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ELEMENTARY EDUCATION IN ENGLAND

WITH SPECIAL REFERENCE TO LONDON, LIVERPOOL, AND MANCHESTER

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., June 27, 1913.

SIR: With the rapid growth of American cities and the large increase in their industrial population, the problems of city school administration are becoming more complex and difficult. These problems are different for different cities and can seldom if ever be solved by imitation. Yet a knowledge of the administration of the schools of one large city can not fail to be helpful in working out plans for the better administration of the schools of another. This helpfulness may be all the greater if, while some of the conditions in the two cities are quite similar, others are so dissimilar as to amount to contrast, as is the case with the large cities of England and America. For this reason, and because of the desire in this country for a better general knowledge of English schools, I have asked Mr. I. L. Kandel, of Manchester, England, to prepare for this bureau a manuscript on the public schools of London, Manchester, and Liverpool, giving special attention to the methods of dealing with those problems which have more recently assumed importance in American cities. In collecting material for this manuscript, Mr. Kandel visited the cities and studied their schools carefully at first hand. His knowledge of schools and general conditions in America has enabled him to give the subject such treatment as to make his study especially helpful to American teachers and school officers. I recommend that the manuscript be published as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

PREFACE.

English education at the present time offers many points of interest, and an account of the systems of elementary education of London, the world metropolis, of Manchester, the center of the world's cotton industry, and of Liverpool, one of the greatest shipping centers of the world, may be taken as typical of the aims and aspirations of the educational activity of other cities of England. The effects of the changes introduced in educational administration by the education act of 1902 can now, after a decade, begin to be evaluated and the promise for the future to be estimated. Education has become a public concern, as it never was before in English education, and the duty of the community to the rising generation is more liberally interpreted. Hence, education now means something more than the mere provision of schools; it includes care for the physical and moral development, as well as the instruction, of all children. The work of the school also presents many interesting aspects, for it now stands at the beginning of a process of development which has unlimited possibilities for the future. If the author has succeeded in arousing an interest in the subject presented in the following pages, it is due to the unfailing courtesy and good will of the school officials, head teachers, and their assistants in the cities visited. The author expresses his acknowledgment of the valuable help and criticism received from his friends, Mr. I. Shaer and Dr. Peter Sandiford.

I. L. K.

MANCHESTER, ENGLAND, *May, 1913.*

ELEMENTARY EDUCATION IN ENGLAND.

Chapter I.

THE ADMINISTRATION OF EDUCATION.

There is probably no parallel in the history of education to the remarkable activity and progress which have characterized English education in all its branches since the opening of the present century. It would seem as if all the influences which retarded its development in the last century, the social, political, and religious interests, had entirely disappeared. But it would be a mistake to imagine that something in the nature of a revolution has taken place, or that a national scheme suddenly sprang into being by the will of some legislative body. Such a rapid change would be alien to the English political theory, which prefers progress to be slow and calculated, and introduces compulsory legislation when the conditions are ripe for it. The theory of State control in education has, however, gradually been accepted, and the importance of a national system of education is generally recognized, but it is not intended to surrender to the State that local and private freedom which has always been enjoyed in this matter. The State, under the new system, aims to furnish those conditions which make possible the exercise of local freedom in the interest of a well-coordinated and progressive system of education. Hence the central Government, through its education department, merely acts in an advisory and supervisory capacity, and encourages local effort by financial assistance, if certain minimum standards are observed. The control which the State exercises is accordingly financial, but otherwise no pressure is brought to bear on the local authorities, who are at liberty, if they can afford it, to use their independence in their own way, conduct any experiments they please, and remain free from central control, provided that they bear the expenses themselves. Thus the principle of devolution is applied to the administration of education, and, though the framework of a national system is already in existence, there is no approximation to the centralized and bureaucratic systems of France or Germany. The ultimate responsibility for education accordingly rests with the local authority. This principle of freedom is a characteristic feature of all branches of English education, and is carried through to the individual school. While this doctrine of freedom is to a great extent the secret of the strength of the English system, it is at the same time the cause of many of its weaknesses.

One of the factors which long stood in the way of the establishment of a national system was the religious question, which was the origin of and still is responsible for a dual system of elementary schools. But it seems highly probable that the difficulties which surround the problem of control and religious instruction in the schools are not so great now as they once were and that a complete settlement is in sight. In fact, in the present discussion of educational reform the religious difficulty hardly receives any attention. There still remains the social question, and it is extremely doubtful whether there will ever be established in England a system as national as that of America or comparable to the Einheitsschule demanded by some reformers in Germany. It seems certain that there will always be schools which serve class interests, and many of the leaders of English thought support the retention of private schools, which can perform their work without any restrictions from an external body and make such contributions as they are able in the way of educational experiments. Since these institutions are likely to be sufficiently wealthy not to stand in need of State aid, they will find no difficulty in remaining apart from a centrally administered national system of education. The possibility, however, of inspecting private schools, in much the same way as some schools in the New England States are inspected, has been suggested.

The central authority for the administration of education in England and Wales is the Board of Education, which was created in 1899 to replace the Education Department and the Science and Art Department, and with some few exceptions is concerned with the administration of all branches of education. Its functions are to see that the statutes bearing on education are observed and to administer the grants in respect of education. Through the grants the board is enabled to exercise an indirect control on the education of the country. It issues regulations for the administration of the various branches of education, which serve as conditions for earning the Government grant. In reference to elementary education the board publishes annually a Code of Regulations for Public Elementary Schools in England, which is laid before Parliament and thus acquires the force of law. The code deals with such matters as the curriculum, teaching staff, premises, accommodation, equipment, the grants, attendance, etc., but in each case only lays down the minimum requirements compatible with efficiency. There has been a tendency in recent years to leave more freedom to the local authorities even in these matters, without insisting on the prior approval of the board or its inspectors. Thus local authorities may make experiments in the curriculum and changes in the time tables without special notification. The code, in giving the number of subjects which may be taught in the elementary schools, does not insist that any one of

these, with the exception of physical training, shall be included in the curriculum, nor is any time allotment given for each subject, except in the case of special subjects like handicrafts, domestic subjects, and physical training. Similarly, in the case of attendances, only the minimum of 400 sessions per pupil is definitely required for the grant. The board also issues "Suggestions for the Consideration of Teachers and Others Concerned in the Work of Public Elementary Schools," giving advice and suggestions on methods of instruction in the subjects of the curriculum but does not insist on the introduction of these methods in the schools. Except in a few subjects the board does not publish syllabuses of the school subjects and does not require the use of these, although for special reasons, as in the case of physical training, it may recommend the employment of the official syllabus. The board has undoubtedly contributed more than any other agency in the country to the improvement of education by these indirect means, but the point that must be emphasized is that the efforts and initiative of the individual teacher or head teacher are in no way interfered with or discouraged, provided that they can be justified. The policy of the board is well stated in the "Suggestions" in the following terms:

> The only uniformity of practice that the Board of Education desire to see in the teaching of the public elementary schools is that each teacher shall think for himself, and work out for himself, such methods of teaching as may use his powers to the best advantage and be best suited to the particular needs and conditions of the school. Uniformity of details in practice (except in the mere routine of school management) is not desirable, even if it were attainable. But freedom implies a corresponding responsibility in its use.[1]

The board also issues regulations for the training of teachers, for secondary schools, schools of art, and technical schools; it is the one potent force for the unification of standards and the promotion of progress in education at the present time.

The inspectors of the Board of Education superintend the observance of the code and regulations by the local education authorities and report on the efficiency of the schools. The inspections of elementary schools do not take place at regular intervals, nor is formal notice of an intended visit given by the inspectors. It is a common practice not to visit schools which are under an efficient head teacher as frequently as schools which seem to require closer attention. But in either case a school may not be inspected for periods of a year or more. The inspectors are required to report not only on the efficiency of the teaching, but also on the adequacy of the buildings and their sanitary condition. Supervision, in the sense of inspecting instruction for the purpose of improving the

[1] The latest code provides that: "The Board of Education, or the inspector who visits the school, may require any syllabus to be submitted for approval. The board may require the modification of any syllabus which is unsuitable."—Ed.

teacher, is not attempted by the board. The inspectors may discuss and offer suggestions on the syllabuses drawn up by the head teachers, and they may confer with the teachers on shortcomings in their methods of instruction, but for purposes of improvement the relations are not sufficiently sustained. It always remains in the power of the local education authority to act on an adverse report from the inspectors on a school or teacher. The inadequacy of the inspectorial staff from this point of view can not be denied, but at the same time it is uncertain whether the supervision of teachers is intended to be part of the duties of the inspectors. Whether the numerous criticisms passed on inspectors is due to a general misconception of their duties or merely to some of the differences which have prevailed in recent years between the elementary school teachers and the Board of Education, it is impossible to say, but the statement is frequently made that the teachers derive little benefit from the visits of the inspectors, especially since the opinions of different inspectors are not always the same and there is an absence of definite standards of criticism. At the same time it must be pointed out that the inspectors are in touch with large areas and many different types of schools, and are consequently in a position to draw on a wide experience. As a result of recent agitations for some reform in the method of appointment and in the qualifications for those inspectors who are to deal with elementary schools, the board has decided to appoint about ten assistant inspectors, who must have had at least eight years' experience in elementary school teaching. Some time must elapse before the results of this experiment can be estimated; the insistence on elementary school experience does at any rate open a career for elementary school teachers.

