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SIGNIFICANT MOVEMENTS IN
CITY SCHOOL SYSTEMS

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SIGNIFICANT MOVEMENTS IN CITY SCHOOL SYSTEMS

By W. S. DEFFENBAUGH,
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CONTENTS—Administration—Teachers—Length of school year—Curriculum and articulation—Experimental research—Individual instruction—Safety education—Visual instruction—The platoon school—The visiting teacher.

So extensive and so complex has the modern city school system become that it is impossible in a short chapter to discuss more than a few of the educational movements in the cities of the country, and these only briefly. In addition to day elementary and secondary schools, the activities of city school systems include night schools, continuation schools, special schools, health supervision, vocational schools, vocational guidance, etc. Reviews of some of these activities appear in other chapters of the Biennial Survey of Education. Separate chapters are also issued which discuss various phases of kindergarten, elementary, and secondary education in city school systems.

ADMINISTRATION

During the past two years comparatively little general or special legislation relating to city school administration has been enacted. The situation at present with respect to the methods of electing boards of education and with respect to their fiscal relation to other boards may be summarized as follows:

Thirty-eight boards of education in 55 cities of 100,000 or more population reporting are elected by the people; 11 are appointed by the mayor; 3 by the city council or commission; 3 by the courts. One hundred and four of the boards of education in 135 cities between 30,000 and 100,000 population reporting are elected by the people; 16 are appointed by the mayor; 15 by the city council or commission. In 516 cities between 5,000 and 30,000 population reporting, 416 boards of education are elected by the people, 33 are appointed by the mayor, and 67 by the city council or commission.

In cities of 100,000 or more population 8 of the 47 boards of education reporting must submit their annual estimates to the mayor, city council, or commission; 11 to a board of finance, board of esti-

mate, or similar municipal board; and 5 to the county board of supervisors or county budget commission.

After obtaining funds for the purchase of grounds and the erection of new buildings, 32 of 47 boards of education in cities of 100,000 or more population may purchase grounds and erect buildings without consulting any other body.

In cities between 30,000 and 100,000 population, 20 of the 133 boards of education reporting must submit their proposed budgets to the board of estimate or city finance committee; 32 to the council, mayor or city commission; 11 to the county board of supervisors or county budget committee; and 3 to the State tax commission or State budget director.

After obtaining the funds the board of education in 71 of the 133 cities may purchase land and erect school buildings without consulting any other board.

One hundred and twenty-six of 520 boards of education in cities between 5,000 and 30,000 population reporting must refer their annual estimates to the city council or town finance committee; 30 to board of estimate; 15 to the people; and 51 to the county officials.

Although there has been a tendency to consolidate municipal departments and to abolish department heads, there has been no movement to abolish boards of education and to place the schools under the management of the municipal department. In fact, within recent years several school systems have been reorganized by placing more power in the hands of the boards of education. As long as education is considered a State and not a municipal function the schools will not become more subordinate to municipal government than they now are. The principle that school officials are State and not municipal officials has been so well established by law and court decisions that any effort to make the schools a part of the municipal government would be considered by authorities on school administration as a step in the wrong direction. Authorities on municipal government, however, would generally favor a movement of this kind on the theory that all the affairs of the city, including school matters, should be considered together, and that the budget of boards of education should be reviewed by some municipal body just as are the budgets of any other municipal department.

All the evidence available seems to indicate that the fiscally independent school systems are as economically administered as the dependent ones, and that in many respects they are more efficient. Practically all the recent school surveys in cities where the boards of education are fiscally dependent recommend that, since education is a State and not a municipal function, and since experience has proved that the fiscally independent plan works better than

the fiscally dependent plan, schools in these cities become fiscally independent. Two authorities on city school administration express as follows the views of practically all city school administrators regarding the fiscal control of city schools:

It can be generally said that the people of a school district should have the legal right to raise as much money for the financial support of their schools as they decide is desirable. There is no reason why constructive economy in the operation of the schools should not parallel increased costs. Restriction of tax levies, budgetary reviews, or any form of artificial controls will not necessarily operate in the manner in which the laws assume. The most effective control is the selection of competent officials, and an insistence upon factual evidence showing that every dollar expended is returning value received.¹

In Michigan, the school laws were codified in 1927, and some important legislation was enacted regarding the city school districts by dividing them into three classes. Districts of the third class are those having a population from 10,000 to 125,000, districts of the second class are those having a population of more than 125,000 and fewer than 500,000, and districts of the first class are those having a population of more than 500,000. The laws relating to schools in these districts are in general based upon sound administrative principles. The boards of education are small and are elected from the city at large. The chapter on districts of the third class especially may serve as a model for those States contemplating legislation for their smaller cities. The main features are:

1. The board of education is composed of seven members elected at large for a term of four years.

2. The board of education has large powers, including the right to determine the amount of taxes necessary; to borrow money, to purchase sites for buildings, etc., and to erect buildings; and to issue bonds not to exceed 2 per cent of the assessed valuation of the district.

3. The superintendent of schools is made the legal executive of the board of education, his powers and duties being:

- (1) To put into practice the educational policies of the State and of the board of education in accordance with the method provided by the board of education;

- (2) To recommend in writing all teachers necessary for the schools and to suspend any teacher for cause until the board of education may consider such suspension;

- (3) To classify and control the promotion of pupils;

- (4) To recommend to the board the best methods of arranging the course of study and the proper textbooks to be used;

- (5) To make reports in writing to the board of education and to the superintendent of public instruction annually or oftener if required, in regard to all matters pertaining to the educational interests of the district;

- (6) To supervise and direct the work of the teachers and other employees of the board of education;

¹ Engelhardt and Engelhardt: *Public-School Business Administration*, p. 94.

(7) To assist the board in all matters pertaining to the general welfare of the school, and to perform such other duties as the board may determine.²

The classification of city-school districts and laws relating to the administration of the schools in each class are usually considered preferable to special legislation for each of the cities in a State.

