Properties be given charge of the school janitors, and that he be instructed to take immediate steps to organize a sort of janitor school, where those who are already in the work, and those who are making applications for position for such service, may be carefully instructed in the duties of this very important work. The following brief suggestions regarding the establishment of such training courses may be of some help:

(1) Regular meetings of janitors should be held at least once a month, at designated school buildings, and a regular programme for their instruction should be outlined.

(2) This course of instruction should consist of: (a) Lectures by the Superintendent and Medical Inspector on such subjects as the following: The danger of dust; the selection and placing of school desks; the care of blackboards; the disinfection of toilets and school rooms; the general management of basements; the care of the health of a janitor; the proper temperature of a class-room and why. (b) Technical instruction by the school engineer or department mechanic on the following subjects: How to build fires and stoke economically; the theory and supervision of thermostats; the theory and management of the various systems of ventilation; plumbing fixtures; sweeping compounds and how to make them; oiling floors; management of fans; the disposal of ashes and cinders; the management of vacuum cleaners; sweeping and dusting; protection against fires, etc. (c) "Tricks of the trade," set forth and illustrated by the most efficient janitors in the service. (d) Lectures by selected principals on: Fire drills; the care of school property; the general management of boys; the moral influence of janitors; opportunities of a janitor; the care of playgrounds, etc. (e) Discussions of the latest and best information relating to the work of janitors, gathered from magazines and books.

A good supply of literature and helps should be furnished by the Board of School Directors.

The above suggestions embody only a few of the topics which might be outlined. But with some such a plan as this put into operation, not only much expense could be saved, but a much higher degree of efficiency in the janitor force could be secured. Provision for such training would also give the Board of School Directors the opportunity to demand professional preparation for their work of all applicants for janitorial service. In a word, it would introduce a system of selecting the fittest, and take the office out of the field of politics and personal pull. (See also Chapter XI, Part 2, h.)

In addition I wish to say that an intelligent, well-trained janitor should get better pay than one who, other things equal,

has nothing to commend him but ordinary intelligence and physical strength. One element, entering into the selection of a janitor, should always be that of moral character and ability to understand children and manage them acceptably. Those janitors who serve most helpfully should be remunerated accordingly.

Miscellaneous Recommendations

1. The children of the Ladd school should be protected in the use of the park and the street next the building for playgrounds. The police should be asked to keep all automobiles and wagons off of this street while the children are at play, during intermissions. This will hinder public rights very little, because the street on the opposite side of the park can be used at such times with very little or no inconvenience, and the children will then be protected. During my visit to this school many children were endangered by rapidly moving automobiles. Children have rights, as well as adults.

2. If a roller-skating track of 12 or 15 feet in width were constructed of concrete around the two parts of the playground at the new Failing school, and at least one part of the playground of the Irvington and the Clinton Kelly schools, it would bring a great joy and service to the children of these neighborhoods, not only during intermissions, but after school hours and during vacations. The Failing school grounds in particular could then be used much more helpfully as a recreational center for all the young people of the neighborhood. The same suggestion could be profitably applied to the playgrounds of a number of other schools.

3. I would like to suggest that advantage be taken of the deep ravine between the Creston school building and the new playground to construct an open-air or Greek amphitheater. Comparatively little expense would be involved, and one of the most useful and beautiful structures in the whole city would result. It would serve for many school purposes and social center activities, and would certainly be in demand by the city as a whole.

4. The Lownsdale and Couch schools are unfit for school use, and should be abandoned as soon as possible.

5. I commend the form of coved baseboards used in the Fernwood school and recommend that this form of construction be introduced in all future buildings.

6. Something should be done to deaden the halls in the Jefferson high school building. They are very noisy. This building was badly constructed, and will eventually require expensive repairs.

7. The Fulton Park site is so near to two car lines that the Board of School Directors should exchange it, if possible, for a

site further removed from the growing disturbance and danger that will surely come with increasing traffic.

Advisory Educational Committee on Buildings

Finally, I would like to suggest that a small committee, say of five, composed of two principals, a teacher from the primary grades, one from the upper grades, and one from the high schools, be appointed to advise with the Superintendent and the architect when plans for new buildings are under consideration. By selecting those especially qualified for the work of this committee, and giving them opportunity to make some special study of school hygiene, they could render valuable service to the city.

NOTE: The scientific reasons upon which many of the arguments of this chapter are based could not of necessity be set forth in full here. For these the reader is referred to a work by the author of this chapter, entitled *School Hygiene*.—DIRECTOR.

Chapter XIV

MEDICAL INSPECTION; HYGIENE TEACHING; PHYSICAL TRAINING; SPECIAL SCHOOLS FOR DEFECTIVES

(Prefatory Note)

This report is based on an investigation of one week's duration. All the information available was secured from the chief medical officer, three of the four school medical examiners, the school nurse, the director of physical training, and the superintendent of schools. This was supplemented by conversations with nine school principals and at least forty-four teachers, all of whom expressed themselves as frankly and fully as time would permit.

The writer was present during the routine medical examination of about 400 children, in three different types of schools, and saw, altogether, about 2,400 children in class-rooms, physical training drills, and in exit or entrance marches.

Seven recitations in hygiene were observed in whole or in part, besides four physical training exercises. The schools visited were selected as representative of various social and hygienic conditions. It is believed that no amount of further investigation would have altered materially the substance of the report which follows.

It is not possible to set forth in this report the facts and arguments of general nature on which the criticisms and recommendations are based. These can be obtained from the following three books by the writer:

1. *The Hygiene of the School Child.*
2. *Health Work in the Schools* (written with the assistance of Dr. E. B. Hoag); and
3. *The Teacher's Health.*

LEWIS M. TERMAN.

1. THE SYSTEM OF MEDICAL INSPECTION

Two Types of School Health Service

In the schools of the United States there are two main types of school medical service. In order to make clear the significance of certain criticisms and recommendations, to be made in this report, it is necessary to describe these briefly and to set forth their respective aims and procedures.

1. The first is "medical inspection" carried on chiefly for the detection and control of transmissible diseases. This is the form in which school medical work everywhere had its beginning. In nearly all cases, it was merely an extension of the functions of the local board of health. The cost is very small,

averaging in the United States about 13 cents per year for each child. Medical inspection of this type has unquestionably proved its value. It is the primitive type of school medical service, and has been superseded in most of the larger and many of the smaller cities of the country by the type of work about to be described.

2. The second kind of school medical service goes beyond mere "medical inspection" and has for its purpose the "health supervision" of schools in a broad sense. It aims not only to control contagious diseases, but also to discover every form of physical defectiveness which may exist among the pupils, to bring about, by means of an efficient follow-up service, the correction of as many of these as possible, and to supervise the activities of the school to the end of preventing conditions of ill-health. Defects of teeth, throat, eyes, nose, cervical glands, ears, nutrition, heart, lungs, nervous system, and skeletal development are carefully sought out.

This type of health supervision includes in its scope physical training and playground activities, medical control of athletics, physical examinations of candidates for teaching positions, supervision of the school programme from the point of view of hygiene, the segregation of defective children in special schools (open-air schools, schools for the deaf, blind, crippled, feeble-minded, etc.), home education in matters of hygiene, expert advice in regard to school-house construction and sanitation, besides many other lines of work more or less preventive in nature.

Health supervision of the type just outlined is usually under the direction of a physician of special training and equipment, who gives his whole time to the work. The annual cost of such a system is, at least, 50 cents per pupil, but measured by results it is by far the cheapest form of school medical service.

Main Features of the Portland System

With minor exceptions, Portland's school medical service belongs distinctly to the first type. It is carried on by the board of health. Four half-time school medical examiners are employed (three hours daily for five days a week), a nurse for full time, and a dentist for one day each week (Saturdays). The total annual expense is about \$3,250, or a little over 10 cents per child. The emphasis is obviously on the control of contagious diseases, the eradication of parasites, and upon securing treatment for the worst cases of adenoids, tonsils and decayed teeth.

Notwithstanding the restricted scope of the work, as organized, it is performing a service which is worth many times its cost. At the same time, it should be regarded merely as a beginning, by no means as a final accomplishment.

Nature of the Medical Examinations Given

Under the present system these can be nothing more than superficial inspections. Each half-time medical examiner has from 5,000 to 7,000 children under his charge and is expected to make the entire rounds of his district in from one to two months. This necessitates the inspection of children at the rate of about 200 to 400 for each half day.¹ A thorough examination once a year, or even once in two years, would result in more good than a large number of superficial inspections.

The method employed in the examinations is to have the pupils of a room march in single file by the physician, who stops each long enough to permit inspection of the hands, arms, and hair. Then the physician gives a hasty glance into the mouth and throat, and the pupil passes on. Cases of itch and pediculosis, also extreme cases of obstructed nasal breathing and dental decay, are listed by the teacher at the examiner's request, and reported to the parent on a card provided for the purpose.

No examination is made for defects of heart, lungs, nutrition, general development, hearing, vision, etc., or for spinal curvature, flat foot or other orthopedic defects.² Teeth are not reported unless their condition is rather bad, and the milder cases of obstructed nasal breathing seem to escape attention sometimes.

In one room where I was present during the inspection no child was reported (at least on this particular occasion) for defective teeth. After the departure of the medical examiner I looked into the mouth of each child in this room and did not find a reasonably clean set of teeth, or a single child free from dental decay. Most children had from three to six teeth badly decayed, one of them fourteen. Perhaps children in this room had been reported for defective teeth at previous inspections, but if so, little or nothing had ever come of it. On this occasion, however, the inspector reported several children for "nits," several for dirty neck or hands, and one for tonsils. The room in question was in one of the poorest sections of the city. The examiner himself stated that not far from 75 per cent of the children in this school have adenoids or diseased tonsils. Anaemia was evident on every hand.

There is no intent to criticise the medical examiners. Parasites naturally get first attention, for a school so afflicted is

¹ Adequate examinations cannot be made more rapidly than 20 to 40 per half day.

² It should be added, however, that sometimes children suspected by the teachers of having visual or auditory defect are given a special examination. Obviously, only a negligible proportion of the enrollment can receive such examinations.

not a livable place. As regards neglect of the less obvious defects, nothing else could be expected. Where there is time neither in examinations nor in follow-up work for attention to more than a small proportion of the defects, ordinary human sympathy insures that the severe or advanced defects will be looked after first. This is only natural. It means, however, that the efforts are largely misspent. Defects should be remedied at the earliest possible moment. It is unwise to neglect adenoids until the child's face has become deformed, his body stunted, and his mind dulled. Teeth that have been neglected until eight or ten are decayed present a hopeless problem. The same is largely true of other kinds of defectiveness. Failure to make annual hearing tests means that many curable cases of partial deafness will go untreated. If annual tests of vision are not made the eyes and nervous system of many children will be wrecked.

It is evident that routine inspection like that just described does not come under the head of "expert" work. It can be done just as efficiently by specially trained nurses as by the average physician, and is so done in several of the best school systems of the country. Much of it could be done by the teachers themselves after suitable instruction.

2. DEFECTS OF THE SYSTEM.

Results Secured

It is taken for granted that the management of contagious diseases is satisfactory. The methods employed do not differ materially from those in a majority of American cities.

As regards common physical defects, the case is different. As already explained, this is in part due to the lack of opportunity for a complete physical examination. Equally fatal is the fact that only one school nurse is employed for nearly 30,000 children. Ideally, there should be a nurse for every 2,000 children. Each of two principals stated that the entire time of one nurse should be available for her own school. Two other principals said that they could use half the time of one nurse.

So slow is the average parent to act upon the examiner's recommendation that thousands of home visits need to be made each year in a city the size of Portland. Medical inspection, without adequate follow-up service, amounts to little more than inspection. At present, the follow-up work devolves largely upon the teachers. These evidently have accomplished considerable, though certainly only a fraction of what an adequate supply of nurses would accomplish.

In a large proportion of cases the matter ends with the notification of parents. It is impossible to state the actual or

even approximate percentage of children receiving the medical attention recommended, for the reason that no attempt is made to secure records. Urged to venture a guess on this point, one of the medical examiners estimated that probably one-fourth to one-half of the parents responded, another medical examiner estimated one-half to two-thirds, while principals and teachers gave estimates varying from one-tenth to three-fourths. The proportion must vary greatly in the different schools according to the prevailing social and economic conditions of the parents, but in no case have we the facts necessary to enable us to measure the efficiency of the system in terms of results.

One index of the efficiency of a system of health supervision is the proportion of children wearing glasses. Statistics of visual defects collected from many hundreds of thousands of school children in diverse parts of the world prove that the per cent of school children with sub-normal vision is much the same everywhere. This always falls between 15 and 30 per cent. The proportion who really need glasses, however, is less than this, ordinarily not far from 10 to 12 per cent. Of about 2,400 children whom I saw in the Portland schools, only a fraction over 2 per cent wore glasses, most of these in the upper grades. On the most liberal estimate, not over one-fourth of the Portland children who should be wearing glasses are doing so.

In almost every class there are several cases of extreme dental neglect, and from one to three or four cases of neglected nasal obstruction. Adenoids and enlarged tonsils seem unusually numerous in the Portland schools. One of the examiners estimated the incidence as high as 50 per cent for the entire city. Judging from 200 or more throats into which I looked, this estimate appears to me as none too high.

Records and Reports

These are altogether unsatisfactory. There are no records on what should be regarded the main point, viz., the action taken by parents after notification of defects. The medical examiners report daily to the central office the number of pupils examined, numbers of defective pupils found, number of cases of pediculosis, measles, scarlet fever, chicken pox, etc., also number listed for adenoids, tonsils, etc. These are summarized monthly in the reports of the health officer. The two sample reports given on the opposite page are illustrative.

It will be noted that pediculosis, measles, chicken pox, etc., are reported specifically, while obstructed breathing, discharging ears, defective eyes, teeth, etc., are lumped together in a group called "miscellaneous," as though they were minor matters. This illustrates a very common misplacement of emphasis.

Space does not permit us to point out all the defects of the record system in use. It is wholly bad.

TABLE 24

Health Officers' Monthly Reports

Cases.	Sept., 1911.	March, 1913.
No. of pupils examined	16,882	19,729
No. of defective pupils found	225	1,396
No. of cases of pediculosis found	126	261
No. of cases of scarlet fever found....	0	0
No. of cases of diphtheria found	0	0
No. of cases of chicken pox found....	2	8
No. of cases of measles found	0	0
No. of pupils vaccinated	0	0
Miscellaneous	0	1,127

The value of a system of medical inspection depends intimately upon its bookkeeping methods. The following are some of the important considerations:

1. There should be an individual health card for each pupil. This should go with the pupil from grade to grade. It should contain the complete data for each annual medical examination, together with note of action taken upon recommendations. This card should be a complete health history of the child from the beginning to the end of his school life. It should be kept in the school building where the child attends, and a copy may be kept in the central office.

In the registration of data explicitness should be the rule. For example, the record of a defective ear should show whether it is a case of ear discharge or something else. The eyes should be recorded separately. Squint should be designated specifically, and so on with all other sorts of defects.