The organization of education is based on the education act of 1902 and other acts which supplement this. Under this scheme the authorities responsible for local administration generally were given control of education in their areas.[1]

London is an administrative county, with an area of 120 square miles, established by act of Parliament for purposes of local government, with a population in 1911 of 4,522,961. A special education act was passed for London in 1903, conferring on it the same powers as had already been conferred by the 1902 act on similar areas. Manchester and Liverpool are county boroughs, the former with a popu-

[1] Four types of areas are recognized for the purposes of local government—administrative counties, which correspond in general to the counties in some American States; municipal boroughs or cities with a population of from 10,000 to 50,000; county boroughs or cities with not less than 50,000 inhabitants; and urban districts or areas corresponding to townships in some American States. All these authorities are intrusted with the management of elementary education within their areas, provided in the case of municipal boroughs that they have a population of not less than 10,000, and in the case of urban districts that they have a population of not less than 20,000. For the purpose of higher education, however, only administrative counties and county boroughs are autonomous. The three areas with which this work deals, namely, London, Liverpool, and Manchester, belong to the latter class.

lation in 1911 of 714,566, the latter with 746,566. The local authorities, the city councils in Manchester and Liverpool, and the County Council in London, were accordingly empowered to control through special committees all branches of education. The administration of education was thus taken away from special ad hoc bodies and placed in the hands of the authority responsible for the administration of other local public services. Buffalo is an example of an American city in which the same system prevails. The councils accordingly delegate the power intrusted to them to education committees, which consist of members of the respective councils, and coopted members who have experience in education or are acquainted with the needs of the various kinds of schools. The act of 1902 provided that women must be included on education committees. The education committee of the London County Council, which consists of 118 elected members and 19 aldermen, includes 50 members, of whom 38 are members of the Council and 12 are coopted; 2 of the councillors and 5 of the coopted members are women. In Manchester the education committee consists of 20 councillors, including 2 women, and 13 coopted members, 4 of whom are women. In Liverpool the number of members on the committee is 52, of whom 34 are councillors and 18 coopted members (3 being women). The old school boards with their limited sphere of duties, and often small areas and restricted powers, were thus replaced by new education authorities with larger powers over wider areas, corresponding to the areas recognized for local government in other than educational matters. This extension of powers, with a command of greater resources, was bound to attract men and women who would not interest themselves in the routine of small boards. London, Manchester, and Liverpool have continued under the Council the progress begun by the former school boards.[1]

The education committees have full power to deal with all types of education and of making recommendations on the subject to their councils, but they have no power to raise or borrow money, except that the education committee in London may spend up to $2,500. Educational expenditure is subject to the same considerations as the expenditure in other departments and requires the recommendation of the finance committees of the Councils. The work of the education committees is divided up among a number of subcommittees. In London there are nine subcommittees, as follows: General purposes; accommodation and attendance; books and apparatus; buildings; children's care (central); elementary education; higher education; special schools, and teaching staff. In Manchester there are the following subcommittees: General purposes; finance and audit; schools

[1] It should be recalled that the school boards of the large boroughs secured, during what was the formative period of public elementary education in England, the services of notable men and women, and that a return to the ad hoc system for these areas is demanded sometimes.—Ed.

of technology and art; secondary education; elementary education; administrative; sites and buildings. There are similar subdivisions of the work in Liverpool. It is the duty of the local education authorities to maintain and keep efficient all public elementary schools in their area. Since the 1902 act there are two classes of elementary schools under public control—provided or council schools, for which the buildings have been provided out of public funds or have been transferred to the local education authority; and nonprovided or voluntary schools, which have been established out of private funds and are rented to the local education authorities on payment for the wear and tear of the buildings. The nonprovided schools are denominational, and religious education is given in them in accordance with their respective trust deeds. Except that the body of managers is differently constituted, that the buildings must be maintained in good repair by the managers, and that religious instruction of a particular denomination is given, the nonprovided schools are now similar in every respect to the provided or council schools, the local authority being charged with the cost of maintenance generally.

The education act of 1902 provided further that certain local education authorities, as described above, may take such steps as shall seem desirable to supply or aid the supply of higher education and to promote the general coordination of all forms of education. The local education authorities quickly seized the opportunity of extending the educational facilities in their area, and in addition to elementary schools now provide higher elementary and central schools, trade schools, secondary schools, technical institutes, and evening education of all grades, assist institutions of university rank, and provide extensive scholarship schemes. The scope of the educational activity of the London County Council may be gathered from the following statement of the number of institutions maintained or aided by the Council: There are under the system 917 elementary schools; 9 special schools for the blind; 10 special schools for the deaf; 35 special schools for the physically defective; 89 special schools for the mentally defective; 2 open-air schools; 8 industrial schools; 7 training colleges for teachers; 10 trade schools; 3 schools of domestic economy; 277 evening-school centers; 20 secondary schools; and 17 technical institutes, polytechnics, and schools of art; in addition the Council aids 42 secondary schools, 37 technical institutes, polytechnics, and schools of art, and several institutions of university grade. The educational work of Manchester and Liverpool is organized on similar lines, but is necessarily less ambitious and extensive.

Within recent years there has been a further extension of the functions of education authorities beyond the sphere of what has hitherto been regarded as pertaining to education. Since 1906 local education authorities are empowered by the education (Provision of Meals) act

to provide meals for necessitous children attending the elementary schools. Since 1907 they have been charged with the medical inspection of the elementary school children under the education (Administrative Provisions) act, which also permits them to provide vacation schools, play centers, or other means of recreation during the holidays and at any other times. By the education (Choice of Employment) act, 1910, the authorities may also make arrangements for finding suitable employment for boys and girls on leaving school up to the age of 17. Thus the ever-increasing interest in child welfare is extending the sphere of duties which have been assumed by local education authorities.

The education committees delegate some part of their duties to local bodies interested in a particular school or group of schools. The position of such bodies, known as managers and care committees, which serve as links between the school or group of schools and the education committees, is dealt with in another chapter.

The purely administrative work connected with education is in the hands of permanent officials, acting under a director of education, or, as he is known in London, the education officer. The directors of education are, as a general rule, selected for their ability and experience as administrators rather than as educationists. At present the majority of such officials in England have gained their experience in education offices and have never been engaged in school work. An increasing number of positions of this type is being filled by men of university education, but teaching experience or training, other than that of office routine, is not required as a qualification. The director and his staff act as the professional advisers of the education committee and initiate its educational policy. The work of the education office is divided among different departments, each of which is charged with some particular branch of administration. For administrative purposes in connection with elementary education London is divided into 12 districts, each under a district inspector, who is assisted by a divisional correspondent to conduct all correspondence with managers and care committees, and a divisional superintendent concerned with matters affecting attendance, employment of children, and charges for meals and medical treatment.

The supervision of education is in the hands of local inspectors and superintendents and organizers of special subjects, who must be distinguished from the inspectors of the Board of Education. Under the London County Council there are 4 divisional inspectors who are concerned especially with secondary education; 12 district inspectors and 12 assistant inspectors of elementary education; and the following special subjects inspectors and organizers: 6 for art, 12 for domestic economy, 5 for handicraft, 6 for physical exercises, 1 for infants' school method, 1 (part time) for music, 2 for science, and 2 for children's

care. In Manchester there are engaged for elementary school inspection 4 inspectors and 8 assistant inspectors, with one superintendent for each of the special subjects, physical exercises, science instruction, drawing, manual work, and domestic economy subjects. The local inspectors are charged more particularly with the supervision of instruction and are required to report on the work of the teachers in the schools under their charge for purposes of promotion, increases of salary, etc. But the methods of supervision are no more intensive than those of the Government inspectors. Frequently the inspection takes the form of an examination of the pupils rather than of the teachers' methods of conducting their classes. The general routine inspection is usually conducted periodically by the assistant inspectors, the district inspectors as a rule confining their attentions to the weaker schools. The onus of maintaining the efficiency of the schools is thus thrown on the head teachers, who enjoy in return a greater degree of independence and confidence. Except in some of the special subjects, the local inspectors do not suggest or provide syllabuses. Schemes of work are drawn up in the case of the newer subjects like manual work and domestic subjects, but the tendency even in these subjects is to allow individual freedom as soon as the teachers appear to be sufficiently competent.

The most prominent question of the present day in educational administration is the problem of raising money to meet the growing demands made upon local authorities. The only sources of income at present are the Government grant and local rates; the amounts derived from school fees and endowments are almost negligible. The cost of education has been increasing rapidly in the last few years. There has been an increase in the cost of buildings since the demands of the Board of Education in respect of accommodation have been raised, and more classrooms are needed; the cost of materials and of building has risen; local authorities are finding difficulties in purchasing sites for school buildings at reasonable rates; the newer schools are provided with larger playgrounds; special rooms and equipment are required for such subjects as handicrafts and domestic economy; medical inspection and the provision of meals have placed an additional burden on local authorities; the salaries of teachers rise automatically each year and add to the necessary expenditure, while the near future will probably see an agitation for higher scales of salary. To these items must be added the heavy cost for higher education of different types. It is impossible to open a school report issued in the last few years which does not refer to the unequal distribution of the financial burden between the Government and local authorities. Thus in London about 70 per cent of the cost of education is raised locally and in Manchester 54 per cent is thus found. The only new form of subvention in recent years has been an annual

grant of $300,000 in respect of medical inspection. But no aid is given for school buildings, for which money is found by means of loans on the security of local rates. Under present conditions it is impossible to find other sources of revenue; the borrowing powers are limited by acts of Parliament; the local rates, although rising annually, can probably not stand further strain. The local authorities are accordingly constrained to look to the imperial exchequer for greater financial assistance than is forthcoming at present, although it is possible that a reform in the system of rating may still yield more local revenue than at present.

The Government pays to the local authorities the following grants in respect of elementary education: (1) Aid grant of a sum equal to $1 per scholar, and an additional sum to areas of a low ratable value. (2) A fee grant of $2.50 per child in average attendance between the ages of 3 and 15. This was introduced in 1891 to compensate the school boards for the abolition or reduction of fees. (3) An average attendance grant of nearly $3.50 per unit of average attendance between the ages of 3 and 5, and of nearly $5.50 for other scholars. (4) Special subjects grants in respect of instruction in handicrafts, gardening, and domestic subjects. Another form of grant for schools in areas with small populations does not affect the three educational authorities here considered.