Board organization.—The movement to reduce the number of standing committees or to abolish them continues. The reduction in the size of boards of education and a clearer conception of the function of such boards have been responsible for the reduction in the number of standing committees. When boards of education were large there was perhaps some justification for standing committees, but now that few such boards are composed of more than nine members it is difficult to understand why a board of education should continue having such committees. No committee should have executive duties, not even a committee on supplies or a committee on buildings. In the larger cities there are business managers and superintendents of buildings to perform executive tasks relating to business and school buildings. In the smaller cities where there are no business managers or superintendents of buildings, the superintendent of schools should himself look after business matters. The tendency has been to make him the executive officer of the board, since boards of education in many of the smaller cities have come to realize more and more that it is their chief function to adopt policies.

In some of the cities where school business managers are employed there is still a dual system of administration, the business manager being independent of the superintendent of schools. The tendency, however, seems to be toward the unit system of administration, with the superintendent of schools as the chief executive officer and toward placing an assistant superintendent in charge of business affairs. This plan seems the logical and practical solution of a vexing problem that has been confronting many city boards of education.

TEACHERS

Qualifications.—Within the past two years the educational and professional training required of elementary-school teachers for the first employment have been raised by a year in some cities. In the cities that required but one year of preparation beyond high school the standard has been raised uniformly to graduation from a 2-year normal school, and in some of the cities that required two years' training beyond high school the standard has been raised to three or four years. The tendency is to raise the requirements for beginning junior high school teachers to college graduation and to require more.

² General school laws, State of Michigan (revision of 1927), p. 50.

professional preparation on the part of prospective high-school teachers. The movement in the direction of requiring a master's degree for academic high-school teachers is pronounced in some cities.

Tulsa, Okla., may be mentioned as one of the cities that have raised the standard for both elementary and high school teachers. In that city—the minimum educational requirement for the beginning teacher is the bachelor's degree, representing four years' work above the high school or its full equivalent, professional training, and not less than 16 months' successful experience in teaching, other than that done as part of his professional training. High-school teachers are expected to have the master's degree or not less than a full year of graduate work in the subject they teach. All teachers must be 21 years old or over and must submit evidence of good physical health, mental ability, and moral character. The board of education, however, reserves the right to employ as teachers men and women of unusual outstanding ability and success even though their academic qualifications may be less than the stated minimum.

City normal schools are extending their courses, and in several States the normal-school courses have been extended to three or four years, thus making it possible for the cities in these States to obtain better trained teachers for their elementary schools.

The need of prepared teachers has always been apparent, but it has not always been an easy matter to raise the standard requirements for first employment. If the standard goes up and the salary does not there are not enough teachers to fill the positions. If, on the other hand, the salaries go up and the standards do not, there is an oversupply of teachers; in which case, one or two things may happen—salaries may be lowered or the standards raised. The tendency among city schools in general has been to raise standards rather than to lower salaries. This is the only logical course to pursue if the schools of a city are to become more efficient.

Single-salary schedule.—The single-salary schedule has been adopted in many cities as a means of obtaining better prepared teachers for the elementary-school grades and of retaining in those grades those teachers who have the preparation necessary to teach in high-school grades but who are better adapted to elementary-school work. The single-salary schedule has also been adopted in recognition of the fact that the work of the elementary-school teacher is just as important and just as exacting as the work of the high-school teacher.

Among the advantages claimed for the single-salary schedule by those who advocate it are: (1) It is easy to operate; (2) it eliminates class consciousness among teachers; (3) it contributes strongly to a feeling of unity and satisfaction in the teaching corps; (4) it attracts superior ability and training in the elementary schools

and gives elementary teachers a higher appreciation of their services; (5) it emphasizes higher standards of professional attainment and encourages professional study and growth, thus producing more efficient teaching in every grade; (6) it permits the transfer of teachers without financial loss from positions for which they are not adapted to positions in which they can render efficient service; (7) it helps place the work of the elementary school in the estimation of the public on a par with the work of the high school; (8) it offers an incentive to further study.

The fact should not be overlooked that even if college graduation is considered desirable for elementary as well as for high-school teachers, the kind of preparation should not be the same. If, for example, a teacher has majored in mathematics and has had 20 hours in education, largely in the secondary-school field, the question may be raised whether that teacher is prepared to teach the elementary-school subjects, or at least whether she is as well equipped as the teacher who has made special preparation for elementary-school work even if her studies have not extended over four years.

Experience.—In some cities a year or two of experience is required of teachers before receiving an appointment. If all cities should adopt such a rule, it is evident that normal-school and college graduates desiring teaching positions would have to obtain them in the rural and village schools or in private schools. Such a rule can not well be defended. Of course as long as some cities pay larger salaries than others they will find it comparatively easy to obtain all the experienced teachers needed. The city that can pay good salaries to teachers should also be able to provide good supervisors to help train the inexperienced normal-school and college graduates, so that it would not always be necessary to employ teachers with one or two years' experience.

Married women teachers.—Among the questions relating to teachers that boards of education are often called upon to answer are: Shall married women be employed as teachers? and Shall a woman teacher who marries during the school term be required to resign? Many boards of education have within the past two years taken some action upon these questions. Some have adopted resolutions that married women shall not be employed as teachers and others have gone a step further in terminating the contract with women who marry during the school term. Boards of education passing such resolutions usually do so on the presumption that a married woman has too many home duties to be an efficient teacher, and on the supposition that she should be supported by her husband. Those persons opposed to rules barring married women teachers assert that it is the duty of boards of education to employ the best-qualified teachers, whether

they be married or single; that efficiency in the classroom is the criterion by which to judge teachers; that each teacher should be judged on merit; and that it is no business of a board of education whether or not a married woman is supported by her husband.

In reply to a questionnaire recently sent out by the National Education Association concerning the employment of married women as teachers, 1,532 cities over 2,500 in population replied. Of these cities, 39 per cent reported that married women were employed as new teachers; 60.7 per cent, that married women were not employed as new teachers; and 0.3 per cent of the cities did not reply. In reply to the question as to whether single women teachers who marry were retained or required to resign, 25.1 per cent of the cities reported that they were required to resign at once; 25.5 per cent required them to resign at the end of the school year; 47.8 per cent permitted them to continue to teach; and 1.6 per cent did not reply to the question.