2. The general reports (monthly, annual, etc.) should also be explicit, and should conform to ordinary statistical requirements. For example, it should avoid such procedures as stating the number of defects found, without indicating the number of children furnishing them, or giving per cent of defects without indicating what the per cent is a per cent of. To illustrate, the Portland examiners' report under the heading, "number of defective pupils found," from 2 per cent to 6 per cent of those examined. But there is nothing to tell us whether these are new cases of defectiveness not found before, or whether they are largely made up of old cases, reported over and over each month.

The general report should avoid lumping together defects of different significance. The common and the rare, the primary and the secondary, curable and incurable, chronic and acute, the grave and the unimportant, should not be confused. The reports should be so planned that they will throw some light

on the relation of the various kinds of defects to each other, their dependence upon age, and their influence upon school progress, etc. They should be comprehensible to the public. They should show how many cases were cured, improved, by what agencies cared for, etc.

The individual health card should combine the best features of the Cleveland, Philadelphia, and Meridian (Conn.) cards. The nurse's report should be modeled after that used in Philadelphia.

Limited Scope of the Work

That the scope of the work is very restricted has already been emphasized. To give a better idea of the real field for the activities of a school health department it may be well to estimate the probable amount of physical defectiveness among the 30,000 school children of Portland. The following estimates are based on statistics from millions of school children from different parts of the United States, Canada, Europe, Australia and other countries. The estimates given are minimum figures, and hold, we may be certain, everywhere. They are exceeded even in such good residence cities as Los Angeles, Pasadena, Berkeley, and Oakland.

Of Portland's 30,000 children not far from

- 10% (3,000) are poorly nourished or anaemic;
- 50% (15,000) have seriously defective teeth;
- 15% (4,500) have or have had obstructed nasal breathing;
- 10% (3,000) have enlarged cervical glands, many of which are tuberculous.
- 50% (15,000) have been infected at least once with tuberculosis, one-fifth of whom (or one-tenth of all) will probably die of the disease;
- 10% (3,000) have vision defective enough to require correction by glasses;
- 5% (1,500) have seriously defective hearing, one-fifth of whom (1% of all) are at least nine-tenths deaf;
- 5% (1,500) have spinal curvature or some other orthopedic defect likely to interfere with health;
- 2% (600) have organic heart disease;
- 5% (1,500) are "nervous" or predisposed to some form of nervous disorder;
- 1% (300) are so mentally backward that their intelligence will never go beyond that which is normal for the twelve-year-old child;
- $\frac{1}{2}$ % of the boys (150) and 2% of the girls (600) stutter or have some other speech defect;
- 50% (15,000) do not use a tooth brush with needed regularity;
- 90% (27,000) do not know how to use a tooth brush properly;
- 10% to 20% (3,000 to 6,000) have toothache frequently;

- 10% to 15% (3,000 to 4,500) sleep in a bedroom with no window open;
- 20% (6,000) sleep from one to two hours less per day than children of their age should sleep;
- 60% (18,000) drink one or more cups of tea or coffee per day;
- 50% to 75% (15,000 to 22,500) have no fruit for breakfast;
- 10% to 15% (3,000 to 4,500) are constipated to greater or less degree, etc.

The above is by no means a complete list, but is sufficient to indicate the vast field of health conservation which a school medical service like that of Portland is hardly able to touch upon. To deal effectively with all this defectiveness and to supervise the activities of the school so that defects will less often develop are infinitely more important ends than the eradication of parasites and the control of contagious disease. As a rule not over 3 per cent of the children will need attention in any one year for contagious disease, while from 50 to 65 per cent have one or more forms of chronic physical defect. The two lines of work are important therefore in the ratio of about 1 to 20.

Another line of work ought to receive serious attention in Portland, and that is the prevalence of goiter among the school children, and especially among the girls. This condition ought to call for serious study and investigation.

3. ESSENTIAL FEATURES OF A DEPARTMENT OF HEALTH SUPERVISION FOR A CITY THE SIZE OF PORTLAND.

Control

This should be vested in the School Directors, not the board of health. The former method of control has superseded the latter in more than three-fourths of American cities, and is rapidly coming to be a standard requirement.

While it is possible for the work to be effectively carried on by a board of health, it is extremely unlikely that it will be. The board of health lacks the educational point of view, usually makes the work curative rather than preventive, neglects the so-called "minor" forms of defectiveness, makes the school service a side issue of the public health work, and fails to secure the maximum co-operation from teachers and parents. In greater or less degree all the above-named faults are to be found in the Portland system. Change of control must be the first step in any real advance in the school medical service of Portland.³

³ For further arguments relating to control, see Gulick and Ayres: *Medical Inspection of Schools*, 1913 edition, Chapter X.

The Force Needed, and the Expense

The following represents the *minimum* requirements for an efficient system of health supervision for 30,000 school children:

One chief health director, full time, salary.....	\$ 3,500
One assistant physician, full time (or two for half time), salary	2,200
One eye, ear, nose, and throat specialist, half time, salary	1,500
One woman physician (chiefly for high school girls), full time, salary	2,000
One dentist, full time, salary.....	2,000
Eight school nurses, full time, salary. each \$800.....	6,400
Equipment	400
Total	\$18,000

As the city grows, the force would need to be increased in proportion. Two nurses and one half-time physician should be added for each 6,000 increase in the number of children.

The expenditure recommended would not make an ideal system, but it would place Portland abreast of the better-class cities of its size.⁴ The importance of adequate salaries deserves special emphasis. Unless they are placed on at least as good a basis as the schedule suggested above, it will be useless to expect the kind of service needed. Costs are large or small relative to other costs. The system recommended would add only about 60 cents per year to the \$44.25 now expended per year for the child's education; or for eight years a total of \$4.80 in addition to the \$354 now spent for instruction. Compared to the health returns and enhanced efficiency of the instruction itself, this cost is very low. Portland is expending several times this sum every year in giving instruction a second or third time to "repeaters," whose number could no doubt be materially reduced by greater attention to health conditions.

The Chief Health Director

Whatever the system, its efficiency will depend more upon the equipment of the physician in charge than upon anything else. The usual medical training does not offer the slightest guarantee of fitness for this position, the requirements of which are absolutely different from those necessary for medical practice. Educational hygiene is a specialty which few physicians have cultivated. A physician should be selected who has had wide experience in work of this kind, and he should be given a free hand to organize the department, within the limit of the expenditures allowed. He should be a man of great tact, for it

⁴ Such cities, for example, as Minneapolis, Los Angeles, and Milwaukee, all of which have health departments ranking with the best in the country.

is necessary to win the confidence of children, teachers, parents, and local physicians. He should be a good speaker, so as to be able to put the department in the right light before the public. He must be able to manage the work in such a way as not to arouse unduly the opposition of religious sects or prejudiced physicians, and he must secure effective co-operation with local hospitals, dispensaries, board of health, philanthropic agencies, mothers' clubs, etc. He must be able to train teachers in effective methods of observing children, and to help them in the teaching of hygiene.

Offices, Equipment, Etc.

There should be a central office of several rooms, viz., a general reception room, a private office for the director, one examining room, a small medical laboratory, a room for the psychologist, and a dental clinic. There should also be planned for each new school building a small room to be used by the school nurse, physician, or psychologist. These are especially necessary in the poorer parts of the city. The woman physician should have an office of two small rooms in each high school attended by girls. A similar office should be maintained in each high school attended by boys for the use of a male physician.

Children who need a more thorough examination than would be possible in the routine examinations could be brought to the central office. One special nurse should be assigned to this office, whose duty it would be to keep the records and assist the physician in charge of office examinations.

Dental Clinic

The arrangement here is excellent as far as it goes. The school dentist, who is employed Saturdays only, treats from 40 to 70 children per month. Usually from one-half to one-third of the treatments are for extractions. Emphasis, however, should be placed more on preventive work. The effort to patch up the results of prolonged neglect is more or less inconsequential. Portland should have at least one full-time dentist. This would not be enough, but it would make a good beginning. The example of Cambridge (England) and West Newton (Massachusetts) should be followed in the concentration of effort on the lower grades. This guarantees the largest amount of prevention for the expenditure of time and effort. To concentrate effort upon the bad conditions of upper grades is like locking the barn door after the horse has been stolen.

Nowhere else are preventive measures so important. Dental caries is predominantly a disease of childhood and youth. When a tooth has ached the best time for saving it has gone by. Statistics in hundreds of cities prove that always from 60 to 95

per cent of the children have one or more decaying teeth, and that the average number per child is usually about three or four. From 10 to 30 per cent of the children of almost any school suffer from frequent toothache, and more than 1 per cent have chronic "gum boils." Impaction and other dental irregularities are common. These conditions result in imperfect mastication, nervousness, general toxemia from the absorption of pus, and lowered vitality generally. Diphtheria, tuberculosis, etc., are sometimes traceable to decayed teeth, and infection may spread from them to the throat and middle ear. Even moral delinquency sometimes yields to dental treatment.

The objection sometimes made to the free dental clinic in the school is that it is an encroachment on the field of the private practitioner. This argument has no weight whatever. A large proportion of parents simply cannot afford to employ dentists for their children. The real question is whether this work shall be done by a school dentist, or not at all. In all probability the income of private dentists would be affected favorably, rather than unfavorably. The child, who has throughout his school life experienced the comforts which result from school dentistry, will form the "dentist habit" and patronize the private dentist the rest of his life. Besides, disease should be conceived as an evil to be eradicated, and not as a resource to be conserved for the benefit of any profession.

The argument that free dental treatment destroys parental responsibility is not borne out by experience. Parental responsibility is increased, rather than diminished. Anyway, our duty is to the children rather than to the parents. It is a queer ethics which would demand that children's bodies be allowed to rot as a moral lesson to their parents!

Medical Clinic

A great deal of medical treatment (just how much the writer was not able to learn) has been provided for the children of indigent parents in local hospitals and dispensaries. This is an excellent arrangement, and should be continued and extended. One or two clinics should also be maintained by the School Directors, in connection with the schools in the poorer sections of the city. These would prove a great help in the management of certain minor disorders, the treatment of which is tedious and not likely to be adequately carried out without some such arrangement. Discharging ears (which ordinarily are found in about 1 per cent of the school enrollment) belong in this category. When not in use by a physician, the medical clinics would be at the service of the school nurse.

The Work of School Nurses

The necessity of a liberal supply of school nurses has already been suggested. Without an adequate follow-up service only a small fraction of notifications sent to parents will be acted on, usually not more than 5 to 30 per cent. School nurses bring the proportion up to 85 or 90 per cent. The nurse goes into the home and by tactful presentation of the child's case effects what no other agency could accomplish. She not only secures action in the case at hand, but she also becomes a permanent advisory influence in the homes where she visits.

It is just as effective to have the routine inspections for trachoma, pediculosis, skin diseases, etc., made by school nurses as by physicians. With proper assistance and direction they make the examinations for many other kinds of defects just as efficiently as doctors. The experience of several cities demonstrates that it is far better to have a small number of exceptionally competent doctors, assisted by a good supply of nurses, than to have a large number of doctors and few nurses. It is also more economical. Another advantage of school nurses is that they arouse less professional jealousy than do physicians.

School nurses eradicate parasites, do first-aid work, act in an advisory capacity to the older girls in intimate matters of personal hygiene, and exert a most beneficent influence in the Americanization of the poorer foreign population. It is a mistake, however, to suppose that nurses are only needed in schools attended by the poorer classes. Portland could well afford to supply ten or twelve, and ought to have eight at least.

The Teachers' Part in Health Supervision

Any scheme of health supervision which does not succeed in enlisting the interest and assistance of teachers is doomed to failure or indifferent success. The more prominent the preventive aspect of the work the greater is this necessity. This is an additional reason why the control should be vested in the board of education.

The teacher is the only person constantly present with the pupils. She has more opportunity than any one else to detect the first symptoms of contagious disease, signs of nervousness, indications of eye-strain, ear-discharge, deafness, etc. With the help of the medical director, teachers develop no mean degree of skill in detecting symptoms of common physical defects; without such assistance and instruction, even good teachers are blind to all but the most striking disorders. It is the latter condition which seems to prevail in Portland. Many teachers were asked whether they had in their room any cases of partial deafness, defective eyes not fitted with glasses, spinal curvature,

nervousness, malnutrition, badly neglected teeth, untreated adenoids, etc. Rarely was an affirmative answer received, although, without the slightest doubt, some of almost every one of the above-named defects were present in every room. I observed at a glance extreme cases of myopia, scoliosis, round shoulders, anaemia, dental caries, etc., in classes where the teacher said she knew of no such defects. The teacher had not been taught to observe, and was resting in false security on the assumption that the school doctors were looking after the child's body sufficiently.

Teachers are the proper ones to make the vision and hearing tests. Some of the best-known oculists in the United States, including Dr. Frank Allport, Northwestern University, Dr. Myles Standish, Harvard University, and many others, have taken this stand, after comparison of the tests made by teachers and ordinary physicians. The teacher can not only find the defective visual or auditory acuity as easily as can the physician who is not a specialist, but even better, for she has more opportunity to supplement her test with observation for symptoms.

4. OPEN-AIR SCHOOLS

Portland is one of the few cities of its size in the United States without an open-air school. The need for open-air schools, however, is much the same in this city as in any other, and the equable, temperate climate is especially suitable to them. An examination of the health reports for the six months ending March, 1913, shows that approximately 9 per cent of the deaths of Portland were caused by tuberculosis. The real proportion is no doubt somewhat greater than this, as experts in vital statistics tell us that everywhere deaths are credited to other diseases which are indirectly due to tuberculosis.

The point to emphasize is that approximately 3,000 children now attending school in Portland (10 per cent of all) will die of this disease, unless something is done to save them. For the most part these are the children whom an examination would show to be somewhat below par in growth and nutrition. There is no way to reach such children and minister to their physical needs except through the school. At present, the schools of Portland are doing nothing for them. The medical examiners practically never report anaemia or poor development, their attention being chiefly occupied with parasites, infectious disease, etc. They are not blamed for this, for under the present system it would do no good to report anaemia and malnutrition. Nothing would come of it.

The economic aspect of this problem is challenging. Portland is turning out annually at least 300 children from its schools who are doomed to die of tuberculosis, many of them in early life. Figuring on the basis of Irving Fisher's low estimate of

the average economic value to society of a human life (\$1,700), the total annual loss from these deaths will amount to more than a half million dollars. As the city's population increases, the loss will be proportionately greater. The school instruction of these 300 children for nine years will have cost, at the present average cost, \$119,475. In other words, Portland is spending about \$119,475 annually in the education of children who will die of tuberculosis; and the total loss from these deaths will amount to more than one-half million dollars per year. There can be no doubt that an adequate system of health supervision, including open-air schools, would prevent a part of this loss. (See also the recommendation for such by Dr. Dresslar in the preceding chapter of this report.)

In this connection, certain other facts regarding tuberculosis deserve emphasis:

1. Tuberculosis is at present as much an educational and social problem as a medical one. Relatively few cases come under the notice of a physician until the most favorable time for a cure has passed by.