It will be noticed that no attempt is made to apportion the grants in proportion to local effort. Except for the grants for special subjects, no special assistance is given for educational experiments, or to encourage the employment of teachers with the highest qualifications or toward the cost of buildings and the purchase of sites. The proportion has probably changed very slightly since 1910–11, and it is probable that the increase has been in the contribution from the local rates.

Of the total expenditure on elementary schools the chief item is the cost of teachers' salaries. Not only have scales of salaries been revised with a consequent annual increase due to the automatic increment, but the percentage of teachers with the highest qualifications, and therefore on the highest scale of pay, is rising every year, while the absolute number of teachers required is also increasing in consequence of the reduction in the size of classes. For the purposes of the Government grant the Board of Education recognizes the following grades or classes of teachers: Certificated, that is, teachers who have gained the board's certificate either by passing through a recognized course of training or by passing the board's examinations without attending a training college; uncertificated teachers, that is, teachers who have passed the preliminary examination for the elementary school teacher's certificate or some equivalent examination; the rapidly disappearing class of supplementary teachers, who are

only recognized temporarily by the board; and student teachers or young persons who intend to enter the teaching profession. The number of scholars in average attendance for whom teachers of different classes may be considered equivalent varies. Thus a certificated teacher may be recognized for 60 children in average attendance, an uncertificated teacher for 35, a student or supplementary teacher for 20 children. In the larger areas, such as those which are at present under discussion, the number of teachers of the last two classes is practically negligible, and the bulk of the teachers are certificated or uncertificated. The former class is steadily increasing, as is indicated in the following comparison for the years 1908–9 and 1910–11 (based on Board of Education statistics):

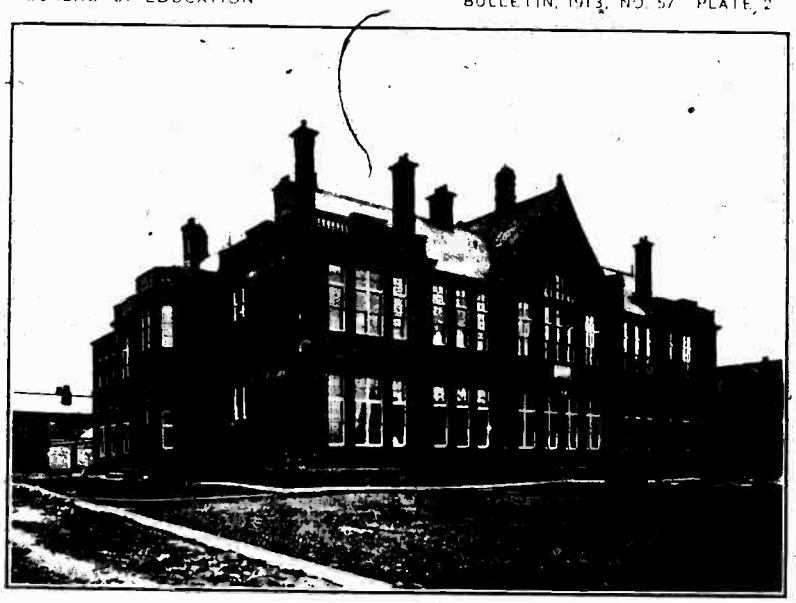
Class.	London	Manchester.	Liverpool.
Certificated:			
1908–9	92.9	68.1	69.1
1910–11	95.0	70.7	74.9
Uncertificated:			
1908–9	4.6	29.8	22.4
1910–11	2.7	27.7	20.5

The percentage of women to the total number of teachers employed is as follows: London, 72.2; Manchester, 75.5; Liverpool, 78.5.

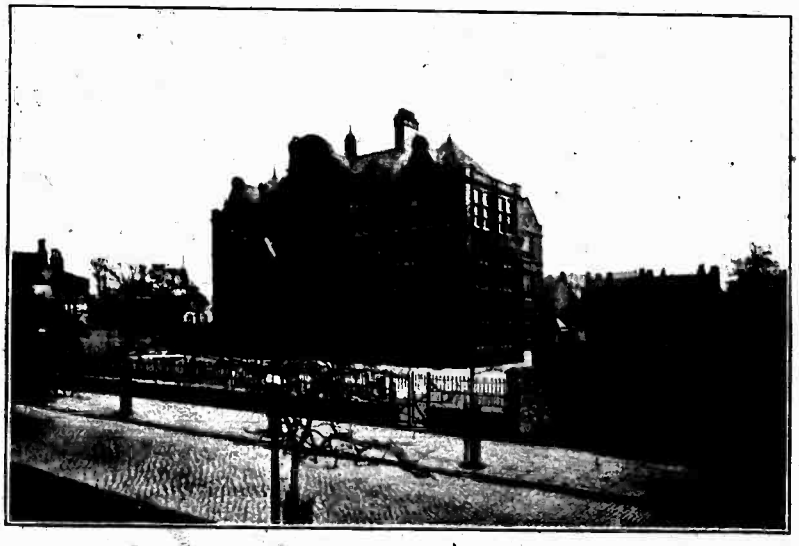
The decrease in the number of scholars per teacher may also be compared for the two years, although the averages must be accepted with the usual reservation in reading such figures:

	London.	Manchester.	Liverpool.
Average attendance:			
Per certificated teacher—			
1908–9	41.3	49.1	45.8
1910–11	39.4	47.1	43.6
Per uncertificated teacher—			
1908–9	38.4	33.4	31.7
1910–11	37.6	33.3	32.7

So far as the average size of class is concerned, the numbers here given fall considerably below the requirement of the board that no class under the instruction of one teacher shall exceed 60 in number. In anticipation of further reductions in the size of classes, local authorities are in the newer buildings making provision for classes of 40. By arrangement with the Board of Education, the London County Council has decided to reduce the size of classes in its elementary schools to 40 in senior departments and 48 in infant departments. It is expected that the alterations in school buildings and the erection of new buildings to meet the increase of accommodation will take 15 years. Every decimal point by which the average of 43.9 pupils per teacher is reduced means an increased expenditure each year of more



A. A NEWLY ERECTED SCHOOL BUILDING, MANCHESTER.



B. A NEWLY ERECTED SCHOOL BUILDING, MANCHESTER.

than $15,000. Similar reductions will be made in the new schools of Liverpool and Manchester.

The qualifications of head teachers or principals of elementary schools have been raised, as well as those of assistant teachers. The Board of Education requires that for the future head teachers shall have been trained, as well as certificated. In London the requirement of collegiate training or other technical qualifications may be waived in the case of candidates of special merit or of candidates who possess a university degree. In addition to these qualifications the London education committee requires that candidates shall have had 10 years' experience, if men, and 8 years, if women, in the London elementary schools. As a general rule, however, teachers do not receive appointments as head teachers until they have served in the schools, on the average, about 17 years. A promotion list of eligible teachers is drawn up each year by the teaching staff subcommittee, which considers the applications of the candidates and the reports on their work and fitness from the managers and inspectors. A promotion list contains the names of about 480 teachers for different departments of schools, while the average number of vacancies in each year is about 80. The competition for head teacherships is as severe in other cities, although no rigid rules as to the number of years of experience are laid down. Since 1905 the head teachers of the London elementary schools have been organized into local consultative committees, which meet six times a year and discuss matters of educational interest upon which their suggestions are desired. The education committee is kept in touch with the local consultative committees by two central consultative committees which are formed of representatives of the local bodies. Conferences of teachers and others whose assistance is regarded as valuable are also held from time to time to consider special subjects. An annual conference of teachers, corresponding to the American institutes, is held in January, at which papers on various subjects of educational importance are read and discussed. The annual conference is becoming more popular each year and is attended by persons interested in education who are not in the Council's service. London is probably the only local education authority in the country which avails itself of the expert advice and opinion of its teachers in the formal manner here described, and by the publication of reports of the conferences is making valuable contributions to the educational literature of the country, second in importance only to the publications of the Board of Education.

After the salaries of teachers have been paid, the heaviest, though much smaller, burden is the expenditure on land, buildings, and equipment. The local education authorities receive no subsidy from the Government to meet the cost of sites and buildings, and

the cost of the former is sometimes unnecessarily high. The expenditure on buildings is constantly increasing, owing to the need of new schools, as a result of the natural increase of population, the development of new districts owing to the extension of traveling facilities, and the increased accommodation required as a consequence of the reduction in the size of classes. For various reasons the cost of erecting buildings has risen within recent years. Among these may be mentioned the raising of the minimum requirement of floor space per child over 8 years of age to 10 square feet; separate classrooms are now provided in place of the large hall used by several classes, while the central hall for assembly and physical exercises is retained; the accommodation required for the teaching of special subjects, like handicrafts and domestic subjects, demands additional space; and greater attention is given to the hygienic requirements of school buildings, such as ventilation, heating, and lighting. There has also been a rise in building prices during the same period. The average cost of new buildings throughout the country varies from $50 to $70 per place, including the central hall, playground, etc.[1] In London the cost is about $85 per place. Besides the cost of new buildings, there is also the expense of repairing and remodeling the old buildings. The Board of Education, through its inspectors, has the power to withhold grants if school premises appear to be unsatisfactory either in respect of accommodation or of sanitary arrangements. This power is, however, not exercised until after repeated warnings have been given. A new force has also arisen which may be of great service to the local education authorities in maintaining satisfactory hygienic conditions in the schools. Many of the school medical officers now refer to this question in their reports, and recommend alterations to secure improved methods of lighting and ventilation and other matters. London has adopted the plan of dealing with the old school buildings in rotation, and about 10 schools are selected for treatment each year as their needs may demand. Some schools are enlarged, in some a central hall is added, in others the staircases, cloakrooms, or other parts of the building require attention, while in others again the playground may be extended by the demolition of surrounding property. In Manchester and Liverpool the dispersion of the population away from the center of the towns threatens the existence of some schools. To meet such contingencies, Manchester has adopted the plan of building or remodeling schools in such areas in a form that they can readily be adapted for use as offices or factories.