LENGTH OF SCHOOL YEAR

The number of days that the city schools of the country are in session has been gradually increased. Within the past two years 50 of about 800 cities reporting have added from 5 to 20 days to the school term. The State of New York has increased the term to 190 days. Even though the tendency is to lengthen the school year, comparatively few city schools are in session more than 185 or 190 days a year. In cities having a school term of 10 months there are often so many holidays that the schools are in actual session only 185 or 190 days, and in many cities having a 9 months' term the actual number of days taught is much less than 180.

The average length of the school term in the cities of the country as a whole could be greatly increased if the school month were made to consist of 20 days actual teaching, as is, for example, the practice in the State of Pennsylvania. In that State the school term in cities having a 9 months' school are in actual session 180 days, and those having a 10 months' term are in actual session 200 days.

A longer school term has generally been advocated by school superintendents and by many other persons interested in education, but progress in this direction has been slow for several reasons. One reason no doubt is that it would cost more to run the schools 11 months a year than it costs to run them 9 months, and another reason is that many persons think that the health of children would suffer if they were confined to the schoolroom 5 or 6 hours a day for more than 200 days a year.

It is evident that the school budget of a city which increased the school term by a month would be larger, but if the 12 years' work can be completed in less than 12 years by lengthening the school course,

the additional expense would not be so great as one might imagine. If a child can complete a 12-year course of 180 days a year in 12 years, he can theoretically, at least, complete a 12-year course of 11 school months, or 220 days, in 9.8 years, or 10 years in round numbers. The "lost" 2 years in the American school system of which we hear so much might thus be found.

Although a longer school year might not meet with general approval, attention is called to the generally unknown or overlooked fact that in the early days of city-school systems—about 1840—the schools in the larger cities were in session practically the entire year. Vacations were short and holidays were few. The prevailing custom was to divide the school year into four terms of 12 weeks each, with a vacation of a week at the end of each term. In some cities all the vacation came in summer, with the exception of about a week at Christmas. The summer vacation was extended gradually, usually about a week at a time, until it became 12 weeks in length.

Very few cities now have all-year schools. One of the latest to adopt the all-year plan is Aliquippa, Pa., but it was adopted largely as an economy method, since only three-fourths of the school population is in attendance any one quarter. The school year was divided into four quarters of 12 weeks each, and the pupils enrolled in the schools placed in the four-quarter plan were divided into four groups. During each quarter three groups go to school and one group is on vacation.

Although the all-year school is found in only a few cities, many have organized summer schools which are usually in session six weeks, beginning about the 1st of July. These schools, however, are often only for pupils who have failed in a subject or two and for those who are thought capable of advancing a grade. As yet they can scarcely be considered an integral part of the school year and fitting in closely with the regular school program. Not simply extending the summer session to 12 weeks and by dividing the school year into four quarters of 12 weeks each there need be no break in a child's program even if he does not attend school more than three quarters.

The school day.—The tendency is toward a longer school day. Of 800 cities reporting, 84 within the past two years have lengthened the elementary-school day, 102 the junior high school day, and 122 the senior high school day by 15 to 60 minutes. The usual increase in the elementary schools has been 30 minutes and in the junior and senior high schools 30 or 45 minutes.

The tendency to lengthen the school day has its critics, especially the tendency to lengthen the elementary-school day. It is contended that school work is too fatiguing to confine children in the classroom for six hours a day, and that children should have some time to play.

If the school work is confined almost entirely to the teaching of reading, writing, arithmetic, and other formal school subjects, there is no doubt much to the criticism of a longer school day. But the modern, progressive school, even though it is in session six hours a day, so balances its program of study and various special activities that the school should be a perfectly natural place for children to live. There should be not only study and recitation periods but periods for work with the hand and periods for play; also periods for rest and relaxation in the lower elementary grades.

Those who advocate a short school day say that a child should have time to play. But where is he going to play? In the back yard at home? Possibly, if there be a back yard. Those advocating a short school day may have both front and back yards and possibly a playroom in the home, but how many children are there in the modern city whose parents live in houses with playrooms or even with yards? The modern city is a city of apartments and of rows of houses with no play space inside or out. The advocates of a short school day evidently forget or have not become cognizant of the fact that most city children have no place to play around their homes, and that very rarely does a city provide enough municipal playgrounds to accommodate all the children who are in need of such playgrounds.

It would seem, when all the facts regarding city life are considered, that the elementary school day should be lengthened rather than shortened—not that more time may be given to study and recitation but that more time may be devoted to various manual activities and to play.

In the junior and senior high schools the school day has been lengthened in order to provide more time for supervised study and for the many extracurricular activities now considered essential parts of any secondary-school program.

Since children may be in school not more than 200 days a year and not more than 6 hours a day, and only in a few cities for as long a time as this, the school should not be held responsible for the child's complete education. The home, the street, and places of amusement have him under their tutelage most of the time. If a child attends school 6 hours a day for 200 days a year, from the age of 6 to 17 inclusive, he is in school only 14,400 hours. Counting 9 hours for sleep he has 15 hours a day at his disposal, or during the 12 years he is awake 65,700 hours. He is thus in school only 21.9 per cent of the time he is awake from 6 to 18 years of age.

As a matter of fact city children from 6 to 18 years of age on an average are in school only about 152 days a year, nor more than 5½ hours a day, and for not more than 9 years. They are thus in school an average of not more than 7,524 hours out of the 65,700 hours they

are awake, or they are in school only 11.4 per cent of the time from age 6 to age 18.

Since the first five or six years of a child's life, when he is not in school, is a very important period for molding his life and character, the entire period from birth to the eighteenth birthday should be considered when comparing the time he is in school with the time he is out of school.

Children from birth to 18 years of age, if they sleep $9\frac{1}{2}$ hours a day, are awake 95,265 hours and in school on an average of only 9 years, $5\frac{1}{2}$ hours a day, 152 days a year, or 7,524 hours. They are thus in school upon an average of only 7.9 per cent of the time from birth to age 18. Kindergarten attendance of 3 hours a day for 152 days would increase the per cent of time in school to 8.4.