2. Statistics prove that recent decreases in mortality from tuberculosis hold little or not at all for children. The disease kills about as many children of school age today as it did fifty years ago. From the ages 10 to 15 tuberculosis is responsible for many more deaths than scarlet fever, diphtheria, measles and whooping cough combined.

3. It is well established that a large majority of children contract tuberculosis before the end of the common-school period. Most of these, to be sure, recover promptly and without suspicious symptoms. A large minority, however, retain the infection in latent form and often, after the lapse of years, succumb to it. In dealing with them the school should do everything in its power to bulwark the body against the manifest form of the disease. It is foolish to begin expensive operations with the third and last act of the drama.

4. No system of ventilation has yet been devised which will take the place of open air for weakly, anaemic children. The lower temperature, normal humidity, and perceptible air currents of the open-air class cannot with safety be replaced by the hot, kiln-dried and stagnant air of the average school-room. The conditions present even under the so-called "ideal" system of mechanical ventilation too often tend to cause anaemia, headaches, nervousness, and unhealthy conditions of the nose and throat.

Careful physical examinations of pupils attending open-air schools in New York, Chicago, Boston, Providence, Cleveland, Oakland and many other cities prove that weakly, ill-nourished

children in these schools invariably show enormous gains in weight, strength and quality of blood. Under the regimen of the open-air school, with its shorter study program, increased physical activity, and warm lunch, followed by one or two hours of quiet or sleep, the corpuscle-count quickly mounts from 3 or 3½ million to 4 or 4½ million per cubic millimeter; and the hemoglobin from 65 or 70 per cent to 80 or 85 per cent (not far below normal). Corresponding improvement occurs in weight, strength, appetite, mental alertness and freedom from colds.

The mental results of the open-air school are also noteworthy. Children who are listless, apathetic and retarded often become interested and attentive. Incurable children develop self control and helpfulness. The spirit of the open-air school is different. Freedom, initiative and co-operation take the place of routine and restraint. *Sickly* children in the open-air school make as satisfactory school progress on a study program of three hours per day as *healthy* children ordinarily make on a five-hour program. Grades, attendance, and percentage of promotions are usually better than in the ordinary class. Instruction given in the open air has marked advantages. The child is brought into closer contact with the world of animate and inanimate things and is more likely to relate the school instruction to his own experiences.

There is no reason for limiting the advantages of open-air schools to children who are sickly. Schools which accomplish so much for the latter could not fail to be of benefit to normal children. Portland could well afford to follow the example of Boston, which is placing about 5 per cent of its school children in open-air schools, or certain cities in California, which are going even further in this direction. At least one or two open-air classrooms should be included in each school building to be erected in the future. These should be planned and located with the assistance of an expert. Meanwhile, inexpensive portable school buildings for open-air instruction can be utilized.⁵

5. SCHOOL FEEDING

While Portland is more fortunate than some cities as regards the average economic and educational status of her people, like all cities she has her exceptional districts. A few of the schools undoubtedly have many ill-nourished children. This does not mean that the children are starving. Malnutrition may result from many causes, including, besides insufficient food, injudicious selection of food, improper cooking, lack of supervision of the child's eating habits, etc. Defective teeth, obstructed nasal breathing, nervousness, low powers of digestion and assim-

⁵ See Leonard P. Ayres: *Open-Air Schools*, 1910, Doubleday, Page Co.

ilation, loss of sleep, lack of opportunity for play, overcrowding, bad air, and general parental neglect are perhaps even more common causes. Where sufficiently thorough examinations have been made it has been found that even among the best social classes from 5 to 15 per cent of the children are ill-nourished. No other factor is as fundamental for health as nutrition. Its impairment is the first step toward tuberculosis and many other diseases.

To improve the nutrition of school children all the factors above named must receive attention. Besides furnishing the child a school environment as nearly ideal as possible, homes must be helped by visiting nurses, the use of health leaflets to parents, etc.

Finally, meals ought to be served in the school of certain districts, and supplied gratis to children who can not afford to pay. In such cases, meal tickets should always be disbursed in a way which will avoid bringing the indigency of a child to the knowledge of his fellows. School meals are one of the most successful and commendable of modern educational innovations. All the theoretical arguments against them have been demolished by the test of results. The school meal contributes not only to the child's health, but to his education as well. Cleanliness, order, politeness, habits of mastication, principles of dietetics, cooking, etc., can nowhere be so effectively taught as in connection with the school meal.⁶

6. THE HEALTH OF THE TEACHING CORPS.

The health of school children is intimately bound up with that of teachers. Statistical investigations indicate that not infrequently teachers suffer from nervous disorders and from diseases of the throat, lungs, and digestive system. Others are handicapped by deafness or defective vision. Where statistics have been collected, from 1 to 3 per cent have been found tuberculous. While facts on these points are not available for Portland, there is no reason to believe that the conditions here are different from those in other average cities.

The prevalence of ill health among teachers is usually traced in part to the absence of any serious physical examination of candidates for educational service, and in part to the teacher's strenuous work, indoor life, and neglect of personal hygiene. Considerations of economy, as well as justice to both children and teachers, demand that all these matters be given attention.

Candidates for teaching positions should be required to pass a thorough medical examination, given by the school physicians. This should include examination for defects of lungs, heart,

⁶ See Louise Bryant: *School Feeding*, 1913, Lippincott Co.

vision, hearing, nervous system, nutrition, etc. Such examinations are required in Los Angeles, and many other cities. Experience shows the mere formal requirements of a certificate of good health, signed by "a reputable physician," is absolutely worthless. Anyone who has not already been turned over to the undertaker can secure such a statement.

The health of the teacher in service should also receive systematic consideration. If teachers who show signs of incipient disease were required to take an examination, serious disorders could often be discovered and arrested. This would safeguard the health of teachers and pupils as well.

The environment and conditions under which teachers work should be made as favorable as circumstances will permit. Teaching, at best, is not a particularly healthful occupation, or one free from severe demands upon physical and mental endurance. Investigations show that it is during the early years of service that the health is most likely to suffer impairment; hence sympathetic and helpful oversight of the young teacher is important. By all means, retiring allowances should be provided for teachers who have worn themselves out in the public service.

7. HYGIENE TEACHING.

The amount of time devoted to the teaching of hygiene seems to be from 30 to 50 minutes per week, more often about 45. This allotment holds for all the school grades and, though not large, would appear to be sufficient if properly utilized. Seven recitations in hygiene were observed. The teaching ranged from excellent to exceedingly poor, but on the whole was perhaps not below the average for most cities.

The teaching of hygiene would no doubt be better if the texts were better. These belong to a type now being rapidly superseded. It should hardly be necessary to urge that the real purpose of hygiene teaching is not to store the child's mind with the dry facts of anatomy and physiology, but rather to instil habits of hygienic living. Not all the teachers with whom I talked seemed to appreciate fully this distinction.

A better series of text books should be adopted, and whatever selection is made, supplementary hygiene readers should be placed in every school. A few of the best of these make fascinating reading for both pupils and teacher.

The latter point deserves emphasis. Most teachers have themselves had but little instruction in hygiene, and need to have their own scope of knowledge enlarged. This can be brought about by well-selected supplementary books and by lectures and criticisms from time to time by someone of wide knowledge on the subject. The right kind of school medical officer finds here one of his most important functions.

It devolves upon the teacher to mold the health habits of her pupils; to cultivate habits of posture which will prevent spinal curvature and myopia; habits of activity, and love of play which will help to counterbalance the effects of sedentary life and ward off disease; to impart the knowledge of hygiene and ideals of correct living which will function throughout life as the cheapest form of health insurance.

8. PHYSICAL TRAINING AND PLAYGROUND INSTRUCTION.

The writer has never seen better physical training exercises than those in the Portland schools. They were lively, varied, and conducted with such a spirit of good humor and vim as to make them interesting and pleasing to the pupils, as well as healthful.

The play life of Portland's school children, as far as observations were possible, seemed by no means all it might be. Several of the schools have no play grounds, and in several instances where the grounds were commodious the children did not play, but engaged in pulling, shoving, yelling and other forms of boisterous rowdyism. Too often the older girls seemed to find nothing to do but sit around on the grass or parade with locked arms.

It should not be necessary to argue for the educative or the moral and hygienic value of the right kind of play. Nowhere else will the child learn such wholesome lessons in fair-play, social co-operation, and self control. Correct judgment brings its quick reward; error its certain penalty. Play life is real life for the child, as the school too often is not.

It is the duty of the school to teach children to play, and to encourage them to do so. Every teacher should be a play instructor. Certain ones who show special adaptability for this kind of work should be given special training for it. Organized courses of instruction are necessary for this purpose.

It is recommended that the scope of the department of physical training be enlarged to include supervision of the playground work. The director of physical training has already accomplished a great deal in this line, but he should be given more assistants for the routine physical-training exercises, so that he may be responsible for the organization and supervision of playground instruction on a broad scale. He should be given a free hand and held responsible merely for results. Teachers who have some special training should be employed to act as playground instructors for an hour or two after the dismissal of school, and on Saturdays during the school year. Play is just as necessary during the school year as in vacation, for the sedentary life which the child leads from 9 A. M. to 3:30 P. M. needs to be counterbalanced.

As already recommended, the services of two physicians should be available in the high schools; one for boys and one for girls. One of their important duties would be to give physical examinations to determine fitness for various kinds of physical training and athletic exercise. In the absence of such examinations the more strenuous forms of the exercises in current use are sure to cause physical injury in a certain proportion of cases, possibly 5 per cent.

The physical-training department would also do well to consider the advisability of establishing, as soon as possible, special orthopedic exercises for the treatment of scoliosis, round shoulders, flat foot, etc. For this purpose children will need to be classified according to type of defect.

The exercises, which should be given for 40 to 50 minutes about three times a week, could take place after the close of the afternoon session. In the conduct of such work, the co-operation of an orthopedic surgeon is very desirable.

9. THE HYGIENE OF INSTRUCTION.

Daily School Programs

The daily programs inspected were not always arranged to accord with the results of psychological and physiological studies of fatigue. No home study should be required below the sixth or seventh grade, and it should be strictly limited and carefully supervised whenever made use of. Text books should be chosen which do not violate the standard requirements in the hygiene of reading. The motor aspects of the learning process should receive more attention. The work of the school should be directed in the light of such studies as have been made relating to the hygiene of the learning process, the hygiene of discipline, the influence of holidays and vacations on the child's ability to do mental work, the hygienic aspects of classification, promotion, etc. In various matters of this kind the advice of a psychologist should be available.

10. SPECIAL CLASSES NEEDED.

School for the Deaf.

The one class now conducted is not sufficient for any school system of 30,000 children. Among this number there are sure to be from 100 to 150 children too deaf to profit greatly from the regular instruction.

A very important desideratum in the education of deaf children is their proper classification. Three classes are to be carefully distinguished, and separately taught by methods suitable to each. These are: (1) the deaf; (2) the "semi-deaf" (those with a usable remnant of hearing); and (3) the dull or feeble-minded deaf. The rule should be to place the child in the high-

est type of school (that is, the type most nearly resembling the ordinary school) for which he is fitted.⁷

In the education of deaf and semi-deaf children it is extremely important to get them in the special class at an early age and to keep them to the age of 17 or 18, if possible.

Special Schools for Blind or Crippled Children

A special class for each of these groups is probably needed in Portland. While many otherwise progressive cities are slow to recognize the responsibility of society in the education of such unfortunates, the responsibility nevertheless is real. Every child has a right to the kind of education which will best fit it for the duties of citizenship. The more serious the child's handicap the deeper is this obligation.

Special Classes for Stammerers

There are probably 200 school children in Portland who should attend classes of this sort. The one now conducted is only a beginning. Statistics show that not over half the children who stutter recover spontaneously, but that 80 per cent can be cured or greatly improved in a few months by appropriate instruction in special classes. Complete segregation is not necessary. Experience elsewhere proves that a special class, meeting for about 40 minutes each day, will suffice in a large majority of cases.

The stuttering child presents a tragedy to which many parents and teachers are strangely blind. Such a child is likely to become retarded. He is subjected to jest and ridicule, and is likely to develop traits of abnormal timidity. The vocational outlook for stammerers is altogether unpromising. They are barred, practically, from law, medicine, the ministry, teaching, and many lines of business.⁸

Schools for Backward Children

Portland has more than its full quota of retarded children. The statistics given in Tables 17, 18 and 19, in Chapter IX, show the large number of children in the schools who are too old for their grades. In discussing these tables Superintendent Spaulding pointed out the need of careful attention being given to the needs of these children. This was again reinforced in Chapter XI, Part II, by Superintendent Francis.

⁷ See article by Dr. Love in *Proc. 11d International Cong. Sch. Hyg.*, pp. 828-839, and that by Dr. Yearsley in *International Mag. Sch. Hyg.*, Vol. VII, pp. 4-13.

⁸ For information on the treatment of stuttering in European schools, see articles by George Rouma in *International Mag. of School Hygiene*, III, 1907, pp. 116-171.

To become retarded means, in many cases, to repeat work. Work that is repeated becomes stale. Repeaters not only lose interest, but self-confidence as well. The child who has failed of two or three promotions has usually formed the habit of failure. Portland is every year turning out many children who do not know what it means to succeed.

To prevent this waste (Portland is spending now \$44.25 a year giving instruction to repeaters), it will be necessary to undertake systematic study of the children who are retarded. Among the important factors are dullness, feeble-mindedness, physical defects, peculiar interests or abnormal moral traits, etc. Improved methods of promotion, instruction, etc., can be looked to for the prevention of minor degrees of retardation, but not the extreme ones.

For the right understanding and handling of the latter, the services of a psychologist will be necessary.⁹ Assisting the psychologist, there should be one full-time field worker, whose function it would be to gather information regarding the home life, previous history and heredity of backward or otherwise exceptional children. This measure, supplemented by the work of the school health-department, would be able to accomplish wonders in bringing up to standard a certain number who are retarded because misunderstood or because physically handicapped.

The more extreme cases of backwardness can not be brought up to grade, but they can be segregated, classified by psychological methods and given a kind of instruction from which they can derive immensely more profit than they can from the regular class. About two per cent of school children are so backward mentally that they can never master the abstractions of upper grammar grade studies. To keep them forever mumbling over subject matter which they can not master is both farcical and cruel. They clog the educational machinery. They consume a disproportionate amount of the teacher's energy. They pull down the standard of achievement for other children. They become disheartened and dejected, or else case-hardened and apathetic.

Most of this class would be capable of learning a trade if they had an opportunity, and in no other way can the school help them so much as by affording them the kind of education which will make them self-supporting. They must be saved from becoming industrial drags after they leave school, for vocational unfitness is the open door to vice, pauperism and crime. (See also Chapters IX and XI.)

⁹ See Arthur Holmes: *The Conservation of the Child*, 1912, Lippincott Co.