The English school buildings are in general inferior from the architectural point of view to the schools in certain German towns; and

[1] See Bd. of Ed., Rep. and Abs. of Evidence taken before the departmental committee on the cost of school buildings, 1911.

in their internal arrangements, such as size of classrooms, cloakrooms, ventilation, and other facilities, fall below the standards of schools in the United States. No building can be erected or remodeled by a local education authority until the plans and specifications have been submitted and approved by the Board of Education. The sanction of the local Government board has to be obtained for building loans, but this is only granted after the Board of Education has approved the plans.[1] The Board of Education does not commend schools of more than 500 or 600 scholars. Departments containing from 350 to 600 places are required to have central halls allowing about 4 square feet per scholar. On the question of central halls, however, there is at present some indecision, as unfavorable reports have been given about them on the ground that when they are used classes around them are liable to be disturbed, that they are dusty, and create difficulties in ventilating the classrooms. The building regulations of 1907, which are still in force, recommend classrooms for from 50 to 60 scholars, allowing 10 square feet for each; these numbers are, in fact, being gradually reduced. The classrooms are, as a rule, equipped with dual desks, which are usually not graded, except in the infants' departments; the long desks and seats without back rests have, however, not disappeared entirely, and even find favor with some teachers because "they make the children sit up." The rooms, even in the newer schools, are so small and compact that they permit of nothing but seat work; the provision of space in front of the class is generally very scanty. The matter of interior decoration appears to have received little attention up to the present; nor is there any definite policy in the selection of pictures for the rooms, for many pictures are found in infants' departments which would seem more suited to the upper classes, and vice versa. The authorities are undoubtedly handicapped by the fact that suitable school pictures are not published in England, as they are in Germany. An interesting reform is, however, noticeable in many of the progressive infant schools, in which the teachers draw large pictures in crayon or pastel to illustrate the stories or other lessons of each class. It is very probable that a school will shortly be set aside in Liverpool for the purpose of experimenting on the general question of school decoration and school art.

Very few schools have such elaborate systems of artificial ventilation as are found in American schools; the open windows in summer, combined with open fires in winter, appear to be satisfactory, although special air chimneys and inlets are also to be found. For heating purposes the open fire or hot-water pipes are in most general use, and about 55° to 60° of warmth is regarded as the normal standard. Lighting, especially in some of the older schools, does not always

[1] See Board of Education, building regulations, 1907.

reach the standards laid down in school hygiene, but it is only in the exceptional cases that classes are so arranged that they do not receive the light from the left; the chief difficulty is in the matter of artificial lighting, which is necessary on many winter days. The commonest form of light is incandescent gas; electricity is installed in new schools, and open gas jets still survive in some schools. The attention which this problem is receiving from the school medical officers may prevent such eyestrain as must have been involved in a classroom where, on a dark day, the teacher sent individual scholars to the window to enable them to see what they were reading. Probably the least satisfactory features are the inadequate provision of lavatory accommodation and the retention of the common drinking cups, for no school is yet provided either with individual drinking cups or with drinking fountains. One of the most important features of the newer schools is the amount of space devoted to the playground, in many cases exceeding the requirements of the Board of Education. This importance of the playground is dealt with in a separate chapter.

But, burdensome as the expenditure on education may be, it has the immense advantage of serving as a means of arousing public interest in the general subject. Never was this opportunity greater than at present, and the press is wisely making good use of it. There are not in England, as there are in America, publicity campaigns, and the average citizen knows little of what goes on in the schools. The increasing expenditure may well be the beginning of his education in such matters.

Chapter II.

SCHOOL MANAGERS AND CARE COMMITTEES.

Probably no other educational system in the world has the advantage of so much voluntary assistance in its administration as that of England. Whatever truth there may be in the charges that the system is becoming more and more centralized and the control more bureaucratic, the fact remains that by a principle of devolution a great deal of the management of the schools is left in the hands of the people or their representatives. The local bodies which are in this way interested in the administration of educational affairs are the local education authorities, school managers, and in an increasing number of places the school care committees. The chief executive and legislative power in the various local areas is vested, subject to the national statutes and the control of the Board of Education, in the local education committee, which is dealt with on pages 10ff.

Under the education act of 1902 every local education authority must appoint a body of managers for each school or group of schools under its control. The number of managers for each school is usually four, but this number may be exceeded. In the case of nonprovided schools the body of managers consists of foundation managers and representatives of the education authority in the proportion of 4 to 2. The managers deal "with such matters relating to the management of the school and subject to such conditions and restrictions as the local education authority determine." In London[1] the schools are arranged in groups of three or four, under a body of 12 to 18 managers, two-thirds representing the immediate district and the remainder appointed by the Council. Meetings are held usually once a month, but one meeting in three months is compulsory. The powers and duties of the managers are in the main advisory, without any financial control except of voluntary funds for specific purposes. The managers may visit the schools of their group and have access to the school records (log book, punishment book, time book, attendance and medical registers). They may advise the Council in matters affecting the school premises, such as alterations, enlargements, ventilation, lighting, heating, and sanitary conditions, and furniture. Managers may be consulted, but have no vote in the appointment of head teachers, but they themselves nominate for appointment assistant teachers and school keepers. Although they have the power

[1] L. C. C. Regulations with regard to the education service, Managers of public elementary schools, 1911.

to investigate complaints against teachers, managers can only make recommendations to the Council as a result of such inquiry. In relation to the children, managers are expected to interest themselves in their attendance, especially of truant children, and where children are employed out of school hours to see that the regulations of the Employment of Children Act, 1903, are observed. They may arrange for the distribution of prizes, for open days, and entertainments, and for a limited number of half holidays during the year. Since managers are selected generally on account of their interest in local public welfare, it is expected that they will see that the schools under their care make full use of the local swimming baths, museums, and places of local interest, that they will stimulate the establishment of school savings banks, and will draw the attention of children about to leave school to the advantages of thrift and benefit societies. For the same reason they may advise children and parents in matters of apprenticeship and employment, and the value of further education after leaving school. It will be obvious, then, that the general duty of managers is to secure efficiency of administration by performing locally such tasks as are of immediate local interest, and to act generally as an advisory council to the head teachers in their relations with the local public. The managers are, of course, unsalaried and undertake their duties voluntarily. It follows, accordingly, that the efficiency of any body of managers depends upon the individuality of its members. The tenure of office is for three years, but the Council may terminate the office of any member who has neglected his or her duties, or is unsuitable for the office, or makes during any one year less than three attendances at the meetings of the body to which he or she belongs, or less than four visits to schools comprised in the group under its charge.

The system of managers has been more or less developed in other cities along similar lines. In some the function of the managers appears to be purely nominal, as in Manchester; in others their duties and usefulness appear to be as important as in London. In Liverpool the head teachers value the cooperation of their managers and consider that they perform a useful function in mediating on the one hand between the head teacher and the education committee, and on the other between the school and the public.

Side by side with the managers, another body, the care committee, has been recently established in a few cities. While the managers are interested in the main in the administrative work of the schools, the care committees direct their efforts to the charitable and philanthropic. The system of care committees is perhaps more prominent and better organized in London than elsewhere. Children's care (school) committees were first established in London in connection with necessitous schools for the purposes of the education (Provision

of Meals) act, 1906. In 1909 it was decided to appoint a care committee for each public elementary school and to extend their scope to include the general supervision of the welfare of children. The school care committees are organized into local associations of school care committees, and all are under the control of the children's care (central) subcommittee of the education committee.[1]

A children's care (school) committee consists of representatives (two or three) of the managers of the school, who may nominate an equal number of voluntary workers from a list supplied by the children's care (central) subcommittee, which also has power to add not more than one-third of the whole number of members. The committees are reconstituted annually. The voluntary workers include members of associations dealing with children and others interested in the welfare of children and social work. The routine work is conducted by an honorary secretary, who is usually a member of the committee and may be a teacher. Paid organizers are appointed by the Council to advise the committees. Meetings are held once a fortnight or, if necessary, once a week.

The duties of the care committees are to make themselves acquainted with the home conditions of the children attending the elementary schools and, by means of advice to the parents and remedial measures that are provided, to secure such an improvement as will enable the children to benefit by the instruction provided in the schools. In connection with the feeding of children they visit the homes of necessitous children and inquire into the causes of distress, draw the attention of parents to local charitable organizations, find employment for members of the family, and talk to the mothers on housekeeping and food values. In the course of such visits members of the care committees obtain information which may lead to inquiries and prosecutions under the Children Act, 1908, which is intended for the safety and protection of children and for their removal from evil environments. Their duties have been further extended to cover medical inspection, for their relations with the parents place the members in a position where they can advise as to the means of securing the medical treatment recommended by the medical officer or of carrying out any other recommendations; they also assist the authorities to obtain payment for medical treatment provided in proportion to the financial conditions of the parents. Besides these important functions the care committees are expected to interest themselves in the general welfare of school children; thus they may encourage thrift, the establishment of clubs and other means of recreation out of school hours, the institution of boot clubs, and the opening of play centers and vacation schools. To the older children about to

[1] L. C. C. Handbook containing general information with reference to the work in connection with the children's care (central) subcommittee, 1910.

leave school they may offer advice as to their future careers and the means of obtaining employment or bring to their notice the facilities existing for apprenticeship or the opportunities for further education in evening schools.

In order to coordinate the work of the school care committees, local associations of these committees have been established. These consist of 18 members, representing the care committees of the schools, the teachers' consultative committees, and the children's care (central) subcommittee. The local associations collect voluntary contributions toward the cost of feeding, manage the feeding centers, disburse money locally for this purpose, and discuss the methods of selecting necessitous children within their areas and questions affecting the physical welfare of the children. They may further prevent any overlapping in the matter of aftercare and employment of children.

There are in London close on to 1,000 care committees, in connection with which there are about 6,000 voluntary workers. The school care committees are grouped into 27 local associations, one for each of the districts into which the county is divided for educational purposes. As in the case of the managers, there is considerable variation in the amount and value of the work performed by the different committees. In some the work and interest are very good; in others there is a tendency to shift the burden upon the most active members. The opportunities opened up within recent years for this type of social work have led to the institution of courses in problems dealing with social welfare, notably at the London School of Economics and in several of the provincial universities.