CURRICULUM AND ARTICULATION

Revision of the elementary, junior high, and senior high school curricula has been going on apace. In cities of 30,000 population and over approximately 82 per cent of those reporting have within the past two years been revising the elementary-school curriculum, 84 per cent the junior high school curriculum, and 74 per cent the senior high school curriculum. In cities between 10,000 and 30,000 population, 53 per cent have been revising the elementary curriculum, 58 per cent the junior high, and 52 per cent the senior high school curriculum. In cities between 2,500 and 10,000 population not so much attention has been given to curriculum revision as in cities above 10,000 population. Only 39 per cent of the cities of that size have been making revision of the elementary, 36 per cent the junior high school, and 39 per cent the senior high school curriculum. No doubt many more schools have revised certain courses, possibly not in formally prepared courses of study, but by the adoption of textbooks prepared within the past year or two. Such schools are following entirely different courses in arithmetic and in other subjects from those of four or five years ago.

Most of the larger cities and many of the smaller ones report that their curricula are under constant revision; that whenever a change seems desirable it is made. This is much better than waiting until a curriculum is entirely out of date to revise it. So rapidly have conditions changed and so much is being discovered about what should be included in a curriculum that the school system that is not revising its courses continuously can not hope to keep pace with the demands of a rapidly changing civilization.

Articulation of the curricula of the various school units, such as the kindergarten, elementary school, junior and senior high schools, and junior college, has been occupying the attention of city school

superintendents and others. Much has been done to articulate the work of the kindergarten and the primary grades, which, not so many years ago, were almost distinct units. Better articulation has been effected by placing the kindergarten and the primary grades under the same supervisor. At present 75 per cent of the school systems providing for supervision in the kindergarten and primary school grades have kindergarten-primary supervisors. Unification has also been aided by institutions preparing kindergarten and primary teachers. In three of every four of such institutions the training given kindergarten and primary teachers is identical. As a result of unified supervision and of identical training courses, the methods of teaching employed in the kindergarten and the first grade are not so dissimilar as they once were, and as a result of curriculum reorganization there is no longer the abrupt break in subject matter that was found in the older kindergarten and first-grade courses.

The organization of child research centers and nursery schools has done much to arouse interest in the education not only of the nursery school but also of the kindergarten-primary-school child. The results of the studies of the preschool child are doing much to help in the understanding of young children, whether they be of preschool or of school age, and consequently to help bring about closer articulation of the work done with children up to 7 or 8 years of age. As yet the public-school system has not made the nursery school a part of its organization, but it is safe to predict that within the next 10 or 15 years the nursery-kindergarten-primary-school grades will constitute the first unit in many of the city school systems of the country.

A big problem of articulation that has not been solved is in the field of secondary education, including the junior high school, the senior high school, and junior college. Each of these units has been working out its own program and curriculum so there has naturally not been that articulation that seems desirable, resulting in loss of time and of efficiency.

The junior college, which may be found in about 100 city school systems, has added another unit, making three in all, in those cities having junior and senior high schools, each unit being short—junior high school 3 years, senior high school 3 years, and junior college 2 years. The growing opinion is that better articulation could be effected if the secondary-school program were divided into two units of 4 years each. By this arrangement the entire city-school course above the kindergarten would be 14 years in length instead of 12 as at present. This plan of organization is known as the 6-4-4 plan.

Even if the secondary schools were to be organized on the 4-4 plan, many problems would have to be solved. One of these is the problem of economizing time through better coordination of work within each

unit and between the two units. Only by careful experimentation can this and other problems be solved. Experiment is needed to discover whether all the work now done in the 12 grades above the kindergarten and in the 4 college years, or 16 years in all, could be done in 14 years. Since some city schools of the country are organized with only 11 grades above the kindergarten, and since the graduates of their high schools are admitted to college along with graduates of school systems having 12 grades; since elementary-school work can be done in six years sufficiently well to begin secondary-school work, and since the first year or two of college work is to a certain extent a repetition of the work done in the senior high school or else the beginning of work on foreign languages, science, history, and other subjects, the question may be and has been raised whether the cities that are organizing junior colleges can not have the curricula of the 8 grades above the 6-year elementary school so articulated that 2 years' time will be saved.

It is doubtful whether the junior college as now organized and superimposed on the high school has brought about better articulation. Dr. L. V. Koos, writing on the *Progress and Problems of Secondary Education in California*,³ where there are many public junior colleges, says regarding the junior-college curriculum:

The junior college, in no small part because it has only recently joined the family of school units in our evolving educational system, faces a most difficult curriculum problem. Being a local public unit and in its essence an instrument of democratic education, it admits all high-school graduates, contrasting in this respect with most higher institutions of the State, which follow some selective basis of admission. The distribution of "college aptitude" is, therefore, much wider typically for students in junior colleges than for those in colleges and universities. At the same time these junior colleges have no other curriculum precedents than those provided by the typical higher institution whose curriculum was worked out with selected students and which look to service only to those students who continue beyond the junior-college level. Although junior-college authorities in the State are conscious of the problem and individual junior colleges are turning serious efforts to its solution, analysis of the junior college offering in the State as a whole shows that it is still largely unsolved.

Economy of time has not been effected, at least not for those students working for a bachelor's degree, since it still requires 16 years—17 including the kindergarten—for a boy or girl to complete the elementary, high school, junior college, and the last two years of the present college course.

Experiments to discover whether a 6-4-4 organization would be better than any of the plans now widely used could be made without disastrous results, no matter what conclusions might be drawn. In fact, there would be a gain if it were found conclusively that 16

³ *School Life*, January, 1929.

years' work can be done in 14, thus permitting young men and women to begin professional and university courses proper two years earlier and with practically the same general training as they now have when they receive their bachelor's degree.

The question is, Who will undertake such an experiment in face of the traditional school organization and in face of thousands of critics? Possibly the time is not ripe in most cities for such an experiment; but if the problem of articulation and of economizing time is to be solved it can be solved only by experimenting and not by mere discussion and theorizing.