It is recommended that all children retarded two years or more be given a careful examination, both medical and psychological, with a view to the formation of special classes for those who are in need of such instruction. The special class should never enroll more than 15 pupils per teacher. The purpose should be to fit the instruction to the needs of the individual child, with little regard to the regular course of study for normal children. A shop is a necessary adjunct. The special teachers should be paid the maximum salary, and should have had specific training for this kind of work. Personality is an important element in their equipment.¹⁰

The children just described are mentally inferior, but not feeble-minded in the ordinary sense. They will be able to "float" in some sort of fashion in the social and industrial world. They are along the borderline between "mental deficiency" and normality. Many of them will never develop intelligence or responsibility beyond that of an eleven or twelve-year-old child. Educationally neglected, as is too often the case, they drift easily into pauperism and crime. Psychologists are demonstrating that from 20 to 40 per cent of our prison inmates, and from 30 to 50 per cent of our white slave victims, belong to this class of individuals whom we may designate as "borderliners." The annual cost of vice and crime in Portland is greater than the city's total annual expenditure for education. The criminals of tomorrow are school children today. To stop the stream of criminality and inefficiency we must study its genesis in childhood.

The Feeble-minded

Another group of children, perhaps one-half of one per cent of all, come under the designation "feeble-minded." The proportion is much larger than it is usually given, for the reason that physicians (who are seldom acquainted with the psychological methods used in such cases) usually overlook the higher grades of defect. These should be rigidly confined in state institutions or colonies throughout the reproductive period. If allowed to produce offspring the result is almost certain to be a spawn of degeneracy and feeble-mindedness. They will improve under training, but it is a positive danger to society to make them self-supporting.

With two or three exceptions, the children now enrolled in Portland's special class belong to this group. Most of them certainly are strictly institution cases. Instead of expending inconsequential effort on these, it is wiser to concentrate effort upon those who are merely backward, dull, "queer," incorrigi-

¹⁰ See book by Lightner Witmer and others: *The Special Class*, 1912, the Psychological Clinic Press.

ble, etc. It is wisest to devote time and money where we may hope for greatest return.

Special Classes for Truants, Incurables and Other Misfits

For the reader to be convinced of the fruitfulness of this field it will only be necessary to examine the latest report of Mr. E. J. Lickley, Supervisor of Compulsory Education in Los Angeles.¹¹ No mistake would be made if the Los Angeles method of dealing with this problem were copied in detail by Portland. The teachers are all men. Manual and trade work, play and athletics are emphasized. Truancy is no longer dealt with by the Juvenile Court. The percentage of daily attendance is every month higher in the truant schools than in any regular school in the city. No pupil in these schools is expelled or suspended, and punishment of any kind is rare. Almost every boy makes good, and hundreds are saved from careers of criminality and started on the road to upright living and good citizenship. (See also Chapter XI, part 2, subdivision b.)

11. SUMMARY OF RECOMMENDATIONS

1. That the medical supervision be taken over by the Board of Education.
2. That its scope be enlarged to include inspection for many kinds of defects which are now seldom reported.
3. That the work be placed under the supervision of a well-paid, full-time physician who has had wide experience in this line of health service and who appreciates the educational aspects of the problem.
4. That besides the chief director, two full-time and two half-time physicians be employed (one of the full-time physicians to be a woman and one of the half-time physicians to be an eye, ear, nose and throat specialist), and one full-time dentist.
5. That at least seven additional full-time nurses be employed instead of one, so that adequate follow-up service could be organized and vigorously prosecuted.
6. That an efficient system of records and reports be instituted.
7. That annual vision and hearing tests be made by the teachers, under the direction of the chief medical director.
8. That greater emphasis be placed upon preventive work and upon the treatment of so-called "minor" defects which are likely to lead to future conditions of ill health.
9. That candidates for teaching positions be required to pass a physical examination, conducted by the school medical

¹¹ See *Psychological Clinic*, May, 1913.

department, and that attention be given to the health of teachers in service.

10. That the teaching of hygiene be made less academic, and that it be directed especially toward the cultivation of hygienic habits of living.

11. That playgrounds be increased in number and size as rapidly as finances will permit, and that the playground instruction be organized and combined with the department of physical training.

12. That a few open-air schools be established at once, and that their number be increased rapidly until they can accommodate all of the anaemic, debilitated children in the schools (or at least 5 per cent of the enrollment).

13. That plans be made for the organization, in the near future, of a more adequate system of special classes for the deaf (to include a number of children whose hearing is not quite destroyed but who cannot profit from ordinary instruction), the blind, the crippled (certain classes of cripples only), stutters, etc.

14. That warm lunches be served in several schools, where a fairly large proportion of the children are under-nourished.

15. That a psychologist be employed to assist in the study of mentally peculiar and defective children, with a view to the segregation of certain types of cases in special schools. The chief problem here is the "borderline" child.

16. That attention be given to the more important aspects of the hygiene of instruction, including the choice of hygienic text-books, the regulation of home study, the arrangement of the daily program, the number of recesses, and kindred matters.

PART IV

Attendance; Records; Costs

Chapter XV

CENSUS AND ATTENDANCE

(Elliott.)

(1) CENSUS

General

A complete, accurate and continuous census of the school population of the city is an indispensable factor for the best and most effective administration of a public school system organized to provide an education for all the children in the community. Such a census affords an index to the changing educational needs of the city, arising from the growth, movement and character of the population. The extent to which the enforcement of the Compulsory Education and Child Labor Laws is possible depends very largely upon the completeness and reliability of the school census. Furthermore, the state, for its own purposes, requires an annual counting of children of legal school age.

Legal Provisions Concerning School Census

The annual school census now taken in Portland is regulated directly by the statutes of the state.

“Every district clerk shall enroll annually during the last week in November for school purposes the names and ages of all persons in his district over four and under twenty years of age and also the names and postoffice addresses of all parents and guardians of such persons resident in the district. This annual school census shall include all youths between the ages of four and twenty years who, on the twenty-fifth day of November, actually resided in the district.” (Lord’s Oregon Laws, Sec. 4069.)

The enumeration made under the above provision is used by the state as the basis for the classification of school districts (L. O. L. sec. 4020), for the distribution of the common or irreducible school fund (L. O. L., sections 3973, 3974), and for the per capita county school tax of eight dollars. (Laws, 1911, Chap. 84.) Also, the county school fund is partially apportioned according to the number of census children.

A special enumeration of the name, age and residence of blind or deaf children is provided for. (L. O. L., Sec. 4072.)

The blanks for the census are provided by the State Super-

* The principal sources for the preparation of this portion of the report have been (a) the special oral and written information furnished by the School Clerk and the Truant Officer; (b) the description of the method followed in taking the census as given by two principals; and (c) the official blanks and reports to which reference is made.—E. C. ELLIOTT.

intendent of Public Instruction. The individual enumeration blank contains the following items:

- (1) Name of parent or guardian.
- (2) Address.
- (3) Names of children classified as to sex and according to three age groups:
 - (a) 4 and 5.
 - (b) 6, 7, and over 15 and under 20.
 - (c) Over 8 and under 15.

Blind and deaf children are enumerated separately and classified as above.

The blank containing the summary provides for the totals for each sex of each of the three specified age groups; and also such totals for blind and deaf children. This blank also calls for the number of legal voters for school purposes, and information concerning private schools, number of teachers employed, number of pupils enrolled, number of private schools, and number of months private schools are in session.

Certified copies of the school census returns must be forwarded by the district clerk within ten days after taking to the county school superintendent (L. O. L., Sec. 4071); also a special segregated report in the case of districts of the first class (Sec. 4114).

The Compulsory Education law provides that the clerk of the first class district school boards shall, at the commencement of school, furnish a copy of the school census to the city superintendent or the principal of the schools in such district, together with the names and addresses of the truant officers whose jurisdiction is in the district. It is made the legal duty of the city superintendent or principal at the opening of school and every four weeks thereafter, to compare the census list with the enrollment of the school, or schools, and to report to the proper truant officer the name and address of any parent or person in parental relation to a child not in regular attendance at the public schools, and also the name of such child.

Plan of Taking Census

The actual census practice in Portland is as follows: The enumerators, mostly principals of schools, are selected by the school clerk. The census area, therefore, is usually the district supplied by the school of such principal-enumerator. The expressed motives for selecting principals for this service, aside from that of convenience, are that they would have a chief interest in seeing that all the children in their districts are included in the census, and that the house-to-house canvass gives a good opportunity for them to become familiar with the school patrons, and with the home conditions of pupils.

The individual enumeration blanks furnished by the State Superintendent are made out in carbon triplicate, arranged al-

phabetically for each enumeration district, and substantially bound. One of the three copies is deposited with the county superintendent of schools, one with the principal of the school of the enumeration district, and one is retained by the school clerk. The apparent presumption is that the census list given to the principal is to be used as a check list upon the school enrollment. However, it does not appear that these lists are systematically used for this or any other purpose; and therefore are "dead" after the summary of the enumeration has been prepared.

Instructions to Enumerators

The instructions given to the enumerators are of the most general sort:

1. Make three copies of each sheet.

2. Enroll the names and ages of all persons (including young married people) over four and under twenty years of age who resided in this district November 25. Also enroll the names and postoffice addresses of parents or guardians of persons over four and under twenty.

3. Enroll separately the name, residence, postoffice address and age of every blind and every deaf person over four and under twenty years of age who resided in this district November 25. Blind, or deaf, applies to each person blind, or deaf, to such an extent as to prevent him or her from acquiring an education in the common schools.

4. Legal voters for school purposes comprise any citizen, male or female, who is twenty-one years of age and has resided in the district thirty days immediately preceding date of inquiry, and who has property in the district in his, or her, name, as shown by the last county assessment, and not assessed by the sheriff, on which he, or she, is liable to pay a tax; provided, that any man who has declared his intention to become a citizen of the United States, and has resided in the state for six months immediately preceding the date of inquiry, shall be considered a citizen of the state; provided, further, that any person shall be deemed to have complied with the property qualifications mentioned above who has stock, shares or ownership in any corporation, firm, or co-partnership which has property in the district, as shown by the last county assessment, and not assessed by the sheriff, on which said corporation, firm, or co-partnership pays a tax, even though his, or her, individual name does not appear upon the tax roll.

Method of Enumeration

It does not appear that any specific directions are given to the enumerators for the purpose of simplifying the procedure for obtaining the required information, or of securing uniformity in the age data. Each enumerator is left to his own devices as to the most economical and productive working plan. He is expected to find all of the census children in his district and to classify them into the indicated age groups. In consequence of this absence of a defined method some considerable varia-

tion in the completeness and the accuracy of the enumerations in the several sub-districts might be expected.

Cost and Report

The enumerators are paid at the rate of three cents per name in the thickly populated districts, and five cents per name in the outlying and scattered districts. The expense thus incurred, according to the financial report of the school clerk, amounted to \$1,901.38* in 1910-11, and to \$2,087.56* in 1911-12. The census exhibit presented by the school clerk in his annual report is in the following form:

CENSUS DATA **

The census for 1911 shows as follows:

Males between the ages of 4 and 20 years.....	19,712
Females between the ages of 4 and 20 years.....	20,245
Total	39,957
Divided as follows:	
Ages 4 and 5	5,098
Ages 4, 7, and 15 to 19, inclusive	16,874
Ages 8 to 14, inclusive	17,985
Deaf and blind included in above:	
Deaf children enumerated	26
Blind children enumerated	4
Legal school voters:	
Total voters enumerated	28,722

Critical Statement

The circumstances under which this section of the report has been prepared have not permitted that careful and detailed examination and checking of the methods followed by the census enumerators necessary for making any criticism of the effectiveness of the present system for securing a proper census of all children of school age in the school district. It is clearly recognized that the present general plan of taking the school census as well as its itemized character are determined by state statute. In consequence, the school officials of the city are not entirely responsible for certain limitations of both plan and method. Nevertheless, so firm are we in our belief in the importance of the school census to the enlarging educational inter-

* These amounts are taken from the details of disbursements for the fiscal year ending June 30.

** Thirty-ninth Annual Report, p. 18. In 1912 the school census had increased to 43,121.

ests of the city that the following recommendations are considered appropriate:

RECOMMENDATIONS

1. *Need of a Permanent and Continuous Census*

Manifestly the first purpose of the census is to obtain a complete enumeration of the children of legal school age. The rapid growth and expansion of the city with the resulting large shifting of the population present a difficult obstacle to such an enumeration. The time of the year at which the census is taken (November) is most favorable from the point of view of the permanence of residence of the city's population. The school authorities have sought to correct and supplement the November census by requiring the parent or guardian to fill out for each child entering school a so-called "Census Form," giving the name and residence of the child, month, year and place of birth, the date of the last successful vaccination, and one or two other minor items. These "Census Forms" form a check list in each school for the existing as well as the next school census.

The "Census Form" represents the first step in the making of a permanent and continuous census. Notwithstanding the evident difficulties and the increased expense, every city should at all times be in possession of a complete card list of all of the children of school age residing within its limits and subject to the general educational regulation of the state. This list should be in such form as to enable the school officials to know at all times the school whereabouts of every child of legal school age. Whenever a family changes its place of residence within the city a legal requirement of notifying school authorities should be enforced, if necessary with appropriate penalties. Proper cooperation of police, landlords, charity organizations, school teachers and principals, and the child-labor officials, will make it possible for the city to have an accurate and complete census at all times. This permanent and continuous list then may be used to check the legal census now required by the statutes of the state.

2. *Enumerators*

The employment of school principals for the taking of school census appears to us in the absence of a properly organized attendance department to be a good plan. This service guarantees a higher degree of intelligence and a readier adaptation to circumstances than would be possible with special, intermittent enumerators. Under the plan of a permanent census suggested in the preceding comment, the annual enumeration now required by law would develop into making corrections and additions to the permanent list. These corrections and additions would then best be made by the attendance officers suggested for appointment in the recommendation presented at the con-

clusion of this section of our report. In any event, whether the temporary annual plan of the census is followed, or a permanent and continuous census established, the enumerators should receive far more detailed and definite instructions than are now given.

3. Cost

In the absence of any reliable and definite report of the expense for this item in other cities, it would seem that the expense of the census in its present form (about 5 cents per capita) is a reasonable one.*

4. Report of Census Returns

While the chief purpose of the school census has been to discover the number of school children in the city, it is our judgment that there are other and more important ends which should be recognized.

In the first place, the annual tabulated summary of the census should be much more detailed than the one now published. Instead of showing merely three age groups, as called for by the state, the number of boys and girls *for each year* group, 4 to 19, inclusive, should be exhibited. Such an exhibit, when compared with a similar one of school attendance, would reveal a number of highly important facts as to school population and school attendance, as to private and parochial school attendance,** withdrawals from school, children of school age employed, needed school accommodations, etc. These important items have no place in the account that the school system now keeps with the children of the city.

* The only investigation of the subject of the school census in cities that has been made (*Regulation of City School Children*—Haney, J. D., New York, 1910), brings out the lack of our knowledge as to the cost of the school census. In some states a per capita limit is placed. For such states the medium cost is about 4 cents per child. The United States Bureau of Education, in its annual elaborate exhibit of fiscal statistics of city school systems, groups the expense for school elections and school census as one item.