Care committees have not as yet been established in many of the local education areas. The system has been introduced recently into Liverpool in order to provide an organization "to look after the welfare of the child's body during school age, to extend a paternal interest and helping hand to him at the leaving age, and, so far as the continuation schools and employment are concerned, to watch over his interests for a few years after he leaves the elementary school." Since it summarizes the character of work done in some of the towns where the care committees have already been established, the following list of the committee activities, taken from a memorandum by the director of education for Liverpool, may be of interest:

1. To select necessitous children for feeding from the list provided by the head teacher or other agency.
2. To revise the list at each meeting and see that a name is removed when the case ceases to be necessitous.
3. To act as supervisor of the feeding centers.
4. To determine whether to take steps toward the recovery of the cost of the food supplied to a child.
5. To hear appeals on such cases.

6. To assist children's aid societies, and others of a similar nature, in distributing their gifts of boots and clothing to the best advantage.

7. To classify all cases in which medical treatment is recommended into (1) hospital cases, (2) cases for treatment at dispensary or by private practitioner, (3) cases for charitable assistance (trusses, etc.), (4) cases for home treatment.

8. To secure a voucher card for hospital cases.

9. To insure, by visiting the home, that the appropriate medical treatment is actually carried out, and that spectacles and other appliances are provided as ordered.

10. To assess what charge, if any, should be laid upon the parents.

11. To recommend legal action against parents under sections of the children act where parents refuse or neglect to carry out the necessary treatment.

12. To receive installments of payments for spectacles or tooth brushes provided at cost price by the authority, and for other medical treatment charges.

13. To aid in getting up for parents evening lectures on health, circulating "Health Hints" to parents, dental information, etc.

14. To supplement hospital returns by collecting information as to cases in dispensaries or under private doctors.

15. To apply pressure when cleanliness is at fault, and procure either adequate home washing or public cleansing under order of the school medical officer.

16. To influence the parent in choosing a suitable occupation for the child, especially where vision or any health defect may be a determining factor.

17. To place parents and children in touch with juvenile employment bureaus.

18. To see that leaving reports are ready for the child when he leaves school.

19. To encourage and supervise the work of evening play centers and vacation schools.

20. To encourage such outside movements as the Boy Scouts, cadet corps, etc., in which children of school age may take part, to their great advantage in physical training and in the sense of discipline.

21. To cooperate with the children's holiday societies, etc., and decide on the most suitable cases for their help.

Chapter III.

ORGANIZATION, CLASSIFICATION, AND COORDINATION OF SCHOOLS.

Those who are acquainted with the uniform type of elementary school of the United States will be struck with the variety in the organization of the English elementary schools. There coexist side by side in the same system the ordinary elementary school with its infants' department and departments for boys and girls; the school with its infants' department, junior mixed and senior mixed departments; the school with its infants' department, a junior mixed, and senior departments for boys and girls separately. Each of the departments mentioned is as a rule under a separate head teacher, but in Liverpool some 15 schools, with infants', junior mixed, and senior mixed, or senior boys' and girls' departments, have been placed under the general charge of a principal who is assisted by head teachers over each department. Schematically the various types of schools may be indicated thus:

I.	II.	III.
Infants.	Infants.	Infants.
Boys.	Junior mixed.	Junior mixed.
Girls.	Senior mixed.	Senior boys.
		Senior girls.

What the particular advantages of each type are it is difficult to say, and so far as the teachers themselves are concerned the answer to this question depends largely on their attitude toward coeducation and the influence of the woman teacher. The head teachers of mixed schools are invariably in favor of the coeducation system, on the plea that the presence of boys in a class helps to stimulate the efforts and to raise the standard of the girls' work, while the presence of the girls has a good disciplinary effect on the boys and tones them down. The mixed system admittedly involves some difficulties of organization in the case of the older boys and girls whose industrial work must be differentiated, with the consequent trouble of arranging a suitable time-table. Although the women in general are opposed to the mixed system, which means fewer principalships for them, the women teachers engaged in such schools are ardent supporters of the mixed classes and recognize little difference between the boys and girls; the opponents are usually the men teachers in those senior departments for boys who have come up from a junior mixed department. Here the objection is made that the instruction of the boys by women has not

been thorough and that, on the disciplinary side, the boys have not been kept sufficiently under control and are consequently restless and fidgety. Another objection raised, also usually by men, is that in certain subjects, such as arithmetic and geography, the girls are poorer than the boys and consequently are a hindrance to rapid progress. These opinions are quoted for what they are worth; it would be impertinent without further investigation to attempt to pass judgment on them.

More serious are some of the complaints made by one department against the work of another. There are not infrequently cases where there is apparently an absence of understanding and sympathy between the infants' department and those for older scholars or between a junior and a senior department. The higher division seems to demand greater attainments in the scholars, or there is dissatisfaction with the discipline or instruction of the lower division. To obviate difficulties of this nature, provision has been made in the London schools for two annual conferences between the head teachers of all the departments for the discussion of questions of management and the coordination of teaching methods in writing, arithmetic, drawing, and other subjects in which common action is desirable.[1] An improvement on this has, however, been made in Liverpool by the appointment of organizing principals in 15 schools, with charge over all the departments. Such a system, practically the same as in the large elementary schools of the United States, provides automatically for coordination in all branches and for the maintenance of uniform standards of work. The system is found to work successfully, but is meeting with some objection, partly from the Board of Education, which is opposed to large schools such as this organization involves, partly from the rank and file of the teachers, who feel that the head teachers of departments necessarily assume a subordinate position under the principals, and that the number of principalships is so small as to narrow the opportunities for promotion. But there can be little doubt that the appointment of an organizing principal meets many of the objections which arise from the existence of independent departments side by side. There is the further advantage that with the subdivision of labor more time is left for the supervision of teaching by the departmental head teachers, and more for the purely administrative work of a large school by the principals.

The elementary schools, excluding the infants' departments, are organized on the basis of seven standards, with the addition in many cases of an extra standard known as the Ex-VIIth. Where a junior department exists the scholars are taken up to Standard III, or in some cases to Standard II, and the remaining four standards constitute the senior department. The division into seven standards

[1] L. C. C. Elementary Schools Handbook, p. 30.

assumes that the scholars enter from the infants' department at the age of 7 and pass through the school at the rate of a standard a year. This is probably the rate of progress for the average scholar, but the very sound principle has been adopted that a scholar shall not be retained in a class long after he has shown his ability to master the work assigned to it. Fortunately the head teachers under most systems have been allowed complete freedom in classifying and promoting their scholars, and the Board of Education imposes no restrictions and offers no suggestion in the matter, although instances of serious retardation would at once be inquired into. Some attempt is made in the infants' departments to promote the scholars on their proficiency; but as a general rule age is ordinarily the chief guide, especially in promoting from the infants' to the upper school.

In the standards, or grades for the older children, the ordinary promotion of the average scholar takes place at the end of the school year. Promotion is made on the basis of a final annual examination conducted by the head teacher, the records of the examinations conducted throughout the year, which may take place two, three, or four times in the year, and the teachers' reports. There is thus no rigid passing grade as in American schools. From 90 to 95 per cent of the pupils are thus promoted at the end of the school year. But the brighter pupils may be promoted at any time during the year on the results of one of the intermediate examinations. About 10 per cent of the scholars thus pass through two standards in a year. The examinations are universally conducted by the head teachers, and are oral and written. The subjects of examination to which the chief importance is attached are reading, writing, spelling and composition, and arithmetic, to which drawing is sometimes added. The other subjects of the curriculum are generally tested orally. The examination not only serves as a test of the scholars, but is too frequently the only form which supervision of the teaching takes.

In London a somewhat more rigid system of promotions has been introduced recently. Here provision has been made for the semi-annual promotion of a large number of the pupils. "Such promotions," it is prescribed, "shall be based on the educational attainments of the children. Regard shall be had to the age of the children and to the accommodation provided by the several classrooms."[1] As a consequence, accommodation becomes the guiding principle, for evidently it is an administrative measure intended to keep the classrooms full. The principle has, indeed, been characterized as the "structural principle of promotion." The practice is rendered more unsatisfactory by the fact that the syllabus for each class or standard has been drawn up for a year's work, with the result that pupils who are promoted to a new standard must either miss a whole year's work; i. e., half a year in the standard from which they come

[1] Elementary Schools Handbook, p. 14.

and half a year in the standard to which they are promoted, or those scholars who remain in a standard must be kept at a standstill to enable the newcomers to reach their level. A remedy may perhaps be found, although not without considerable difficulty, by organizing syllabuses on a half-yearly basis. Provision is still made for promotions at other times "under exceptional circumstances."

The simple scheme of promoting the brighter pupils twice in one year or giving them a double promotion at the end of the school year is possible in all schools. Where the schools are so large that each standard may consist of two or more classes, further variations can be introduced, and a finer classification is possible. Thus in one school in Liverpool some of the standards have A, B, and C classes; the A class does a little more than the year's syllabus for the standard, the B class proceeds at the normal pace, the C class makes somewhat slower progress with the ordinary syllabus. But all these classes receive the normal promotion. Side by side with this system further provision is made for the bright pupils, who between the ages of 8 and 9 (Standard II) are placed in a separate group to do the work of two standards in one year, at the end of which they are promoted to Standard IV. On reaching the next standard these pupils are selected to become candidates for free places and scholarships in the secondary schools. In another large Liverpool school the standards are divided into A and B sections, but, in addition, the bright scholars are grouped together in two classes to do the work of three years in two, i. e., one of these classes does the work of Standards I, II, III in two years; and another, which may be differently constituted either because some of the scholars do not maintain their position or because other bright scholars may be discovered in other classes, do the work of Standards IV, V, VI in two years.