EXPERIMENTAL RESEARCH

The great progress made in the city schools of the country within the past 10 years has without doubt been due to the fact that educational problems have been attacked more scientifically. Until recently the trial-and-error method was the only means of testing a theory, and even then it was practically impossible to determine which was the better of two or more procedures. Now that it is possible to test the results of experiments, educational research should be directed more and more to experimental work. Material throwing light on prevailing practices is valuable, but such practices may be entirely wrong. If all the school people were to conform to prevailing practices, there would be no educational progress. Some city school systems which have well-organized research bureaus are conducting investigations that are very much worth while, but unless a city has a well-equipped research bureau, or unless some institution, such as a college of education, is using the schools of the city for the purpose of making research studies, little importance may be attached to many of the experiments now under way. One city school superintendent, when asked what experiments he was conducting, replied: "Experiments are a sad waste of time and should be left to experimental schools alone." That there has been waste of time in conducting investigations on the hit-or-miss plan, without any checking of results, is only too evident. That all experiments should be left to experimental schools is doubtful. The number of such should, however, be greatly increased.

In addition to purely experimental schools, the schools in practically every city should be used as laboratories for conducting at least one investigation. Not all city schools, however, need conduct the same research study. If a score of cities, for example, were to agree to undertake a particular experiment, under the direction of some school of education or other agency, it would not be necessary for other cities to attempt a similar investigation. One group of cities should be working on one experiment and another group on

another. There could be enough groups formed to have many different experiments going at the same time. As it now is, many cities report that they are conducting investigations, but with few exceptions they are working independently of each other. Much that is reported as experimental work can not well be considered as such. The superintendent who reports that he is experimenting with the junior-high school or with the platoon plan usually means that he has recently introduced them into his schools.

Among the many experiments that are reported by city school superintendents in the smaller cities are those relating to individual instruction plans, ability grouping, health of school children, size of class, supervised study, length of recitation period, character education, school government and discipline, special classes, and the platoon plan.

In the larger cities, especially those having educational research bureaus, many interesting and promising investigations have been undertaken. The Detroit experiment in measuring the effect of individualization may be cited as an example. In general, the plan, according to Paul T. Rankin, Director of Research, consists of a trial under experimental conditions of several distinctly different degrees and kinds of individualization. He describes the experiment as follows:⁴

Two schools, one a 24-section platoon and one a 16-section platoon, are using each of the different plans. The plans and schools may be classified as follows: (1) Much individualization; (2) some individualization (horizontal grouping by x, y, and z); (3) little individualization or mass instruction; (4) Winnetka plan; (5) Dalton plan; (6) vertical grouping by x, y, and z.

These schools began operating on the plans assigned to them in February, 1928. The following semester was used as a period of preliminary trial in order that necessary materials might be prepared and that teachers and pupils might become moderately familiar with the procedures used in that plan. The experiment proper is planned to run from September, 1928, through June, 1929.

The experiment has two outstanding characteristics which it is believed will make the results particularly significant. In the first place, the experiment is being conducted in typical Detroit schools, with typical buildings, typical children, and typical standards as regards such matters as size of class, special equipment, etc. As a consequence, the results of the comparison in plans should be transferable to other normal situations. * * *

In the second place, a larger proportion than usual of the changes in children are being considered in the measurement program. Several different tests are being used in each major subject to measure the different phases of pupils' abilities in that field. Furthermore, a number of tests of actual conduct in genuine life situations which require certain character qualities are included.

Many tests are given in the 13 experimental schools at the beginning and ending of the year. The growths of individual pupils will

⁴ Detroit Educational Bulletin, November, 1928, p. 3.

be computed, and these gains averaged and compared among the various plans.

Denver, Colo., may be mentioned as another city that is undertaking an extensive research program. Fifteen important research studies were under way in the schools of that city in October, 1928.

That public-school systems may well cooperate with schools of education and with experimental schools is illustrated by an experiment that has been worked out on "units of work" between the schools of Baltimore, Md., and the Lincoln School, Teachers College, Columbia University. A good description of these experiments may be found in the Baltimore Bulletin of Education, March, 1928. Some of the experimental work was done in a platoon school, in order to determine whether unit work can be as successfully carried out in this type of organization as in the traditional school.

The experiment in visual education, mentioned in another section of this chapter, is an example of what may be accomplished by several cities cooperating in the same experiment.

These few instances of experimental work under way show that many such experiments can and should be undertaken.

INDIVIDUAL INSTRUCTION

The movement to adapt the work of the school to the ability and the needs of the individual pupil continues. That children differ in ability has long been known, but since means have been devised for measuring the comparative abilities of school children the need of fitting the school to the individual child has become more apparent. At one time the teachers who received the praises of superintendents and others were those who had the reputation of treating all children alike. As a matter of fact, such teachers may be most unfair if they hold all pupils to the same standard since some pupils can surpass the standard with little effort and others can not attain it, or at least not in the same time.

Since school work should be adapted to the individual pupil means must be used to attain that end. Here is where the practical school superintendent and teachers must play their part. However sound a theory may be it is of no value until it is put into successful operation. There are many apparently good educational theories, but how to put them into operation is the difficult problem. The inventor of plans and devices is needed in the field of education as well as in the field of industry. It is true that some educational theorists have but little use for plans and devices, but without them their theories can not well be put into practice.

Various plans and devices have been and are being tried so that children may progress through school according to their individual

ability and industry. None of the plans of individual instruction, however, is so individualistic that a child is made independent of every other child in school. Any plan of individual instruction that would tend to break down the community life of the school or that would tend to prevent the socialization of the child should not receive serious consideration.

Among the plans for making better provision for the individual are ability grouping, the Winnetka and Dalton plans, and the Miller and Morrison contract plans.

Ability grouping has become so common that it may no longer be considered an experiment. It, however, has not entirely solved the problem of providing for individual differences, and no doubt much more can be done to improve the plan or technique. Ability grouping for each grade is no doubt a great improvement over the old plan of placing children of all degrees of ability and industry in the same class. There should, however, be ability grouping within each class of 30 or 40 pupils for the different subjects. The plan of arranging as many subjects as possible to come at the same time, so that pupils may interchange classes in different subjects, is a solution that has been suggested. The departmental and platoon plans of organization make it possible for a pupil in the fourth grade who, for example, can do fifth-grade arithmetic, to have his recitations in this subject with a fifth-grade teacher, or if he can do only third-grade arithmetic to report to a third-grade teacher for this subject.