** For instance, the report of the 1911 census shows 17,985 children of 8 to 14 years, inclusive (the compulsory education limit up to the amendment of 1911). The latest printed record of the age of pupils attending public schools is that found on p. 29 of the annual school report in a table "Showing Age of Pupils in Different Classes for Term Ending June 18, 1912." Elementary schools only are included. The reports of the several high schools are silent as to the very important item of the distribution of the ages of pupils. However, this table shows 16,048 pupils of the ages of 8 to 14, inclusive. The unanswered question is, *Where are the two thousand children of these ages apparently not in school according to this record?*

In other words, the school census should be something more than a mere counting of children. It should be one of the principal instruments of an effective school government that seeks to know the full extent of its responsibility to the community.

(2) COMPULSORY EDUCATION

Legal Provisions Concerning Compulsory Education

The Compulsory Education law of the state (Lord's Oregon Statutes, sections 4119-4134, as amended by Chap. 243, Laws, 1911) requires the parent or guardian of any child between and including the ages of nine and fifteen years of age to send such child to the public schools for a term of not less than the number of months of public school held annually in the district of residence. This law makes the usual exceptions as to children attending private or parochial schools, children who have completed the elementary schools, and children physically unable to attend school. The school board of the district of the first class is required to provide truant officers, either by requesting the police authorities to detail one or more members of the police force to perform the duties of truant officers, or by appointing its own truant officer. By the specific provision of the law, truant officers are required to notify parents or guardians of children not attending school, to file court complaints against such parents or guardians, if necessary, and to investigate all cases of truancy or non-attendance at school.

By the provisions of the Child Labor law (Chap. 183, Laws, 1911) of the state, attendance at school is compulsory for children between the ages of nine and fifteen years, during the whole of the school term in the city, town or village of residence, and also for children between the ages of fifteen and sixteen years who are not legally employed in some useful work. To be legally employed, a child must have a child-labor permit. The responsibility for the enforcement of the child-labor law rests upon the Board of Inspectors of Child Labor, the secretary of which issues the child-labor permits. Quite obviously, the bulk of the work of the enforcement of the child labor law is in Portland. Consequently the office of the secretary of the board is located there.

These two laws, the Compulsory Education Law and the Child Labor Law, are complementary efforts to secure to all the children of the community the benefits of a minimum amount of schooling during that period of life when the schooling can be made most effective. The school census is the common ground upon which their enforcement rests, and truant officers are responsible to the provisions of both laws, which are to be classed among the best in the country.

Enforcement of School Attendance

The Board of School Directors for Portland has complied with the provisions of the Compulsory Education Law to the very moderate extent of appointing one truant officer, to whom an annual salary of \$1,370 is paid. Under the rules of the Board (p. 28) the truant officer is under the supervision of the City Superintendent of Schools, during the time schools are in session, performing the duties imposed upon him by statute; during other times he is under the supervision of the School Clerk. Besides the enforcement of the Compulsory Education Law, the truant officer has all cases of the attendance upon school of vermin-infected, or uncleanly pupils (par. 100, Chap. 5, Laws, 1911), trespassing on school property, vandalism, improper use of school premises, stealing, immorality, poverty, and tobacco-using among school children.

The school census of 1912 showed 43,121 children of school age in the district. The enrollment in the fifty-seven public schools during the spring term of 1913 was 31,265. No data are available as to the enrollment of private and parochial schools, which are approximately twenty-four in number.

The amount of work necessary properly to enforce the Compulsory Education Law is altogether beyond the capacity of a single officer. The present truant officer reports that on account of the amount of his work, it is impossible for him to handle any but the most pressing cases of truancy and non-attendance. Moreover, he is without adequate clerical assistance, and is obliged to keep practically all of the truancy records himself.

Records and Reports

The school law defines irregular attendance as "eight unexcused one-half day absences in any four weeks the school may be in session" (L. O. L., Sec. 4129). It has not been possible during the Survey to determine the extent to which principals and teachers comply with this provision by reporting cases to the truant officer. The number of cases of irregular attendance for 1912-1913 (49) seems to be very small, in spite of the high per cent of attendance reported for the city (96.1).

The individual record of cases kept by the truant officer is as complete as could be expected in the absence of proper clerical assistance.

A better organization and operation of the attendance department would naturally result in the improvement of the records, especially in the matter of "following up" cases after the initial disposition.

Truant Officers' Record

No.....	Age.....	Date.....
Name of child.....	Grade.....	Mentality.....
Address.....	By whom made.....	
Parent's name.....		
School.....		
Date of complaint.....		
Nature of complaint.....		
Disposition of case.....		

TABLE 25

Truant Officer's Records

The truant officer submits to the school board each month, giving in itemized detail, a report of his work. At the close of the year a similar report for the entire year is presented. It has not been the practice to include this annual report of the truant officer in the annual school report, although it is unquestionably of greater importance than much of the material included. Consequently the following statement of the classification and disposal of the 1400 cases handled by the truant officer for the school year 1912-1913 may properly be included here as evidence both of the amount and extent of the work undertaken.

Total number of truancy cases reported.....	342
Disposition of cases:	
Warned and returned to school.....	222
Reported to the Juvenile Court as wards.....	38
Transferred to other schools.....	4
Reported to the Associated Charities and Child Labor Commission.....	2
Removed from the city.....	3
Brought before the Juvenile Court and returned to school.....	7
Brought before the Juvenile Court and sent to the Frazier Home.....	19
Parents brought before the Justice Court.....	1
Brought before the Juvenile Court and committed to the Oregon State Training School.....	3
Brought before the Juvenile Court and committed to the Boys' and Girls' Aid Society.....	3
Required to report at my office weekly.....	16
Disposition deferred.....	24
Total number of non-attendance cases reported.....	582
Disposition of cases:	
Warned and placed in school.....	345
Reported to the Juvenile Court as wards.....	32
Reported to the Associated Charities.....	6
Removed from the city.....	16
Brought before the Juvenile Court and sent to the Frazier Home.....	5
Brought before the Juvenile Court and committed to the Oregon State Training School.....	3

Parents brought before the Justice Court.....	4
Brought before the Juvenile Court and returned to school	4
Sickness and poverty found to be the cause of non-attendance	29
Reported to the Child Labor Commission.....	18
Labor permits secured	13
Special permits secured from the City Superintendent	2
Transferred to parochial schools.....	8
Reported to the British Aid Society.....	1
Disposition deferred	96
Total number irregular attendance cases reported.....	49
Disposition of cases:	
Warned and continued in school.....	29
Reported to the Juvenile Court as wards.....	7
Reported to the Child Labor Commission.....	2
Reported to the Associated Charities.....	1
Reported to the Boys' and Girls' Aid Society.....	2
Removed from the city.....	1
Disposition deferred	7
Total number cases of general misconduct.....	286
This includes incorrigibility, immorality, indecency, petty thievery, cigarette smoking, etc.	
Disposition of cases:	
Warned and continued in school.....	135
Reported to the Juvenile Court as wards.....	42
Removed from the city.....	5
Returned to the Oregon State Training School as wards	5
Reported to the Oregon State Training School as wards	1
Brought before the Juvenile Court and sent to the State Training School	8
Brought before the Juvenile Court and sent to the Frazier Home	20
Reported to the Juvenile Court for investigation..	4
Reported to the Associated Charities.....	1
Brought before the Juvenile Court, and escaped..	1
Brought before the Juvenile Court, and continued in school	19
Transferred to other schools.....	1
Required to report to the office weekly.....	18
Taken before the Juvenile Court and remanded to the Circuit Court	1
Reported to the City Health Department.....	2
Transferred to parochial schools.....	5
Reported to the Police Department.....	1
Removed from school and labor permit secured..	1
Taken before the Juvenile Court and committed to the Boys' and Girls' Aid Society.....	1
Disposition deferred	15
Total number cases of trespass reported.....	42
Disposition of cases:	
Children warned and parents notified.....	35
Police Department notified	1
Disposition deferred	6

Total number cases children found on streets.....	89
Disposition of cases:	
Placed in school	68
Removed from city	3
Reported to the Child Labor Commission.....	4
Labor permits secured	5
Transferred to other schools.....	3
Physician's certificates secured	1
Disposition deferred	5
Total number cases of poverty reported.....	9
Disposition of cases:	
Reported to the Juvenile Court as wards.....	1
Reported to the Associated Charities.....	8
Total number cases of filth, pediculosis, etc., reported	2
Disposition of cases:	
Health office notified	1
Parents notified and warned.....	1
Total number cases reported to the Child Labor Commission	34
Total number cases reported by the Child Labor Commission	60
Visits to the Juvenile Court in prosecution of cases.....	38
Visits to homes for investigation of cases.....	340
Visits to schools	327
Legal notices, letters of warning and other communications sent	586
Special investigations	15
Visits to the Justice Court	3
Total number of wards reported to the Juvenile Court.....	117
Total number children brought before the Juvenile Court and returned to school	29
Total number children sent to the Frazier Home.....	44
Total number children sent to the Oregon State Training School through the Juvenile Court	19
(Part of these have been wards of the Oregon State Training School and have been returned to that insti- tution.)	
Total number children committed to the Boys' and Girls' Aid Society by the Juvenile Court	4

The 1,400 cases reported to this office during the past year directly concern 1,618 children.

During the year investigations of 153 cases have been deferred, owing to lack of time. Of these, 135 have been disposed of. This leaves 18 cases of which no disposition has been made.

Certain features of the monthly and annual reports of the truant officer are open to some criticism. No provision seems to be made in this report for carrying forward and reporting upon the "Disposition deferred" cases. Again the details relative to disposition are incomplete and misleading. The really significant question to be answered relative to the 342 truancy cases reported during 1912-1913 is how many truants were actually returned to school (was this the case of the child or children of the one parent brought before the Justice Court or of those children (16) required to report to the truant officer each week?)

and the character of the attendance thereafter. However, these and other important questions could be promptly and completely answered only by an attendance department organized and conducted on a broad *educational* basis.

Critical Comment

With the wholly inadequate facilities now provided, it would be unfair to the present officer to criticise his methods of work or to contrast them with those of a properly organized attendance department. It is evident that the Board of School Directors has forgotten that Portland is no longer a small, compact town, the school attendance affairs of which could be cared for by one officer, and has been unwilling to take measures to secure that quality of regular attendance upon the public schools demanded alike by the Compulsory Attendance Law and for the most economical use of the educational advantages of the school system. The attendance department, as represented by the single truant officer, has been regarded almost wholly from the narrow point of view of its police function, that is, of caring for the more aggravated cases of non-attendance. The larger and far more important function of such a department is that of disclosing and treating the causes that underlie truancy, irregular attendance, incorrigibility and early withdrawal from school. The defects of the present "police" position of the attendance department have been again and again indicated to the Board of School Directors in the reports of the truant officer. In particular has he called attention to the necessity of making proper provision for delinquent and incorrigible children. This necessity has been fully supported by the records of his own office, as well as the records of the Juvenile Court. In view of the recognized importance of the regular attendance of children upon school as a large factor for the most economical and effective utilization of the facilities of the public school system of the city, and in view of the existing situation in American cities which demonstrate the necessity of constant and competent oversight as a condition of regularity, we recommend:

RECOMMENDATIONS

1. That there be created in the school department a bureau or division of school attendance, at the head of which shall be an officer known as the Superintendent of School Attendance; that at least five attendance officers be appointed for service under this superintendent, for the oversight and betterment of school attendance in general, for the enforcement of the Compulsory Education Law, and those parts of the Child Labor Law for which truant officers are responsible, and for general out-of-school supervision of incorrigible and delinquent children.

2. That the taking and care of the school census records of the city be placed under the charge of the Superintendent of Attendance.

During 1911-1912, Portland's position among certain cities in the country, for which information is available, concerning the expense of the enforcement of compulsory education and truancy laws, may be exhibited by the following figures, showing the expenditures for this purpose per thousand enrollment in elementary schools:

Cambridge (Mass.), \$272; Denver (Colo.), \$207; Louisville (Ky.), \$200; Kansas City (Mo.), \$172; Oakland (Cal.), \$141; Providence (R. I.), \$122; Minneapolis (Minn.), \$106; Omaha (Neb.), \$102; Spokane (Wash.), \$76; Portland, \$45.

Portland needs to increase both the dignity and the expense for its school attendance department.

Chapter XVI

RECORDS AND REPORTS*

(Elliott)

Record of Board Proceedings

The minutes of the proceedings and the memoranda of the transactions of the Board of School Directors and its committees are recorded by the School Clerk promptly and in complete and satisfactory form. Moreover, the conduct of the affairs of the Board is greatly facilitated by the efficient mechanical preparation of all matters brought before it or its committees for consideration. While the mechanical procedure for making and caring for the records of Board and committee actions is entitled to approval, the question naturally arises in a school system of this size whether or not the minutes of the proceedings of the Board and the memoranda of its principal transactions should not be regularly and systematically printed. This would enable all the members of the Board to have ready and convenient access to the record of past actions, and furthermore would encourage a wider appreciation on the part of citizens of the functions and activities of the Board.

At any rate, the written (typewritten) minutes and memoranda should be more fully indexed and cross-referenced than under the present plan. While practically the Clerk is now able, through his constant and intimate participation in the affairs of the Board, to serve as a reliable source of information relative to previous actions of the Board, these records should be in a form independent of any single officer for their proper usefulness.

The Annual Report

The Board of School Directors complies with the legal requirements imposed upon school boards in districts of the first class, "to make an annual printed report to the tax-

* The official recorded proceedings of the Board of Education for the past year have been examined in detail. In connection with the presentation of the critical estimate relative to the annual report of the Board of School Directors, the annual reports for the past ten years—Thirtieth (1902-1903) to Thirty-ninth (1911-1912), inclusive), have been reviewed. For a complete list of the administrative forms and blanks submitted for examination, see pp. 300-2. Opportunity has not been sufficient during the Survey to make a critical estimate of the forms and blanks belonging to other departments than the educational department.

payers of said district" (Lord's Oregon Statutes, Sec. 4102). This annual report is usually issued during the summer and, though indicating on the title page as being for the year ending with the close of school in June, contains the School Clerk's report, addressed to the legal voters, for the year ending December 15th; the School Director's report, addressed to the taxpayers, and submitted to an annual meeting generally held during the last week of December, and the report of the Superintendent of Schools, addressed to the School Board, for the annual school year ending in June.

Contents of the Annual Report

The following enumeration of the principal items contained in the school report for 1911-1912 is typical of these reports for the past decade:

School Clerk's Report. (2 pages.)

A brief itemized statement of receipts, disbursements and indebtedness for the past year; and a tabulated summary of the school census. Appended is a formal statement of the special auditing committee.

School Director's Report. (4 pages.)

A brief commentary upon matters concerning chiefly finance and the school plant, together with an estimate of expenditures for the coming year.

Superintendent of Schools. (47 pages.)

As a "report of the condition and progress of the public schools" contains: annual and monthly statistical tables of enrollment, attendance, and discipline; ages of pupils in different classes of elementary schools, nativity of pupils, number of teachers. (10 pages.)

Tabulated statement showing name, place of graduation, years of experience, years in Portland schools, certificate held, school and grade of position of teachers employed during the year. (19 pages.)