Whatever the system employed, adequate provision seems to be made everywhere for the promising scholars. This is further indicated by the fact that the minimum age of entrance for scholarships and free places to secondary schools, the examinations for which are based on the work of Standard V or even higher, has been placed as low as 10 (in Manchester and Liverpool) or 11 (in London). The average scholar would, however, only reach Standard V between the ages of 11 and 12. It is thus not uncommon to find that the age range of the scholars in Standard VII or Ex-VII is from 11 to 14. The system has its defects, but these are not inherent. It is expected that the scholar who is rapidly promoted will proceed to a higher type of school at any rate by the time he is 12; but no provision is made for those scholars who reach the top standard at the age of 11 or 12 and do not, for some reason or other, leave, and who, consequently, spend their remaining time in school in repeating the syllabus. This topic, the broadening of the curriculum for the top classes, is referred to elsewhere (see p. 54).

However satisfactory the provision for the bright scholars may be, the question of the backward pupil has only recently begun to receive attention. It is impossible to give any statistics of retardation for English elementary schools, because no reports contain a distribution of scholars by ages and standards, nor would it be wise to attempt an estimate. Further, without some degree of uniformity, it is doubtful whether such statistics would have any value as a test. Just as there are scholars of 11 years of age in Standard VII, so there are scholars of 14 in Standards IV and V, and the incidence is probably higher for schools in poor neighborhoods than in better-class districts. It is perhaps of interest to mention that the question of backwardness has been brought to the front by the school medical officers. In Manchester the dull pupils were noticed by one of the assistant medical officers by the fact that they took a longer time to answer the questions put to them than did the normal pupils, and their backwardness was confirmed by a reference to their standard, which was usually below the normal. Of 800 boys about 13 years of age, 62.5 per cent were in Standards VI and VII and 37.5 were distributed among the first five standards; of 700 girls, 57.2 per cent were in Standards VI and VII, while 42.8 were in the first five standards. In another investigation a girls' school in a poor district was selected, and it was found that of 254 children in the school 187 were below Standard V, and of these 104 were distinctly backward. It is not necesssary here to enter into the physical defects which were found to accompany the mental backwardness; the figures are only quoted to indicate to what extent the retardation may be found to exist.

The school medical officer of Manchester in his report for 1909–10 recommended the establishment of special classes attached to the ordinary schools or even the establishment of intermediate schools to deal with these cases of backwardness or dullness which are not sufficiently serious for admission to special schools for mental defectives. There is, however, a very general opposition on the part of teachers to the establishment of special backward classes, on the ground that it is unfair to label a child, as placing in a backward class would do, and that the presence of normal and even bright children in a class serves as a stimulus to the backward child. These objections seem somewhat unreasonable as well as unfair to the scholars of all types. For, if the normal scholars set the pace, the backward ones fall irretrievably behind, while special attention to them involves loss of progress for the normal scholars. Nor are the large classes calculated to afford a teacher time to give that special attention which the backward scholars need. Provision has, of course, been made for the slow pupils, but for the dull or backward it is only just being organized. The tendency is to give such children more manual than literary work. An experiment is being conducted in a London school

in a very poor district in providing a curriculum with a practical bias for scholars of the class under consideration. The school which has been reconstructed is equipped, in addition to the ordinary classrooms, with a science-demonstration room, a practical workroom, and wood and metal workshops for the boys, and a science-demonstration room dressmaking room, and domestic-economy rooms for the girls. The size of the classes is reduced to 40. The chief emphasis of the curriculum is placed on handwork—paper, clay, and cardboard modeling and wood and metal work for the boys, and for the girls clay and paper modeling, designing, cookery, laundry work, housewifery, needlework, embroidery, and dressmaking. The teachers have been specially selected for their sympathy with industrial occupations in education.[1] Where the special classes have been established in the ordinary schools in London, Liverpool, and Manchester, the same attention is given to the manual and industrial occupations as a means of training the backward child, and in many instances the special class is known as the industrial. But considerably more can be done for this class than is done at present, for in London only 20 to 30 schools out of the 917 made special arrangements in 1911, and the proportion is probably the same in other towns. There is no doubt, however, now that its importance has been recognized, that much attention will be given to this problem of school administration.

COORDINATION OF SCHOOLS.

A radical difference between the English and American systems of school organization is the difficulty in the former of coordinating the elementary and secondary schools. The American high school receives its pupils after they have completed the elementary school course and builds up its curriculum on that foundation. The English secondary schools receive their pupils from a variety of schools—special preparatory schools or elementary schools—and the pupils on entering may vary in age from about 10 to 14. But the question of coordinating the elementary and secondary schools did not become pressing until recent years, when the number of pupils entering from the elementary schools began to increase considerably, and local education authorities were empowered to provide all types of schools. It is felt that under the present system there is much overlapping and that a boy who enters the secondary school from the elementary at the age of 11 or 12 with a scholarship or a free admission or as a fee-paying pupil must for a time repeat much of the work that he has already done, except in languages and science and perhaps mathematics. The secondary schools prefer to receive their pupils at least under 12 years of age, for it is held that in certain subjects, especially languages, progress becomes increasingly difficult after that age. This problem may, however, not be so urgent if a new

[1] L. C. C. An. Rep., 1911, Vol. IV, p. 6.

type of secondary school be organized with a curriculum on the basis of English, science, and mathematics. As a general rule, pupils who do not leave the elementary schools for the secondary at the age of 12 or in some cases 13 are hardly likely to enter at all. With this in view the following suggestion is contained in the Elementary School Code (introduction):

> It will be an important though subsidiary object of the school to discover individual children who show promise of exceptional capacity and to develop their special gifts (so far as this can be done without sacrificing the interests of the majority of the children), so that they may be qualified to pass at the proper age into secondary schools and to be able to derive the maximum benefit from the education there offered them.

The absence of coordination is thus avoided by securing the entry of pupils to the secondary schools at the earliest possible age. Some experiments have been undertaken to secure better coordination. In Nottingham an experiment is conducted in two council elementary schools of admitting, after an entrance examination, pupils between the ages of 9 and 10, and, in addition to the ordinary curriculum, of including French, algebra, and geometry. Many secondary schools in the country are either providing special classes for scholars from elementary schools in order to prepare them to take their proper place in the school or classify the scholars by subjects.[1] The question is, however, far from being solved, nor is a solution likely to be reached by tinkering with the present organization. Any thoroughly conceived reconstruction will have to take into account a reorganization of the whole system, and not merely to make the elementary school fit the secondary, but to provide for greater differentiation at the top of the elementary school for the large majority who can not proceed to the secondary school.

In addition to the opportunity of entering a secondary school the elementary school pupil may proceed to the higher elementary or the central school at the age of 11 or 12 or to the trade school between the ages of 13 and 14 or in some cases 15. Here the problem of coordination is practically settled, for these schools are intended to continue the work of the elementary schools. The problem of coordinating with technical schools does not arise, for very few pupils enter these schools from the elementary schools directly. Finally the work of the evening schools is in general so varied that the elementary school pupil has no difficulty in finding the course or classes suited to his capacity and attainments. It is obvious, therefore, that in those institutions originally established and controlled by local authorities the problem of coordination is practically solved. The chief difficulty centers round the relations of the elementary schools and the secondary school which so long had a separate existence and has developed its own traditions for its own needs.

[1] See Bd. of Ed., Rep. for year 1911-12.

Chapter IV.

SCHOOL ATTENDANCE AND ITS ENFORCEMENT.

The returns relative to the attendance of children at the ordinary elementary schools are impressive. In the school year 1910–11, the last for which a summary is available, the percentage of average number of scholars to the average number on the registers for England was 89.16 for scholars of all ages, 76.50 for scholars between 3 and 5 years of age, and 89.96 for scholars of the ages of 5 and over. These figures bear remarkable testimony to the efficiency of the organization for securing and enforcing school attendance. Before turning to this it must be pointed out that a large proportion of the Government grant for education is paid on the basis of school attendances, no grant being given for less than 400 school sessions. Hence a decrease in the school attendance means a considerable financial loss to the local education authority, and in Manchester a difference of 1 per cent in attendance means a difference of $5,000 in the grant. An efficient organization to secure a high standard of attendance is therefore of financial value to the local education authorities. Excessive zeal in this respect is indicated in some places by the complaints of the authorities that the more stringent requirements of school medical officers are leading to a reduction of the Government grant.

Three factors contribute to make school attendance what it is: Public opinion, the teachers, and the special agencies, supported in the last resort by the law. Since 1870 public opinion in England has been educated up to the point where daily attendance at school is accepted as the normal incident in a child's life, only to be interrupted in the case of illness. In London the percentage of average attendance to the average number on the registers rose from 78.3 in 1871 to 89.4 in 1911. The following diagram indicates the growth of the average attendance in the public elementary schools of Manchester as compared with the growth of the population since 1871.

Among the several factors which have led to this advanced state of public opinion, no little credit is due to the interest of the teachers, who have inculcated so successfully the lessons of regular and punctual attendance. Shields, banners, and badges are offered for class competition in some schools, while weekly badges and annual prizes are awarded to individual scholars for good attendances. In the London schools—

in order to encourage punctuality and regularity of attendance, teachers are authorized to provide some attraction, recreative or otherwise, for the children during the

last half-hour on Friday afternoons. The children of any one class in any department (other than central schools) may be dismissed after two hours' secular instruction has been given during the afternoon, but this privilege is to be exercised only on Friday afternoons.

It is the practice in every school in the country to display in a prominent position the attendance at each session, either for the whole school or by classes. The head teachers may cooperate with the attendance officers by notifying parents of the absence of their children from school.