The Winnetka and the Dalton plans are so well known that no description of them in this chapter is necessary. No doubt more tested experiments regarding them are needed. Many cities are making trial of one or both of these plans. Eighty-five cities report that they have within the past two years introduced one or both of these plans or some modification of them in one or more schools.

Several schools report that certain standards must be attained by all pupils before passing on to new work, the time of completion depending upon the ability and the industry of the pupil. The high-school principal of Auburn, Me., in his report to the superintendent of schools of that city, explaining a plan in operation in the English department, says:

The teachers of English this year have been laying out their work in minimum, median, and maximum requirements. All work has to be done at least 90 per cent perfect for a pupil to receive any rank or credit for it. Many pupils who formerly drifted along with the class have accepted their job and settled down to its accomplishment. As soon as the bright pupil passes his minimum test, he goes on to work which requires less supervision of the teacher and more initiative on his part. The slow pupils get satisfaction from a greater mastery of their work and there is a general improvement in their habits of study. * * * The assignments in English are mimeographed and given to the individual pupil, so that he can progress independently of his fellow

classmates if he chooses. But he must master the lowest assignment before he attacks the median or maximum.

This procedure requires the same degree of perfection but permits the standards to be attained at different rates. Under the usual plan, children making as low as 65 or 70 per cent may be promoted along with those making a grade of 95 per cent. Just how thoroughly a subject should be learned before a pupil is given a new assignment or promoted to another grade is a question that needs careful experimental study, but it would seem that in school work, as in other work, quality should be the criterion. If a certain necessary standard can not be attained in a day and can be in two days, it would seem that two days should be taken for the work before passing on to something new; or, still better, the assignments should be so differentiated that they may be completed day by day. At least work should not be skimmed over for a semester and then a pupil be required to repeat.

In addition to the foregoing plans for providing for individual differences the following may be mentioned: Coaching, laggards, special classes, supervised study, differentiated curricula, differentiated assignments, and intensive study of problem cases.

SAFETY EDUCATION

Many cities have prepared courses of study in safety education. Most of these courses are not confined to teaching children how to avoid street accidents, but treat safety in its broader sense of protection to life and health not only as an individual but as a community matter. No doubt much of the subject matter for safety instruction falls under the head of "civics" and "health." Since city government is organized largely for the protection of life, health, and property, safety instruction can well be given in connection with the study of the various safety agencies of the city and with the study of the best ways of aiding the police, health, and other city officers in making the city a safe place in which to live.

The courses in safety are usually designed to correlate with most of the subjects taught in the elementary schools. As an illustration of what is done in this regard, the following is quoted from a recent report of the superintendent of schools of Kansas City, Mo.⁵

During the year 1926-27 a committee of the curriculum revision department and the safety council began preparing a course of study to which much careful consideration was given. The course is designed to correlate with the regular subjects of the elementary schools, and furnishes material which may be used in teaching the standard subjects of the curriculum without giving any special time to safety instruction as a separate subject. By the constant use of this material it is hoped that no time will be lost from teaching the

⁵ Report of the superintendent of schools, Kansas City, Mo., 1921-1927, p. 20.

regular subject matter, but habits of safety may be developed which will cause the children unconsciously to act in such a way as to minimize the number of accidents.

Many teachers have found that the materials and situations available in safety instruction afford a good opportunity of motivating the work of practically all the subjects in the elementary-school curriculum, that the subject matter for safety instruction lends itself to the project method, and that it can be taught in a practical way through various kinds of safety clubs. Among the organizations of this kind are junior safety councils, safety patrols, civic leagues, all of which afford a valuable means of putting into practice the principles learned in the classroom.

The following is quoted from the 1926-27 report of the superintendent of schools of Lakewood, Ohio, to show how safety instruction may be correlated with other subjects:

During the year 1926-27 all the departments in senior high school have emphasized safety education. The art department by means of poster projects; the English department by means of oral and written compositions and editorials in the school publications; the science department with instruction about contagious diseases, sanitation, infected foods, and water; the history department by means of studies and surveys of local condition, have all combined in the teaching of safety.

VISUAL INSTRUCTION

Visual instruction is to-day one of the most discussed methods of teaching. The wide interest in this subject is due largely to the popularity and the educational possibilities of the moving picture. Visual instruction, however, involves other visual aids, such as maps, charts, graphs, models, exhibits, flat pictures, stereographs, and stereopticon slides. All of these aids are receiving attention as never before, but the chief experiments and chief interests in visual instruction are at present centered around the moving picture.

Many experiments have been made, the results of which leave no doubt as to the value of the teaching film in the classroom. One of the recent investigations, from which practical results may be expected, is that conducted under the direction of Dr. Thomas E. Finegan, Dr. Frank B. Freeman, and Dr. Ben Wood. Twelve city school systems were invited to cooperate in the experiment. These cities, selected from various sections of the country, were Newton, Mass.; Rochester, N. Y.; Detroit, Mich.; Chicago, Ill.; Lincoln, Nebr.; Denver, Colo.; Oakland, Calif.; San Diego, Calif.; Kansas City, Mo.; Atlanta, Ga.; Winston-Salem, N. C.; and New York, N. Y.

The experiment involved about 12,000 children in the elementary and junior high school grades. Two groups of children, equal in number, from similar home environments and social conditions in life

and of the same intellectual level were under instruction. One group received instruction without the use of films and the other group with their use.

The complete report of the investigation has not been issued at this writing, but Doctor Freeman and Doctor Wood have reported, according to a circular issued by the Eastman Teaching Films (Inc.), Rochester, N. Y., that enough evidence has been revealed to warrant the continuance of the production of classroom films. They said:

Our own observation of the classes in operation with and without the films convinces us that the films contribute elements to the experiences of the children which it is difficult and often impossible to secure by any other method available to the school.

This preliminary survey indicated that the teachers are much pleased with films as instruments of instruction, that they consider these particular films to be excellent, and that it is their judgment that films should be made permanently available to the schools. This is our opinion, based on the testimony of the teachers and on our observation of the classroom work.