Name of pupils promoted from the grammar grades to the high school during the year. (10 pages.)

High school graduates and commencement programs (8 pages.)

Appendix to Superintendent's Report. (13½ pages.)

Reports of principals of high schools. Confined exclusively to a statement of the enrollment in the several courses and subjects, together with the number of credits attempted and the number earned during the year and the number of graduates. (4 pages.)

Schedule of teachers' salaries. (1 page.)

Corps of teachers for 1912-1913. (7½ pages.)

School calendar for 1912-1913 and announcements as to teachers' meetings and teachers' examinations. (1 page.)

Clerk's Supplementary Reports. (43 pages.)

Boundaries of school district. (1 page.)

Boundaries of sub-districts. (14 pages.)

List of Text Books used in high and elementary schools. (2 pages.)

- Tabular statement relative to school buildings; date of construction, number of rooms, heating, cleaning, and fire systems. (6 pages.)
- Location, description and area of property owned by school district. (4 pages.)
- Estimated cash value of property owned by school district. (1 page.)
- List of school directors and officers since 1851. (2 pages.)
- School janitors for 1912-1913. (1 page.)
- Schedule of janitors' salaries. (½ page.)
- Number of teachers of different grades of position, June 30, 1912. (½ page.)
- Comparative statement of receipts and disbursements, 11 years. (1 page.)
- Number of teachers employed in each school, classified according to salary paid. (2 pages.)
- Sundry statistical and financial statements and supplementary memoranda. (7 pages.)
- Index.* (2 pages.)
- Insert.* Showing complete detail of disbursements by items and by schools for year ending June 30, 1912.

With the possible exception of the financial statements* this annual report of the public schools has remained substantially the same in form and scope during the past ten years. During that time, (excepting for 1906-1907 and 1911-1912), these reports have also contained the detailed outline of the courses of study in elementary and secondary schools. (195 pages, 1910-1911.) The several items given in the Clerk's supplementary report noted above are to be found only in the last two annual reports.

The Annual Report is not a *report* within the proper meaning of that word. It has become merely a mechanical *record* of only certain features of the formal operation of the school system. It gives no evidence that the school authorities have been influenced by the widespread movement of recent years for the betterment and increased usefulness of such reports.

Functions of the Annual Report

The annual report of the public school system should be in such form and content as to serve for a ready means for community publicity as to the real progress and performances of the schools, and as an effective instrument for stimulating the citizens of the school district to action for meeting the demonstrated needs of the schools. It should be the chief means of communication between the people and their authorized officials as to the conduct of public school affairs. The report should stand not only as permanent evidence of the honesty of that conduct, but as a mark of the capacity of the Board and its officers to serve as educational

* See p. 300.

leaders in the community. People in this day are not affected in their attitude toward education except in a merely passive way by perfunctory testimony as to the honest conduct of public affairs. The people of the modern city need, for the best development of the educational system, that stimulation that comes from public-spirited, earnest, energetic, far-sighted boards and officials, capable of causing them to understand the meaning and possibilities of the public schools. Only thus will there be developed a right quality of confidence and a proper degree of public co-operation on the part of the people. Upon such confidence and co-operation the public schools are ultimately built. Complacency is not confidence. Proper concurrence in official action is not popular co-operation by the people in that action.

The present annual report is not an effective report because it is chiefly a collection of cold, conventional facts, loosely arranged and presented in a purely formal manner, and without any indication of their vital relationship to the efficiency or growth of the educational system. If the people of Portland have been slow in their response to the increasing and enlarging needs of the school system, this is due in part at least to the failure of the responsible school authorities to emphasize their educational stewardship of children. The educational records must deal, first of all, with children and their education. There is no value in accounting for the expenditure of public money for public schools unless that accounting is accompanied by a demonstration of results and products. The difficulty is not with the financial accounts, but with the educational accounts. They are inadequate because the blanks for the gathering of data and information have not been designed to record the real educational experience of the schools. This experience must be recorded before it may be reported and interpreted for the guidance and increased intelligence of the citizens of the community. In other words, Portland's school accounts keep track of dollars, rather than of children.

Record Forms and Blanks

The numerous statistical forms and administrative blanks listed on pages 300-2 of this section of the report are easily separable into two general groups:

- a. Those of a temporary or routine character, devised and employed primarily to expedite the operation of the existing machinery of the school system; to adjust this machinery to the established practices and customs of the outside business world; to save time and to check honesty.
- b. Those of a more special and permanent character, used primarily for the determination of the educational

efficiency and productivity of the school organization; and therefore, as a possible basis for the betterment of the machinery and the control of the machinery of the school system.

By far the larger number of the records and reports now used in both the business and educational departments belong to the first group. Our general estimate, after an examination of all of the forms and blanks is, that there are too many of them; that too much importance is given to trivial and unessential operations. The teachers and principals are required to devote too much time and energy to the making of records and reports which are not and cannot be used for the purpose of checking the results of teaching and promoting the improvement of the educational system of a city.

It is obviously beyond the immediate intent and purpose of this Survey to make a minute, critical analysis of the several statistical forms and administrative blanks. More useful, perhaps, would be some indication as to what fundamental records of the operation of the school system should be kept and reported. The particular forms and devices for obtaining the necessary data can then be more effectively determined by the active supervisory and inspecting staff.

Fundamental Educational Records Needed

The weakness of the present system may be said to lie in the absence of those statistical records that enable educational officials to determine the extent to which the educational system actually serves the purpose of economically educating all the children of the community. As a conspicuous instance of this it may be pointed out that since 1897 Portland has had a distinctive scheme of classification and promotion of pupils in elementary schools. Each year the superintendent of schools has presented a table showing the enrollment and ages of pupils in each of the several groups and divisions. Nowhere is there to be found a record of the promotions and failures of pupils, indicative of the advantages of this scheme.

What fundamental items should the *educational* accounting or recording plan of the city contain? The following are suggested for consideration. (Those indicated by an * are not now provided for in the existing system of records.)

*1. A complete, accurate, and continuous school census, tabulated and summarized so as to show the number of children residing in each sub-district by sex, for each year-age group between four and nineteen years, inclusive; the number of boys and girls of each age attending public, private, and parochial schools; and the number between fourteen and

sixteen years of age not attending school, in possession of work permits, and the character of employment.

*2. An individual, cumulative card, providing for the record of the complete school career of every child; showing name, place and date of birth, name and occupation of parent or guardian, residence, date of admission to school, length of attendance, and date of promotion from each grade or class, condition of health, character of conduct and quality of accomplishment in each grade and class. (*This is the most fundamental of all the school records. From it all the collective statistical exhibits are developed.*)

3. Enrollment,* promotions,* non-promotions, by grades and schools.

4. Distribution of enrollment by ages and grades, or classes. (Present report gives this for elementary school only, and for but one term of the year.)

*5. Distribution of withdrawals by ages and causes.

6. Average daily attendance by schools.

*7. Distribution of attendance.

*8. Non-promotion by age, grade, and cause.

*9. Failures by studies and grades.

*10. Beginners, distributed by ages.

*11. Graduates, distributed by ages.

*12. Per capita attendance cost for each school properly distributed among the major items of expenditure, accompanied with proper explanation of increase or decrease from year to year.

*13. An individual, cumulative card, providing for the record of the teaching career of every teacher on the staff, showing name, age, residence, education and training, teaching assignments, and teaching success, as determined by supervisory and inspectorial officers.

It is not possible here to describe in detail the method of tabulating and summarizing necessary for a proper interpretation of such records.* This procedure has become a highly specialized work, and to be properly done should be under the care of a specially trained individual.

All of the findings developed from these records would not be printed each year. Some of them would be printed every two years, some every five years. When published, however, they would serve as definite, concrete evidence of the condition and progress of the public school system as a whole and of its several parts.

*For suggested forms of records and other pertinent explanations reference is made to the REPORT OF THE COMMITTEE ON UNIFORM RECORDS AND REPORTS OF THE NATIONAL EDUCATION ASSOCIATION, published by the Bureau of Education, 1912.

Financial Records

The school clerk has kept his records of the financial receipts and expenditures in accordance with that classification that has come to be regarded as the best and most approved. Portland, therefore, belongs to that relatively small number of cities able to make their financial report to the United States Bureau of Education according to the form and classification desired. A brief explanation of the procedure of the school clerk's office, as regards financial operations, is conclusive of the mechanical effectiveness which has been established there.

Recommendation

That there be established in connection with the office of Superintendent of Schools a division to be known as the Division of Statistics and Educational Investigation, to be under the charge of a director whose chief function will be to gather, in proper form, all of the necessary data concerning the operation of the school system that will enable the administrative and supervisory staff to evaluate the practices and methods of the schools, and to give to the people of the community a reasonable basis for an intelligent appreciation of the true worth of the results being obtained in and through the schools.

Report and Record Forms in Use

At our request, the school clerk and the superintendent of schools furnished us with copies of all of the various statistical, record, and routine blanks used in the educational and business departments. These are enumerated in the following lists:

1. By the Superintendent of Schools:

1. Application blank for new teachers.
2. Information for applicants for teachers' positions.
3. Letter of inquiry: Teachers' references.
4. Teachers' Certificates.
5. Teachers' Life Certificates.
6. Teachers' Reapplication Blank.
7. Teachers' Request for Change of Work.
8. Visit Report of Teachers.
9. Teachers' Final Certificate of Completed Service.
10. Form for Teachers' Names, Grades and Addresses.
11. Data for Teachers' Pay Roll.
12. Principals' Record of Teachers' Attendance and Tardiness.
13. Census Form.
14. Superintendent's Transfer for Pupils.
15. Principal's Transfer for Pupils.
16. Principal's Suspension Notice to Parents.
17. Principal's Suspension Notice to Superintendent.
18. Pupil's Reinstatement Blank.

19. Book List and Price List—Elementary Schools.
20. Book List for High Schools.
21. Pupil's Report Card for Primary Grades.
22. Pupil's Report Card for Grammar Grades.
23. Pupil's Report Card for High Schools.
24. Teacher's Monthly Report of Attendance of Pupils.
25. Nativity of Pupils.
26. Teacher's Semi-Annual Report for Promotion of Pupils.
27. Result Sheet (i. e., Report of Pupils' Monthly Standings).
28. Report on Number of Pupils Belonging to Various Classes.
29. Principal's Annual Report of Enrollment and Attendance.
30. Desk Seating Report.
31. Annual Summary of Enrollment and Attendance.
32. Fire Drill Report.
33. Requisition Blank for Principals.

2. *By the Truant Officer:*

1. Truant Officer's Record (of individual cases investigated).
2. Special Report by Principal of Pupil to Truant Officer.
3. Extract from Oregon School Laws, 1911,—Unsanitary Pupils.
4. Extracts from Oregon Compulsory Education Laws and Child Labor Laws for Information of Parents.
5. Extract from Child Labor Laws.
6. Legal Notice by Truant Officer to Parents.
7. Physician's Certificate,—Compulsory Education.

3. *By the Manual Training Departments:*

1. Time Report of Instructor.
2. Monthly Report of Pupil's Work.
3. Monthly Report to Principal of Pupil's Attendance.
4. Equipment Report.

4. *By the Superintendent of Property:*

1. Register of Drawings.
2. Daily Time Report.
3. Drawing Receipt.
4. Progress Report.
5. Form of Agreement with Contractors.
6. Cost Record—Plans, Specifications and Superintendence.
7. Announcement and Instructions to Bidders.
8. Standard Form of Contract.
9. Shop Order.
10. Directions for Care of Blackboards.

5. *By the Purchasing Agent:*

1. Stock Card.
2. Receipt for Goods from Stock Room.
3. Receipt for Goods from Stores.
4. Requisition for Purchases.
5. Order for Supplies.
6. Order for Repair Material.
7. Emergency Order.
8. Store Room Daily Report to Clerk.

6. *By the School Clerk:*

1. Employees' Pay Roll, Distribution of Charges.
2. Employees' Pay Roll, Receipt for Salary.
3. Employees' Daily Report.
4. Janitor's Reapplication.
5. Janitor's Application (new).
6. Janitor's Notice of Election.

7. Janitor's Letter of Inquiry Regarding Qualifications, etc.
8. Janitor's Data for Pay Roll.
9. Insurance, Record of Agents.
10. Insurance, Record of Companies.
11. Special Form to be Attached to Insurance Policies.
12. Insurance Application.
13. Election: Notice to Judges and Clerks.
14. Election: Acceptance of Judges and Clerks.
15. Election: Notice of Place.
16. Election: Acceptance of Place.
17. Election: Tally Sheet.
18. Election: Instructions to Judges and Clerks.
19. Census, Instructions.
20. Census, Summary.
21. Census Form.
22. Teachers: Notice of Election (day).
23. Teachers: Notice of Election (night).
24. Teacher's Acceptance.
25. Teacher's Excuse for Absence or Tardiness.
26. Teacher's Notice of Receipt of Excuse.
27. Supervisor's Registration (service) Card.
28. Record of Certification and Service—Teacher's.
29. Notice of Retirement Fund.
30. Report of Teachers' Certificaties.
31. Permit by Parents for Use of Machinery by Pupils in Manual Training and Trade Schools.
32. Teacher's Monthly Pay Roll.
33. Superintendent's Certification of Pay Roll.
34. Order for Teachers' Salaries.
35. School Property Reports (monthly).
36. Supply Returns.
37. Tuition Notice.
38. Pay Roll Claim Sheet.
39. Bill Head.
40. Letter Accompanying Voucher.
41. Letter Accompanying Draft.
42. Voucher.
43. Nature of Claim Allowed.
44. Nature of Board and Committee Meetings.
45. Program—School Directors' Meeting.
46. Committee Report.
47. Clerk's Monthly Financial Statement.
48. Directory—Board of School Directors.
49. Daily Cash Statement.
50. Principals' Oral Reports.
51. Garbage Receipt.
52. Standard Form of Contractor's Bond.
53. Indemnifying Bond.
54. Option.
55. Depository Bond.
56. Auditing Committee Monthly Report.

Limitations of time have prevented any complete and detailed critical examination of those forms from the business department.

Chapter XVII

COSTS OF THE SYSTEM OF EDUCATION

A Fundamental Assumption

The members of the Survey staff have, from the first, assumed that what the taxpayers and citizens of Portland were most interested in was, not primarily how they could reduce the present expenses for education, but how they could obtain a better school system for the money they now spend, or for such additional and reasonable sums as might seem to be wise to spend. We have not for a moment assumed that a community, composed of such an intelligent class of people as is found in Portland, would be short-sighted enough to want to stop the development of their schools in order to try to save a little money. The economic loss to the city by the deflection of people of means and intelligence to the cities of Washington and California, which would inevitably follow the adoption of such a plan, would greatly outweigh any possible saving which might be effected. The surest means by which the city may retain its present high standing and its position of supremacy in its territory is for it to spend money liberally to keep its schools abreast of the changing educational needs. This the Survey staff has from the first assumed to be the wish of the people, and such a purpose has also been assumed to have been the actuating motive with the taxpayers of the district, assembled in meeting, when they adopted the resolution authorizing and creating the School Survey. The members of the Survey staff have kept this belief in mind in all their consideration of the problem, and in making the numerous constructive suggestions contained in the different chapters of this report.