But the chief burden of enforcing attendance falls on the school attendance officers, and in the last resort on the police courts. The

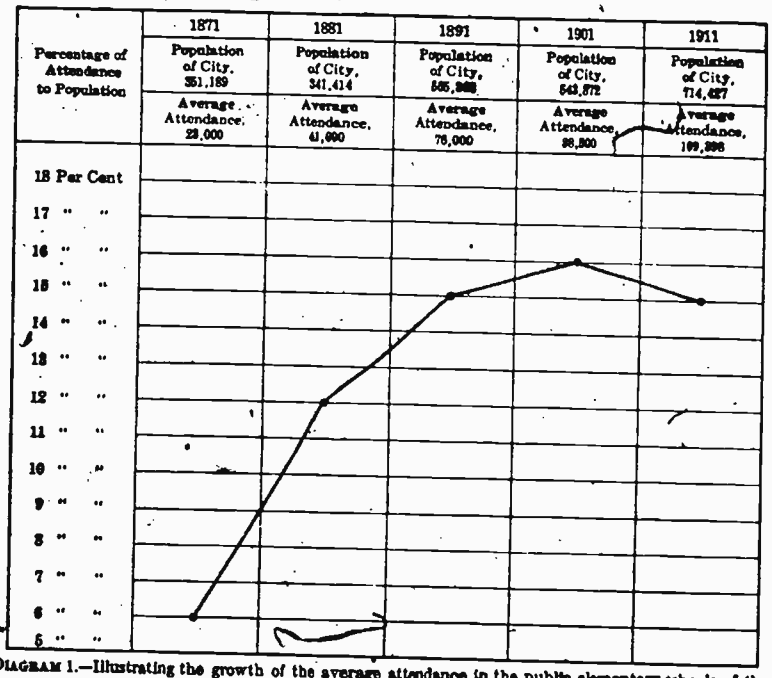


DIAGRAM 1.—Illustrating the growth of the average attendance in the public elementary schools of the city as compared with the growth of the population.

school attendance officers are responsible to the local education authorities not only for following up the absentees from the schools, but also for supplying information on the number of children of elementary school age. In London the school attendance officers annually make a schedule of the children of school age who are likely to enter an elementary school. The schedule is drawn up mainly on the basis of the number of children residing in houses of a certain annual rating or less. This affords the education committee both an estimate of the number of children who should be in school and an indication of the school accommodation likely to be required. A similar system of taking the school census prevails in other cities and

is conducted by the school attendance officers. Their chief function, however, is to trace absentees by visiting their homes. The Manchester system of conducting this work, since it is typical, will indicate its scope and effectiveness. This city in 1911 had a population of 714,427, and there were 122,141 scholars on the rolls, with an average attendance of 109,398, or 90 per cent. To supervise school attendance there were employed 62 school attendance officers, 3 district inspectors, and 1 superintendent. The city is divided into 57 districts, with an average population of 12,534 and an average of 2,143 children of school age. Those officers who are not engaged in district work are employed either in clerical work, industrial school cases, rota, and police court proceedings. The officers in charge of the districts visit each school at least once a week and on Fridays receive a duplicate register of the attendances for the week.[1] All the doubtful cases—that is, where less than 10 attendances have been made—are visited in the following week and investigations are made into the cause of absence. Usually one visit is sufficiently effective, but where the result is not satisfactory, the parents, before proceedings are taken against them either under the statute or under the local by-law, are given an opportunity to attend a meeting of one of the rota committees. These committees, which consist of representatives of the education committee, meet in local centers periodically, once or twice a month according to the needs of a district, and by warning parents reduce the number of cases to be prosecuted before the magistrates. In London the local attendance committees for each electoral district, and in Liverpool the courts of appeal for each attendance district, mediate in a similar way between the school attendance officers and the police court. The rota committees thus dealt with 8,099 cases in 1911 in Manchester, of which about one-eighth only were further summoned to appear before the magistrates. When cases are taken into court, parents are liable to a penalty of $5, while refractory children may be committed to industrial schools (described in Ch. XIV).

Within the past few years the sphere of duties of the school attendance officers has been extended. Under many local education authorities the officers conduct the inquiries into the home conditions of children who are considered to be necessitous, as authorized by the education (Provision of Meals) act, 1906. Their assistance has also been found to be of great service in connection with the system of school medical inspection, and under some authorities they take children to the cleansing stations. They are in a position as a result of their investigations and home visitations to bring to the attention of the school medical officer cases of absence on medical grounds, of

[1] Some authorities use a slip system or card system on which the attendances of each child are registered, and these are given to the attendance officers in the case of absentees.

infectious diseases which need not be notified, cases of defective children, and cases of children permanently unfit to attend school.[1] In the same way the attendance officers can cooperate with the medical officer in following up cases recommended for treatment. The intimate connection between school attendance and physical fitness is now so thoroughly recognized that several authorities—e. g., Gloucestershire, Derbyshire, and Somerset—have appointed school nurses as attendance officers.

The average cost per child in average attendance for enforcing attendance at school shows considerable variation throughout the country. The cost in London is 42 cents per child in average attendance, which is 89.4 per cent; in Manchester the cost is about 33 cents per child, the average attendance being 90 per cent. In an inquiry conducted on behalf of the Liverpool education committee the cost per child in average attendance in 13 of the largest towns in England varied from 16 cents (Newcastle-on-Tyne, with an average attendance of 90.6 per cent) to 53 cents (Liverpool, with an average attendance of 89.6). As a result of the inquiry the Liverpool organization for securing school attendance was reformed with a view to cutting down the cost, which apparently bears little relation to the results attained.

[1] See Chief medical officer of the Bd. of Ed., An. Rep. for 1911, pp. 9, 99–104.

Chapter V.

INFANT SCHOOLS.

The infant school, like most educational institutions of the present in England, is in a state of transition. It is gradually losing the rigid formalism which once marked it. Its chief defects arise out of its history. It is not so very long since even infant schools were subjected to as rigid examinations as the upper schools and an inspector could report that the mental arithmetic of the 5-year-olds was unsatisfactory. Further, until recently the inspection of infant schools was conducted by men who were not familiar with Froebelian or kindergarten work. At present this side of inspection is being intrusted to women inspectors. The training colleges are also responsible for the weakness of infant schools, for very few of them give that special preparation which infant-school teachers require. But the infant school is responding more and more to the influences of the progressive kindergarten principles. But the difficulties in the way of complete reform are largely administrative. The infant-school teacher must compromise between her own conception of child life and the education suited to it and the demands of the upper departments that the child on leaving the infant school shall have attained a definite standard of information. Not that the two are incompatible, but there is the danger in some infant schools that attention will be concentrated mainly on the three R's. To some extent, also, further development is hampered by large classes, from 48 to 60 children, the formal school desks which seem to invite nothing but seatwork, and inadequate space in the classrooms. There are accordingly infant schools of all types—schools in which the work is mainly formal and disciplinary and schools in which the freedom and natural development of the child are the guiding principles. But there is in all schools a tendency to pay too much attention to the time-tables, and to divide up the school day into numerous short periods of 15 to 20 minutes. No doubt for many of the formal subjects such short periods are sufficient, but on the whole the result is to prevent continuity of interest in anything.

Time-table of an infant school

(Manchester.)

	9.00 to 9.30.	9.30 to 9.50.	9.50 to 10.00.	10.00 to 10.05.	10.05 to 10.30.	10.30 to 10.45.	10.45 to 11.15.	11.15 to 11.30.	11.30 to 12.00.	2.00 to 2.10.	2.10 to 2.20.	2.20 to 2.50.	2.50 to 3.05.	3.05 to 3.25.	3.25 to 3.55.	3.55 to 4.15.	4.15 to 4.20.	4.20 to 4.30.
Monday	Religious instruction.	1. Story. 2. Do. 3. Do. 4. Do.	Conversation.	Movement exercises.	Reading.	Recreation.	Number.	Recitation.	Writing. Do. Do. Do.	Conversation.	Word building.	Printing. Drawing or clay modeling. Clay modeling. Do.	Recreation.	II Hall. Words of songs. Games or Recitation.	Bast. Tablets or paper folding. Drawing. Gift III or IV.	Occupations. Games. Do. Do.	Marching.	Prayers and dismissal.
Tuesday		1. Singing. 2. Observation lesson. 3. Do. 4. Do.	Number. Voice training. Do. Do.		Number.		Reading.		Writing (printing). Do. Do. Do.			Pastel drawing. Drill. Crayon. Drawing.		IV Hall.	Paper modeling. Brush-work. Drawing. Crayon.	Games. Occupations. Games. Do.		
Wednesday		1. Observation lessons. 2. Do. 3. Singing. 4. Observation lesson.	Conversation. Voice training. Conversation. Voice training.		Reading.		Number.		Writing. Do. Do. Do.			Cutting. Drawing. Gifts, tablets or paper cutting. Drill.		III Hall.	Drawing. Bast. Brush-work. Crayon.	Games. Occupations. Games or story.		

Thursday	Religious instruction.	1. Observation lesson. 2. Singing. 3. Observation lesson. 4. Do.	Voice training. Observation. Voice training. Do.	Movement exercises.	Number.	Recreation.	Reading.	Recitation.	Drill. Printing. Do. Do.	Conversation.	Word building.	Drawing. Clay modeling. Drill. Gift I or II.	Recreation.	I Hall.	Brushwork. Free cutting. Do. Shell or stick laying.	Occupations. Games. Do. Do.	Marching.	Prayers and dismissal.
Friday		1. Observation lesson. 2. Do. 3. Do. 4. Do.	Voice training. Do. Do. Conversation.		Reading.		Number.		Writing (printing). Do. Do. Do.			Clay modeling. Pastel work. Clay modeling. Do.		Optional.	Free occupations.	Fairy story.		