We are convinced that the production of these films, together with the guides (each film is accompanied by a teacher's guide to the subject), and further production of other films, makes a decidedly valuable contribution to educational procedure. The indication is that there is a strong demand for properly planned and well-organized educational motion pictures of the character used in this experiment.

That there is a wide interest in the use of films is evidenced by the fact that no high school is considered fully equipped unless it has one or more motion-picture machines. In several cities projecting machines have been installed in practically all their school buildings.

In Detroit the film program—

this year reached 80 elementary schools, 12 high schools, 12 intermediate schools, 20 evening schools, 25 summer schools, Detroit Teachers College, and the College of the City of Detroit. The film library now consists of 400 reels covering the various divisions of instruction. The frequency of use of these films on a footage basis was approximately 18,000,000 feet and the total number of children seeing the films was approximately 1,500,000. In addition to the regular programs, a special film program on dental education reached 85,000 children.

In addition to the film service in Detroit—

there are now 100,000 slides in the various school libraries and 20,000 slides in the department library. The slides in the department library were reserved and booked in accordance with the school requests. The frequency of use of the department slides was 170,000.*

Naturally many difficulties have arisen to militate against the practical use of moving pictures. Among these may be mentioned the cost of equipment and the difficulty of procuring films sufficiently coordinated with the subjects taught in the classroom. Comparatively few teachers have been trained to use films to supplement their

*Eighty-fifth annual report of the Detroit public schools, 1928.

instruction with the textbooks. The care and distribution of films has been a problem, but many cities have solved this by organized visual education departments. These departments, however, have many other duties, such as adapting visual education to the course of study and selecting visual aids. It is evident that many administrative problems, as well as teaching problems, have arisen in connection with the use of motion pictures and other means of visual instruction.

What changes in teaching method or what changes in school organization will result from the introduction of teaching films can not well be foreseen, but changes in methods of instruction may be expected. Judging from the general interest in visual instruction and from the results reported, it is safe to predict that within a few years teaching films as well as other visual aids will be considered as necessary a part of the equipment of schools as are textbooks, maps, and dictionaries.

THE PLATOON SCHOOL

The movement to organize platoon or work-study-play schools has within recent years been rapidly going forward. The growth of this type of organization was at first very slow. The first platoon school was organized in Bluffton, Ind., in 1902, and the second in Gary, Ind., in 1907. From 1907 to 1913 four other cities—Kalamazoo, Mich., Kansas City, Mo., New Castle, Pa., and Sewickley, Pa.—organized 15 schools on the platoon plan or on some modification of it; from 1914 to 1920, 35 other cities organized 148; and from 1921 to 1925, 53 more cities organized platoon schools. By April, 1925, 93 cities in 30 States had the platoon plan in one or more schools; by February, 1927, the number had increased to 115 cities; and by January, 1929, 153 cities in 38 States had organized one or more platoon schools. In all, there are 850 platoon schools in the 154 cities, an increase of 110 schools since 1927, when there were 740 such schools in the 115 cities. The percentage of increase of the number of cities having the platoon organization from 1925 to 1927 was 23.7, and from 1927 to 1929 it was 33.

No doubt the slow growth of the platoon school before 1920 was due to the fact that many persons had formed a wrong conception of it or wanted more proof of the value of the new plan of organization. Visitors rushing into a platoon school and rushing out of one would often carry away with them some incidental facts to help prove their preconceived notions of the plan. The big idea back of it was not always grasped. Defects that were trivial and that could be easily remedied were overemphasized. The big idea of providing a program of work, study, and play was too often overlooked; also the fact that the modern city had grown up largely for the conven-

ience of adults, and that the city child, especially the child living in a congested section of the city, had been deprived of opportunities for work and play, which are so essential in a child's education.

As already indicated a few of the smaller cities at first experimented with the platoon school. When its possibilities were realized several of the larger cities began to introduce platoon schools cautiously. Pittsburgh, Pa., and Detroit, Mich., were among these. So successful were the schools first organized in these two cities that others were instituted as rapidly as possible. Now Pittsburgh has 75 and Detroit 110 schools on the plan. The success of the platoon schools in Gary, and later in Pittsburgh and Detroit, caused many other cities to study the plan and finally to organize at least one platoon school to see how it would work.

Some cities, however, have made no attempt to adopt the platoon plan, for their boards of education have not been convinced of its need or value. In some cities the school buildings may not be adapted for platoon schools, but often old buildings can be so remodeled, at very little expense, that platoon schools can be organized. Teachers who are entirely absorbed in teaching from textbooks often do not favor the platoon or work-study-play school, saying that the three R's will be neglected and that there will be too many distractions, and that there will be too much confusion in the school buildings when classes are changing. Where teachers are opposed to the plan the superintendent of schools can not well undertake to introduce it with any hope of its being a success. The usual procedure, when experimenting with the plan, has been to organize at first a platoon school in a building where the teachers are at least willing to give the scheme a fair trial for a few years.

Although no nation-wide scientific study regarding the efficiency of the platoon plan of school organization has been made, the conclusions of those who have had to do with the organization of such schools are that: (1) The three R's are as well taught, and that music, art, nature study, and the other so-called special subjects are better taught and as well coordinated with other subjects as in the nonplatoon schools; (2) school buildings that have gymnasiums, auditoriums, and workrooms and playgrounds will, when organized on the platoon plan, accommodate about one-third more children than when organized on the nonplatoon plan; (3) the cost of operating a platoon school is no more than the cost of operating a nonplatoon school.