In a number of the preceding chapters the question of additional costs has been considered, and it does not seem necessary further to expand the treatment here. To these preceding chapters the reader is referred for a more detailed statement as to needs, and reasons therefore, and only summaries will be presented here. Instead, this chapter will be devoted to a consideration of only two things: (1) What is the relative rank of the district now in the matter of school expenditures? and (2) Can the district reasonably afford to spend more money on its schools than it now does?

Returning to the reports of the U. S. Census Bureau, for the 1910 census of the United States, used at length in compiling the tables given in Chapter VI, and taking the same 37 American cities used there (see Table 4, p. 70), which in 1910 had between 100,000 and 350,000 inhabitants, and compiling the costs for education for each of these, we get the following tables. These show the comparative costs for the maintenance of schools for the different cities, and Portland's position in the list.

(1) RELATIVE RANK OF THE DISTRICT IN SCHOOL EXPENDITURES

Comparative Per Capita Costs

The first of these tables shows the rank of the city in the cost for education, measured per capita of the total population. Portland is here seen to be in a middle position, there being 18 cities which spend more, and 18, of which seven are Southern, which spend less. The per capita expenditure in Portland is also seen to be below the average for all cities of 30,000 or over in the United States.

TABLE 26

Expenditures for Schools Per Capita of the Total Population

1. Washington, D. C.....	\$6.27
2. Newark, N. J.....	5.79
3. Denver, Colo.	5.49
4. Spokane, Wash.	5.46
5. Worcester, Mass.	5.39
6. Minneapolis, Minn.	5.35
7. Seattle, Wash.	5.29
8. New Haven, Conn.....	5.12
9. Cambridge, Mass.	5.01
10. Omaha, Neb.	4.74
11. Syracuse, N. Y.....	4.56
12. Rochester, N. Y.....	4.51
13. Providence, R. I.....	4.51
14. Grand Rapids, Mich.....	4.48
15. Toledo, Ohio	4.46
16. Dayton, Ohio	4.32
17. Kansas City, Mo.	4.31
18. Indianapolis, Ind.	4.30
19. PORTLAND, ORE.	4.29
20. Scranton, Penn.	4.27
21. Columbus, Ohio	4.21
22. Jersey City, N. J.....	4.14
23. Paterson, N. J.	4.09
24. St. Paul, Minn.....	4.04
25. Oakland, Cal.	4.03
26. Albany, N. Y.....	3.98
27. Fall River, Mass.....	3.95
28. Lowell, Mass.	3.89
29. Los Angeles, Cal.	3.77
30. Louisville, Ky.	3.38
31. Bridgeport, Conn.	3.01
32. New Orleans, La.	2.89
33. Memphis, Tenn.	2.88
34. Nashville, Tenn.	2.62
35. Richmond, Va.	2.34
36. Atlanta, Ga.	2.32
37. Birmingham, Ala.	2.07
38. Average, all cities 30,000 or over.....	4.62

Since some cities have many children in the total population and others few (see Table 8, p. 77), the percentage of the

total population which is under fifteen years of age varying, for the 37 cities studied, from 18.8% for Portland to 32.3% for Fall River, Mass., with an average of 27.3% for all cities in the United States, the above table is recalculated, in the one which follows, to show the comparative cost of schools for each of the 37 cities for each person in the total population, after excluding all persons under 15 years of age from the count. Due to its small number of children, Portland now drops from nineteenth to twenty-sixth in the list. Of the 11 cities which spend less, two are rich Western cities, one is a poor Eastern city, and six are Southern cities.

TABLE 27

Cost for Schools for Each Person in the Total Population Fifteen Years of Age or Over

(Calculated from Tables 26 and 8)

1.	Washington, D. C.	\$8.29
2.	Newark, N. J.	8.23
3.	Denver, Colo.	7.52
4.	Worcester, Mass.	7.39
5.	New Haven, Conn.	7.15
6.	Spokane, Wash.	7.11
7.	Minneapolis, Minn.	6.98
8.	Cambridge, Mass.	6.94
9.	Seattle, Wash.	6.60
10.	Omaha, Neb.	6.39
11.	Scranton, Pa.	6.29
12.	Grand Rapids, Mich.	6.14
13.	Providence, R. I.	6.11
14.	Toledo, Ohio	6.07
15.	Syracuse, N. Y.	6.02
16.	Rochester, N. Y.	5.96
17.	Jersey City, N. J.	5.96
18.	Fall River, Mass.	5.84
19.	Paterson, N. J.	5.77
20.	Dayton, Ohio	5.72
21.	Indianapolis, Ind.	5.61
22.	Kansas City, Mo.	5.47
23.	Columbus, Ohio	5.45
24.	St. Paul, Minn.	5.38
25.	Lowell, Mass.	5.31
26.	PORTLAND, ORE.	5.28
27.	Oakland, Cal.	5.20
28.	Albany, N. Y.	5.14
29.	Los Angeles, Cal.	4.72
30.	Louisville, Ky.	4.51
31.	Bridgeport, Conn.	4.14
32.	New Orleans, La.	4.08
33.	Memphis, Tenn.	3.75
34.	Nashville, Tenn.	3.59
35.	Atlanta, Ga.	3.20
36.	Richmond, Va.	3.17
37.	Birmingham, Ala.	2.92
38.	Average, all cities 30,000 or over.	6.33

The table which follows next makes the same recalculation to determine the cost, measured now only for each adult male (21 years or over) in the total population, for each of the 37 cities. Measured on this basis, due to its large excess of adult males (see Table 6, p. 74), Portland now drops to thirty-first place in the matter of expenditure for schools, five Southern cities and one poor Eastern city alone spending less per adult male.

TABLE 28

Cost for Schools for Each Adult Male

(Calculated from Tables 26 and 6)

1. Newark, N. J.....	\$20.75
2. Washington, D. C.....	20.03
3. Cambridge, Mass.	17.34
4. Worcester, Mass.	17.28
5. New Haven, Conn.....	16.89
6. Denver, Colo.	16.29
7. Minneapolis, Minn.	15.33
8. Scranton, Pa.	14.98
9. Fall River, Mass.....	14.95
10. Grand Rapids, Mich.....	14.69
11. Providence, R. I.....	14.64
12. Toledo, Ohio	14.25
13. Spokane, Wash.	14.15
14. Rochester, N. Y.....	14.14
15. Syracuse, N. Y.....	14.00
16. Paterson, N. J.	13.91
17. Jersey City, N. J.....	13.71
18. Omaha, Neb.	13.68
19. Lowell, Mass.	13.23
20. Dayton, Ohio	13.17
21. Indianapolis, Ind.	13.10
22. Columbus, Ohio	12.57
23. Seattle, Wash.	12.33
24. Kansas City, Mo.....	12.25
25. Albany, N. Y.....	12.17
26. St. Paul, Minn.....	12.03
27. Oakland, Cal.	11.23
28. Louisville, Ky.	11.19
29. Los Angeles, Cal.....	10.47
30. New Orleans, La.....	10.07
31. PORTLAND, ORE.	10.00
32. Nashville, Tenn.	9.39
33. Bridgeport, Conn.	9.32
34. Memphis, Tenn.	8.52
35. Atlanta, Ga.	8.07
36. Richmond, Va.	8.01
37. Birmingham, Ala.	6.74
38. Average, all cities 30,000 or over.....	14.76

These three tables show how relatively lightly the expense for education rests on Portland. Good schools, the best schools in fact, could be maintained in Portland with ease. The rank of Portland, in per capita expense, low as it is, is still much

higher than it would be if any allowance were made for the much higher salaries paid teachers in the West. If Portland paid as low teachers' salaries as the Eastern cities do, it probably would go to the bottom of the list in comparative expenditures.

Cost per Pupil Educated

The low per capita expenditures, shown in Tables 27 and 28, are in large measure due to the extremely small number of children of school age in the Portland district, and not to a low expense per child educated. In fact, in this respect, the city averages up very well with other Western cities, as is shown in Tables 29 and 30.

In attempting to calculate Tables 29 and 30 one is met with an important difficulty in obtaining data. Up to a very few years ago there were about as many systems of bookkeeping and calculating costs in use as there were city school systems. Less than three years ago the U. S. Bureau of the Census and the U. S. Bureau of Education agreed upon certain standard forms for city school accounting, and these forms have since been adopted by quite a number of our American cities. Naturally more small than large cities have adopted the new uniform plan, because the small cities have found it easier to rearrange their bookkeeping. Of the 37 cities so far used for comparisons, only about one-half have adopted these new forms, and rearranged their accounting methods accordingly. For that reason a comparison of costs between all of the 37 is impossible.

Still more, due to the larger salaries paid both teachers and janitors in the West, and the larger cost of both materials and service needed for annual operation and maintenance, a comparison of costs—per pupil—educated between two such cities as Birmingham, Ala., or Fall River, Mass., with their low teachers' salaries and large school classes, and Portland, Or., with its small classes and relatively high salaries for elementary teachers, is not of much value, because two entirely different types of school systems are compared.

Most of the Western cities, where maintenance costs are somewhat the same, have adopted the new system of accounting, and report separate costs, for different items and for different kinds of schools, to the U. S. Commissioner of Education. Portland has adopted this system of accounting, so that comparisons of cost between most of the Western cities, for both elementary and secondary schools, are now possible. Such comparisons are made in the two following tables, using Western cities of 25,000 or more inhabitants only, and using figures published last year for all.

TABLE 29

***Cost for Elementary Schools per Pupil in Average Daily Attendance*

(Calculated from data given in the 1912 Report U. S. Commissioner of Education, Vol. II)

Pueblo, Colo.	\$34.30
Kansas City, Mo.....	34.88
Omaha, Neb.	35.56
Tacoma, Wash.	37.07
Denver, Colo.	38.12
San Jose, Cal.	38.16
Salt Lake City, Utah.....	41.79
PORTLAND, ORE.	41.95
Minneapolis, Minn.	42.31
Oakland, Cal.	42.53
San Francisco, Cal.	42.82
San Diego, Cal.	42.91
*Seattle, Wash.	43.92
Spokane, Wash.	44.33
*Los Angeles, Cal.	50.38
†Berkeley, Cal.	51.72

* Information obtained direct, and approximately correct. Does not use uniform accounting forms.

† This city maintains a complete system of intermediate schools.

TABLE 30

***Cost for Secondary Schools per Pupil in Average Daily Attendance*

(Calculated from same source as Table 29)

City	Cost per pupil per year	Per cent of total attendance in high schools.
Berkeley, Cal.	\$ 66.11	25%
Tacoma, Wash.	71.80	15%
Omaha, Neb.	75.11	11%
PORTLAND, ORE.	76.42	12%
Salt Lake City, Utah.....	78.89	9%
San Jose, Cal.....	80.33	21%
Oakland, Cal.	80.94	13%
Kansas City, Mo.	82.30	14%
Denver, Colo.	82.78	13%
Minneapolis, Minn.	84.83	14%
Pueblo, Colo.	86.73	12%
Spokane, Wash.	92.56	14%
*Los Angeles, Cal.	120.07	15.15%
*Seattle, Wash.	101.14	16%
San Diego, Cal.....	104.06	15%

* Does not use uniform accounting forms. Information obtained direct, and approximately correct.

**Does not include night schools or vacation schools.

The costs for elementary education in Portland are thus seen to be about what other Western cities average, while the costs for secondary education are lower. This we should expect from the discussion of teachers' salaries, in Chapter V.

Size of Classes as Determining Costs

These figures do not reveal the whole truth of the matter, however, as the cost per pupil educated in the elementary schools varies much, according to other factors than teachers' salaries. The most important of these is the average number of pupils in each class-room. Portland's elementary school classes are smaller than all but two or three other cities in the above list. This is a feature of the administrative organization of the school system which is to be greatly commended, and the size of classes in Portland ought not to be increased. Thirty children to a teacher are about as many as a teacher can teach well, and the present Portland classes of 35 to 38 are still a little large. The classes in Portland are not too small; they are merely too large elsewhere.

The cost per pupil per year, however, is materially increased when such small classes are maintained over what would be the case if 45 or 50 children were given to each teacher, as may be seen from the following, calculated on a basis of a cost of \$1,500 per year per classroom:

Size of class.	Cost per pupil per year
30 pupils	\$50.00
35 "	42.86
40 "	37.50
45 "	33.33
50 "	30.00

Reasonable Per Capita Costs

As many of the cities given above in Table 29 teach their children in classes of 45 or more, the comparison is not so favorable to Portland as might at first seem. To provide the special classes and schools needed to meet well the educational needs of the city, as pointed out in Chapters XI and XIV, Portland ought to spend, considering the size of classes maintained, close to \$50 per pupil in average daily attendance per year. The intermediate schools, recommended in Chapters IX and XI, ought to cost about \$70 per pupil per year. The high schools, too, are costing too little. The teachers are not paid a high enough maximum to retain the best, and they are also required to teach too many periods a day. To provide the kind of educational conditions best suited to the needs of such a city as Portland, with the recommended additions to the high schools, a cost of \$90 to \$100 per pupil in average daily attendance in the high schools is not too much.

These estimates would include the additions recommended in the preceding chapters, and would add somewhere from 20 to 25 per cent to the present annual cost for maintenance and instruction. This would add about one mill to the school tax of the district. Such additions, with the right kind of administrative organization and leadership, would soon give Portland a thoroughly good school system, and one which would answer the needs of the city for some years to come.

2. CAN THE DISTRICT REASONABLY AFFORD TO SPEND THIS ADDED SUM ON ITS SCHOOLS?

To show that the Portland school district can afford such an addition, and afford it with ease, Tables 31 and 32 are introduced.

TABLE 31

Real Wealth Behind Each Dollar Spent for School Maintenance (A combination of Tables 26 and 10)

1. Atlanta, Ga.	\$559.00
2. Los Angeles, Cal.	538.00
3. Richmond, Va.	536.00
4. Birmingham, Ala.	479.00
5. PORTLAND, ORE.	456.00
6. Memphis, Tenn.	449.00
7. Indianapolis, Ind.	408.00
8. St. Paul, Minn.	407.00
9. Spokane, Wash.	370.00
10. Seattle, Wash.	364.00
11. Oakland, Cal.	354.00
12. Omaha, Neb.	352.00
13. Nashville, Tenn.	350.00
14. Louisville, Ky.	326.00
15. New Orleans, La.	314.00
16. Minneapolis, Minn.	294.00
17. Kansas City, Mo.	280.00
18. Bridgeport, Conn.	276.00
19. Providence, R. I.	256.00
20. Albany, N. Y.	234.00
21. Denver, Colo.	231.00
22. Rochester, N. Y.	225.00
23. Columbus, Ohio	221.00
24. Jersey City, N. J.	218.00
25. Scranton, Pa.	216.00
26. Washington, D. C.	212.00
27. Dayton, Ohio	208.00
28. Grand Rapids, Mich.	207.00
29. Cambridge, Mass.	204.00
30. Syracuse, N. Y.	202.00
31. Fall River, Mass.	196.00
32. Lowell, Mass.	194.00
33. Paterson, N. J.	185.00
34. New Haven, Conn.	185.00
35. Toledo, Ohio	184.00
36. Worcester, Mass.	180.00
37. Newark, N. J.	165.00

Table 31 shows the real wealth, for each of the 37 cities studied, which lies behind each dollar spent for the yearly maintenance of schools by the city, and Table 32 shows the rate of tax in mills required to raise this amount for maintenance, based on real wealth (see Table 10, p. 80), and assuming no delinquencies in taxes. While taxes are based on assessed wealth and not on actual wealth, the great variations in the rate of assessment make real wealth the only proper basis of comparison between cities.