Quotations from several sources are introduced as examples of the conclusions reached by those who have made actual trial of the platoon plan. William E. Putnam, director of research of the public

schools of Birmingham, Ala., writing of the enriched curriculum, says:

The enrichment of the curriculum is one of the ideals which underlie the philosophy of the platoon school. Some of the facts which have been proved by the Birmingham school authorities in support of this statement are that: (1) It makes for better teaching, because each teacher is responsible for fewer subjects; (2) the pupil is given the advantage of different personalities, and this enriches his knowledge of people and makes the transition from grade to grade easier, since the same teachers handle the special subjects for all grades; (3) the school is socialized through the special activities and through the necessary freedom from autocratic discipline; (4) each school is enabled to work out a program that meets its local needs.⁷

Mr. Putnam also shows that the school buildings on the platoon plan are used much more effectively:

From a recent study of the capacity of 28 elementary-school buildings for white children under the former, or traditional, plan and under the present platoon plan of organization, it is shown that the capacity of these buildings is 17 per cent larger under the platoon plan than under the traditional plan. This means an increase in capacity of approximately 2,700 pupils. At the per pupil building cost of \$323, this reorganization has resulted in a saving in building investment of nearly \$900,000 since its adoption. These figures are presented to show that the administration in the past six years has not been unmindful of the necessity of securing the greatest possible service and efficiency out of its school buildings, especially at a time when the unprecedented growth of the city has caused such a large congestion in the schools.

Mr. G. O. Clough, professor of education, Southern Methodist University, Dallas, Tex., and formerly superintendent of schools, Tyler, Tex., writing of the reorganization of the schools of Tyler, says regarding building costs:

In order to offer manual training and home economics in the ward schools, under the traditional plan, additions would have had to be made to four ward-school buildings. The estimated cost was \$77,224. The overcrowded condition of the ward schools was relieved by transferring the seventh grade to the high school and introducing the platoon program in the ward school, which made additions to the ward-school buildings unnecessary. An expenditure of only 6,660 was necessary to provide for the special subjects of a platoon program in the new high-school building. Therefore the buildings provided for the new organization cost \$70,564 less than would have been necessary to provide for an expanded curriculum for the seventh grade under the traditional plan.⁸

Mr. Clough also points out that the cost of instruction under the new organization is comparatively less than under the old and that the curriculum has been expanded and enriched.

A study made in Denver, Colo., and reported by Homer W. Anderson, deputy superintendent of the Denver schools, shows that the average cost per pupil based on membership for the six platoon schools in Denver was for the 2-year period, 1925-1927, \$69.86, and

⁷ The Platoon School, October, 1927, p. 26.

⁸ Ibid., 1928, p. 129.

for six nonplatoon schools \$72.63, or a \$2.77 lower annual per pupil cost on the platoon type of school.⁹

The results claimed for this type of organization can not be ignored by any school superintendent or board of education when it is planning a school-building program. As one of the attempts to help solve the educational problems created by the modern city, the platoon or work-study-play plan should be carefully studied by boards of education before they conclude that gymnasiums, auditoriums, and other special facilities are too expensive to be included in elementary-school buildings and before they conclude that the traditional or nonplatoon plan is better than the platoon plan.

THE VISITING TEACHER

The number of cities employing visiting teachers, and the number of such teachers employed in the cities that have had departments of visiting teachers for several years are increasing. First adopted into the school systems of New York, Boston, and Hartford, Conn., in 1906-1907, the visiting-teacher activity has grown until, at the present time, there are 230 of such teachers in the city school systems of the United States, in 70 cities, scattered throughout 36 States of the Union.¹⁰

The increase in the number of visiting teachers in some of the larger cities during the past two years is of interest. For example, the number of such teachers in Rochester, N. Y., in 1926 was 16; in 1928 there were 21; the number in New York City in 1926 was 22; in 1928 there were 29; and in Dayton, Ohio, where the school board established a visiting teachers bureau as a part of the administrative department in 1926, with a director in charge, at which time there were 7 visiting teachers, in 1928 there were 10 teachers, with a director in charge.

With regard to the function of the visiting teacher in the school organization, the following is from a report of the director of visiting teachers of Dayton, Ohio, published in the yearbook of the principals and supervisors association of that city in 1928:

To discover the cause of the child's failure to grasp the opportunity that benevolent school boards have planned.

To confer with the parents, enlisting their cooperation when the child shows signs of falling below the school's standards of scholarship or conduct.

To try to adjust many home conditions whereby more favorable conditions will be attained in regard to school work, conduct, attendance, and interest.

To interpret the school purposes and ideals to parents, thus securing a greater amount of much desired cooperation on the part of each toward the other.

⁹ The Platoon School, December, 1928, p. 173.

¹⁰ The Recorder, a bulletin of visiting-teacher work, 1928.

To secure and record family history, personal history, and past and present performances of all children coming to her attention.

To aid in securing better school adjustment for all misfits in the broad interpretation of the word.

To secure personal and social information in regard to the child and bring it to the teacher and principal, so that it will make for better understanding of the child.

To try to find causes of unusual misconduct and endeavor to remedy the condition, either by influence with the child or the parents or both.

To cooperate with every outside agency to the highest degree, that all possible forces may be assembled toward individual and social betterment.

To analyze the child's social environment, home, and neighborhood.

Regarding the qualifications of the visiting teacher, the Dayton yearbook continues:

It would be necessary for the visiting teacher to have experience as a teacher if she is to understand the teacher's work and interpret it to others. * * * Two years of normal training are required before a teacher is considered adequately prepared for teaching in the grades, and four years are considered better. * * *

If the visiting teacher is to work with junior high school teachers, she should be required to understand the work of that teacher and the problems peculiar to adolescent youth, and she must have the same academic training as that teacher. The senior high school teacher is required to have four years of college work. The visiting teacher should also be required to have the four years' training.

The visiting teacher must be able to study and analyze the needs of the individual child that she may more intelligently meet those needs. This would demand that she be qualified as a social worker, having at least one year's experience in that special field.

Some city school systems are replacing the probation officer by the visiting teacher. The following is from the 1927-28 report of the superintendent of schools of Peoria, Ill.:

To-day we have the probation officer replaced by the visiting teacher. If the child is not in school, instead of sending an officer of the law after him, a sympathetic member of the teaching staff is sent to the home to inquire concerning the cause. Many times he discovers that the parents did not know of the child's absence. Knowing his work, he immediately establishes a bond between the school and the home, and together they solve the problem. In the future the solving of the compulsory attendance law in that home is easier and the schools have won a friend. A school that handles its attendance work in this manner is keeping step with the best in educational progress.

Judging from various other reports regarding visiting teachers, they are doing an important work in the schools that can not be done by the regular teacher nor by the attendance officers.