TABLE 32

*Comparative Rates of Tax Required for School Maintenance
(in mills) Based on the Real Wealth of Cities*

(A combination of Tables 26 and 10)

1. Newark, N. J.....	.00606
2. Toledo, Ohio .....	.00543
3. New Haven, Conn.....	.00541
4. Paterson, N. J. ....	.00541
5. Lowell, Mass. ....	.00515
6. Fall River, Mass.....	.00510
7. Worcester, Mass. ....	.00505
8. Syracuse, N. Y.....	.00495
9. Cambridge, Mass.....	.00490
10. Grand Rapids, Mich.....	.00483
11. Washington, D. C.....	.00471
12. Scranton, Pa. ....	.00463
13. Jersey City, N. J.....	.00459
14. Columbus, Ohio .....	.00452
15. Rochester, N. Y.....	.00444
16. Denver, Colo. ....	.00433
17. Albany, N. Y.....	.00427
18. Dayton, Ohio .....	.00421
19. Providence, R. I.....	.00391
20. Bridgeport, Conn. ....	.00362
21. Kansas City, Mo.....	.00357
22. Minneapolis, Minn. ....	.00340
23. New Orleans, La.....	.00315
24. Louisville, Ky. ....	.00307
25. Nashville, Tenn. ....	.00285
26. Omaha, Neb. ....	.00284
27. Oakland, Cal. ....	.00283
28. Seattle, Wash. ....	.00275
29. Spokane, Wash. ....	.00270
30. Indianapolis, Ind. ....	.00245
31. St. Paul, Minn. ....	.00244
32. Memphis, Tenn. ....	.00222
33. PORTLAND, ORE. .....	.00219
34. Birmingham, Ala. ....	.00209
35. Richmond, Va. ....	.00186
36. Los Angeles, Cal.....	.00184
37. Atlanta, Ga. ....	.00180

That Portland can afford the estimated needed increases, these tables show, without question. Portland could even double its expenses for yearly school maintenance, and still pay a rate

of tax for schools, based on real wealth, which would be less than that paid by almost every Eastern city. These Eastern cities, with their large school populations, large foreign elements, much lower per capita wealth, and high taxes, are paying high rates of school tax to try to do what Portland can do with ease, and on a much lower rate of school tax. These Eastern cities pay lower salaries to their elementary teachers, teach their children in larger classes, are compelled to build their school buildings by bonding, and have to maintain many half-day classes, because they cannot build buildings enough; while Portland, on less than half the real tax they pay, pays relatively good salaries to its elementary teachers, teaches its children in classes much nearer the proper size, pays for nearly all its school buildings the year they are erected, and has not a half-day class in the entire city. On the contrary, the district has a number of vacant rooms.

Portland's Educational Opportunity.

Excepting probably only Los Angeles, no other large city in the United States has such an excellent opportunity to make for itself a school system which shall be second to none in the country, and one the excellence of which will make Portland known educationally all over the United States, and attract to it many new residents of a desirable class. It will require some more money, to be sure, and a little higher tax for schools, but not a large amount, while the returns from the investment,—educational, social, moral, and commercial,—will be very large. The commercial returns might well be mentioned first, instead of last. Los Angeles has utilized the opportunity which her wealth and the character of her population have given her, and has developed one of the very best school systems, large or small, to be found anywhere in the United States. There is little question but that the present social and industrial prosperity of the city is in no small measure due to the very broad scope and the very high excellence maintained throughout the school system. Portland, by reason of its very large wealth, the high character of its people, the freedom (practically so) of the school district from debt, and the good foundation upon which to build, could, in a few years, and with but a small increase in the tax rate for maintenance,—if under wise, intelligent, and capable leadership,—easily become the educational rival of Los Angeles, and her schools would acquire a reputation, as those of Los Angeles have done, throughout the whole United States. Practically no other large city in the entire United States has today so great an opportunity for educational leadership almost within its grasp.

Present Needs of the Portland School System

This opportunity the school authorities of Portland ought to seize, for educational as well as for commercial reasons. The present school system is much in the condition of a manufacturing establishment which is running on a low grade of efficiency. The waste of material is great and the output is costly,—in part because the workmen in the establishment are not supplied with enough of the right kind of tools; in part because the supervision of the establishment is inadequate, and emphasizes wrong points in manufacture; but largely because the establishment is not equipped with enough large pieces of specialized machinery, located in special shops or units of the manufacturing plant, to enable it to meet modern manufacturing conditions. The plant needs more money for operative costs, more specialization in production, the utilization of present waste products, and an efficiency manager to study the business needs, specialize it, and speed it up, with a view to saving wastes, increasing the rate of output, and greatly increasing the sale value of the manufactured product in the markets the factory is trying to supply. On a proper presentation of the matter to the stockholders of any business corporation, it would appeal to them as wise to increase the working capital 20 to 25 per cent, if thereby the rate of production could be materially increased, the present waste in working materials be largely obviated, the value of the output probably doubled, and new and profitable markets for present waste products found. The school business of Portland is, in a sense, a manufactory, doing a three-million-dollar business each year, and trying to prepare future citizens for usefulness and efficiency in life. The taxpayers are the stockholders, represented in the management of the business by a board of five school directors. They should apply to the management of their educational business principles of efficiency similar to those which control in other forms of manufacturing business.

Appendix A

A SUGGESTED LAW FOR THE MANAGEMENT OF THE PORTLAND SCHOOL DISTRICT

The following is a suggestion for a new law for the Portland school district, based on the needs presented in this report. For the reasons for the different recommendations, made in the following suggested law, the reader is referred back to the different chapters of the report itself:

AN ACT

For the Creation of Metropolitan School Districts, and Prescribing Their Form of Organization and Powers

Sec. 1. All first-class school districts now existing, which have 20,000 or more children of school age, or which may hereafter come to have such, are hereby declared to be metropolitan school districts, and are to be governed under the provisions of this act, as follows:

Sec. 2. For the government of each such metropolitan school districts a Board of Education shall be elected by the taxpayers of the district. A taxpayer shall be as defined for school elections, in Sec. 4089 of Lord's Oregon Laws. One member of said Board of Education shall be elected each year, to serve for a five-year term. Boards of School Directors for first-class districts, in office at the time of the enactment of this law, shall constitute the new Boards of Education, and shall continue to serve for the terms for which they were elected or appointed. In case a vacancy shall occur in a Board of Education, the Board shall appoint to fill the vacancy, the person so appointed to serve until the next annual school election, at which time a member shall be elected to fill out the unexpired term of the member.

All elections of members of Boards of Education shall be by ballot, on the same day that annual school district meetings are held throughout the state, and the provisions of the general school laws relating to first-class districts shall apply to such elections. Polling places shall be provided by the Board of Education, at a sufficient number of places throughout the school district, and be open from 1 to 6 P. M. At any such annual school election, Boards of Education may, by vote, submit any question of educational policy or finance to the taxpayers, which to them seems wise, for either direction or advice.

Sec. 3. Boards of Education for each metropolitan district shall reorganize each year, at the first regular meeting after the election of new members, by electing one of their number as president of the board, who shall exercise the usual functions of such an officer, and who shall appoint all standing and special committees of the board.

Sec. 4. Boards of Education in such districts shall elect the following executive officers:

1. A Superintendent of Schools;
2. A Business Manager;

3. A Superintendent of Properties;
4. Superintendent of School Attendance;

and, subject to the provisions of this act, shall assign to them their duties, and shall fix their compensations. Boards shall also have power to create, from time to time, such other executive departments and such sub-departments as the needs of the schools may seem to require.

Sec. 5. The Superintendent of Schools shall be first elected for a one-year term, and thereafter for four-year terms. Each new Superintendent elected shall have similar tenure; *provided*, however, that, for cause, the Board may, on thirty days' notice, and by a vote of at least four members, terminate their contract with the Superintendent of Schools to take effect at the close of any school year. His salary shall be as determined by the board.

Sec. 6. It shall be the duty of Boards of Education in metropolitan districts to determine all large questions of policy; to adopt an annual budget of expenditures for the schools; to fix salaries of all employees; to approve of all enlargements of the work of the schools; to approve all expenses incurred; to purchase new school sites, and to order new buildings erected; to decide upon all enlargements of school sites or buildings; and to approve all contracts entered into. It shall, on the other hand, be the duty of the chief executive officers of the board to execute, under direction, the policies decided upon, and to carry out the improvements, changes, or additions ordered made. It shall be primarily the work of the Boards of Education to legislate, decide, and direct; the work of the executive officers shall be to carry into execution the policies decided upon by the Boards of Education.

Sec. 7. The Superintendent of Schools shall be the chief executive officer of the Board of Education, and shall have general co-ordinating authority and oversight over the work of all executive officers and other employees of the school district. He shall have full responsibility for the course of study, the selection of text-books and supplemental books, and the selection, promotion, assignment, transfer, or dismissal of assistant superintendents, special supervisors, principals, and teachers, the board acting in all such matters only on his recommendation. In case of a conflict in authority between the Superintendent of Schools and any executive officer, the Superintendent of Schools shall decide, unless the Board of Education shall order otherwise, in each case.

Sec. 8. The Business Manager shall succeed to the general functions now exercised by the School Clerk. He shall be elected by the Board, who shall determine his tenure and compensation. He shall have charge of all business affairs of the school department, subject to the supervision of the Board, or its committees; shall make all purchases, approve all bills, and, when ordered paid by the Board, draw vouchers for their payment; shall pay all employees for services performed; and shall act as Secretary of the Board of Education. He shall recommend all employees in his department for appointment or dismissal, and may suspend any such employee, for cause. He shall also be responsible for the successful conduct of the business affairs of the school department; shall give bonds for the faithful performance of his duties, in such reasonable sum as the Board of Education may

determine; and the books of his office shall be audited each year, on order of the Board of Education.

Sec. 9. The Boards of Education shall also appoint a Superintendent of Properties, and determine his tenure and compensation. The Superintendent of Properties shall have general charge of the erection, repair, and care of all school properties, subject to the direction of the board. The school janitors shall be under his direction and instruction. He shall recommend all employees in his department for appointment or dismissal, and may suspend any employee, for cause.

Sec. 10. The Boards of Education shall also appoint a Superintendent of School Attendance, and determine his tenure and compensation. He shall have charge of the enforcement of the compulsory-education law, and those parts of child-labor law for which attendance officers are responsible; the general out-of-school supervision of incorrigible and delinquent children; and the taking and care of the school-census records of the district.

Sec. 11. The Boards of Education shall have four regular standing committees, each consisting of two members and the president of the board, as follows:

1. Financial affairs;
2. Buildings and sites;
3. Educational affairs;
4. Legal affairs.

These committees shall consider such matters of policy, finance, and procedure as may be referred to them. Special committees may be created, for special purposes, from time to time, as necessities of administration seem to require.

Sec. 12. Boards of Education in metropolitan districts shall prepare, each year, with the assistance of their executive officers, a budget of expenses for all departments of the school system, for the ensuing year, and approve the same. They shall estimate the amount to be received from the state and county school funds, sales of properties, or any other sources of income, and shall then estimate the balance needed for each of the following funds, viz.:

1. Outlays Fund: To cover the cost of new buildings, grounds, and equipment.
2. Maintenance Fund: To cover the cost for salaries, maintenance, supplies, administration, and contingent expenses.

On approval of the annual budget by the Board of Education, the board shall then certify the total amounts, only, for each of the above funds to the authorities whose duty it is to levy the school taxes for the district, and said authorities shall then levy a rate on the assessed valuation of the district which will produce the amount so certified; *provided*, that the same shall not exceed a rate of four mills for the outlays fund, or five mills for the maintenance fund; *provided, further*, that, upon a statement of need, the taxpayers voting for school board members at the annual school election may be asked by the Board of Education to approve of a tax levy up to six mills for the maintenance fund. If so approved by a majority of those voting, the Board of Education may certify for levy a tax for the maintenance fund up to six mills, and the same shall be levied as directed.

Sec. 13. Boards of Education in metropolitan districts shall establish standards for the employment and pay of teachers, principals, and other members of the educational service. All such persons, when first employed, shall serve such a probationary period, not exceeding three years, as may be determined, after which they shall be regarded as on indeterminate contract. All persons employed on indeterminate contract shall be considered as permanently employed, unless the Board of Education shall notify such persons, in writing, not later than May 15, of any year, that the Board of Education desires to terminate the contract at the close of the school year, for causes stated in the notice. For the sufficiency of the reasons for so terminating a contract with any employee, Boards of Education shall be the sole judges.

Sec. 14. Boards of Education in districts of the metropolitan class, hereby created, may create a board of examiners and examine their own teachers, as now provided for cities of the first class, or they may vote to accept the county and state teachers' certificates instead, and discontinue their boards of examiners.

Sec. 15. Boards of Education in metropolitan districts shall have power to establish and maintain kindergartens, elementary schools, intermediate schools, high schools of different kinds, manual training schools, vocational schools, schools of trades, neighborhood schools, truant schools, schools for the education of special classes of any kind, evening schools, vacation schools, playgrounds, lecture courses, and such other types of educational agencies or schools as may to them seem desirable to meet the peculiar needs of such cities; to fix the days of the year and the hours of the day when such schools and other educational agencies may be open or in session; to admit to such schools, in addition to the persons now provided for by law, such other persons as they may deem desirable; and to prescribe the text-books and courses of study for the use of such schools, and to change the same, all such prescriptions and changes to be on the recommendation of the Superintendent of Schools; *provided*, that any text-book once adopted and in use shall not be changed oftener than once in four years; and *provided, further*, that the taxpayers of any metropolitan district may, by vote, authorize the Board of Education to provide free text-books for any or all schools maintained.

Sec. 16. Boards of Education in metropolitan districts shall provide for the taking of a detailed school census of their districts, by years and sex, and by residence and school attendance, and shall provide for keeping such as accurate as may be, with a view to knowing fully the educational needs of the district and the full enforcement of all laws relating to school attendance, child labor, or juvenile delinquency.

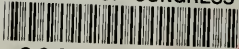
Sec. 17. The Boards of Education for such metropolitan districts shall, in all matters not specifically provided for in this act, be controlled and subject to the general school laws relating to cities of the first class, or the general school laws of the state; *provided, however*, that all acts or parts of acts in conflict with any of the provisions of this act are hereby repealed, in so far as they relate to metropolitan districts.







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