The infant schools receive children from the age of 3 up to the age of 7. The number of children between 3 and 5 is rapidly decreasing everywhere. Children between these ages are usually placed in the babies' class, in which no formal work is done, but the time is devoted to games, singing, stories, conversation, and so on. The babies' classrooms are the only ones equipped with movable chairs and tables, sand trays, toys, and pets. The transition from these classes to the ordinary classes and the confinement of the common school desk is somewhat abrupt, and many teachers would welcome a change throughout the infants' departments to the movable chairs and tables. The curriculum of the older children includes, besides the introduction to the three R's, observation lessons, story telling, singing, games, drawing, handwork, and drill. But these subjects may mean different things in different schools. In one school the children may not use more than one continuous reader, and that in the last few months of their infant school career, the greater part of the time being given up to formal exercise in the recognition of words which they may never see or use, e. g., one class of children between the ages of 5 and 6 was observed to be learning such combinations as *batch*, *vetch*, *itch*, *motch*, etc. Another school, possibly in the same district, may be using in each year five or six of the excellent children's story books which are issued at present. Although the Dale method of teaching reading is probably the most popular, no single method is used to the total exclusion of the others. There seems to be a consensus of opinion in favor of one-syllable readers, which, since they must rigidly maintain this uniformity, are frequently dull and forced. In the number work the children are taught all the combinations up to 20 and can work in 5's and 10's up to 100, and do simple sums of money and measures, but these standards are passed in some schools. Thus the children between 6 and 7 in one school were doing mentally additions in double figures, simple fractions, multiplications, and money sums up to 1/–. The observation lessons of most schools are confined to simple nature study, and here, too, one may distinguish between the simple observation of plants and flowers actually growing in the classroom and the overloaded syllabus of the town school, which attempts to include most of the flowers, many of the trees, and a good proportion of the fruits of the country, and fills out the year with the study of numerous animals and insects.

But the most marked progress is noticeable in the other subjects of the curriculum. Chalk and crayon drawing, pastel drawing, and brushwork, combined as they are with the observation lessons or with the stories in self-expression work, afford the young children increasing opportunities of doing something for themselves, a result which is also attained in many schools in the different forms of handwork. The greater freedom allowed in these subjects is in some

degree due to the fact that many teachers bring to them the enthusiasm of learners, and to some extent to the fact that they are not subjects which have been regarded as of much importance in the upper departments. The same enthusiasm marks the teaching of games, singing, and dancing. A pleasing brightness and gayety accompany these lessons, which are not always present at the seat work. The singing and dancing show a marked improvement as a result of the influences of the folk-song and folk-dance societies. A great variety of tuneful songs and a selection of graceful dances have in this way been added to the school curriculum.

The most advanced infant schools are more and more approximating the methods of the kindergarten. An interesting experiment in introducing free discipline has been conducted for some years at the Jews' Infant School, Buckle Street, East End of London. Apart from the purely educational aspect, the school is of interest for its social work; it is equipped with bath and clinic, provides cots for the afternoon nap of the younger children, and supplies meals to all the children who may need them. Few schools have succeeded so well in retaining the naturalness of the children and in stimulating a certain family feeling among them. Accustomed as one is to seeing children in school on their "best behavior" in the presence of a visitor, it was refreshing to be besieged by groups of children anxious to show their writing or drawing or a piece of handwork, or to point out a masterpiece of one of their colleagues in the class. The school receives children from the age of 3 and keeps them until they pass through Standard II, also an experiment in itself and wisely postponing the transition to the upper departments until the children are old enough for the newer discipline. So far as the curriculum of this school is concerned, it does not differ from that of the ordinary school, but there are some radical reforms in method. The teaching of reading, for example, is conducted with the purpose for which it is intended, i. e., personal enjoyment, and much attention is given to silent reading and the selection of a sufficient variety of reading books. In handwork, again, the element of direction is absent, certainly for the older children, who thus receive a valuable training in initiative and self-reliance. Some of the cardboard work of boys in Standard II was equal to that of boys of Standard IV in other schools. It follows from the freer discipline, the encouragement of conversation, and wider reading that the composition reaches a high standard. There is a readiness in expressing ideas which is all the more remarkable since the parents of most of the children are either foreign or habitually use a foreign language. And free though the discipline is, there is no disorder or noise; the repressive form of discipline has been replaced by the social ideal, the recognition of the rights of others. The work of the Buckle Street school is a valu-

able contribution to the doctrine of liberty and freedom in relation to the education of children.[1]

While the Montessori system has aroused considerable attention and has promoted much discussion among teachers throughout the country, it is difficult to decide what their attitude on the subject is. This much may be said, that there appears to be more unintelligent opposition to the system than intelligent appreciation of its aims or its relation to the education of young children. Experiments with the method have not yet been made in any public school, but it has been introduced by Prof. Findlay into the Fielden Demonstration School in Manchester. Proposals have been made to set apart some of the London infant schools for the purpose of experimenting with the Montessori system and adapting it to English conditions, while one head teacher has been sent to Rome to make a study of the work.

[1] See further the address by the head mistress, Miss H. Pizer, on Free Discipline in Large Classes, in L. C. C. Conference of Teachers, 1913, Report of Proceedings.

Chapter VI.

THE ELEMENTARY SCHOOL.

The English elementary school is at present in a state of transition, a period which necessarily involves varying standards and aims and different rates of development for different schools. But while the development is marked, it is inevitably somewhat slow. Handicapped by a tradition of over half a century, the elementary school is finding some difficulty in shaking off the methods and outlook of the system known as payment by results. The change involves a reconstruction of aims. The old ideal of mechanical accuracy and a small stock of definite information in a few branches of knowledge driven into the pupil is yielding to the broader, if vaguer and more indefinite, aims which express themselves as character forming, teaching to play the game, or training in initiative, resourcefulness, and mental alertness as a preparation for citizenship. There is thus on the one side greater and deeper interest in the child as a developing personality and on the other a desire to increase the range and possibilities of his activities, which finds expression in a widening of the curriculum and a recasting of the methods of instruction. But the two points of view have not yet been completely reconciled, and the stage has not been reached where the curriculum is looked at from the point of view of the developing personality of the child. Methods are changing and the subjects of instruction are being revised, but each as a rule with the bias of the specialist.

There are, besides the traditional influence, other factors which tend to retard progress. The newer methods are not compatible with mass instruction, which is almost inevitably imposed on the teachers by large classes of 50 or 60. The overhauling of the school work subject by subject also renders progress somewhat slower than it would be in American school system where the superintendent with or without assistance revises the course of study as a whole. The same fact also accounts for the unequal distribution of the improvement and the diversity of standards in the various schools. Each school is self-contained, and while one school may be doing excellent work its next-door neighbor may be satisfied with very poor attainments. The unit in the English system is thus the school or department, not, as in America, the school system. Each head teacher is given absolute freedom to work out the destiny of his school. Such guidance as there is is not given by a central institution or training college. There is, in fact, an absence of educational leadership; not

that there are none qualified to lead, but that they carry little or no influence with the large body of teachers, who are either ignorant of, or take no interest in, work that is done in such institutions as the practicing school of the London Day Training College or at the Fielden Demonstration School of the Manchester University education department, or set up the well-worn opposition of theory and practice. Nor are the training colleges centers of influence; their work is completed when they have trained the teacher at the beginning of his career. The bond of sympathy between the schools and the training colleges is as a matter of fact not very strong, for there is a tendency for one to remain in ignorance of the work of the other and for the schools to complain that the training college product has to be remolded by them. Each head teacher works by the light of his experience, with such help as is afforded by the Suggestions of the Board of Education or the Conferences and Reports of the London County Council. Teachers' associations are, in the main, not interested or concerned with the study of education; local education authorities offer few facilities, without insisting on attendance, for the further training of teachers in service; the educational periodicals have little circulation and can not afford to devote much space to discussion of educational theory; finally, the opportunities of visiting other schools are few or non-existent. Hence, the quality and efficiency of a school varies with the ability and educational interest of its head teacher. He draws up his own schemes and syllabuses; outside London he usually has his own system of promotion and classification; may devise his own methods of instruction; and is free within the appropriation permitted by the local education authority to select his own textbooks. He is responsible for the efficiency of the teaching of his staff. The system of supervision is, however, somewhat vague; generally it takes the form of a terminal stock-taking in the shape of examinations of the pupils; sometimes the head teacher will, for the benefit of a weak assistant, take a class for a few minutes; but there is, as a rule, no reference to principles; no systematic endeavor to place teaching efficiency on a higher plane than mere imitation or to train teachers to improve their practice by their own intellectual efforts. Even if the problem of supervision and its importance were recognized, the head teachers are at present too much occupied, and in London perhaps more than elsewhere, with petty clerical work and correspondence which could well be performed at a very small additional expenditure by assigning a clerk to a group of schools. Thus released from part of the routine duties the head teachers could give that assistance and advice, based on sound principles of supervision, which many teachers would welcome and many need. The system employed in a few Liverpool schools of having an organizing principal assisted by heads of departments, who are

freed from much of the routine administration, has much to recommend it in this as in many other respects.

The curriculum and course of each school is accordingly what the head teacher, who may or may not confer with his assistants on these matters, makes it. The only restriction on this extensive liberty is that the approval of the inspectors both of the Board of Education and of the local education authority must be obtained for the time table and the syllabus. This approval would, however, only be withheld in extreme cases. There is probably no parallel in any other educational system to the extensive adoption of this principle of local freedom carried to its logical conclusion. To this principle England owes an elementary school system of which elasticity and adaptation to local requirements are the characteristic features. Any weaknesses or defects in the system are due not to the principle but to the English reliance on approved practical experience rather than intellectual training.

The curriculum of the elementary school consists of the following subjects, all of which may not necessarily be found in any particular school: English language, handwriting, arithmetic, drawing, observation lessons and nature study, geography, history, singing, physical training and hygiene, domestic subjects and needlework for girls and handwork for boys, moral instruction, and thrift. It would be impossible within the scope of this work to enter into a detailed account of these subjects as they are taught in the schools; a few are treated later in separate chapters; of the remainder nothing more will be attempted than to indicate tendencies. There is at present considerable criticism on the part of older teachers and others interested in school matters that the modern curriculum is overcrowded, with consequent loss of grasp to the pupils. Most teachers, however, consider that the present product of the school is as good as it ever was; that while the mechanical accuracy which could, in arithmetic, for example, secure 99 per cent correct answers is not attained nor perhaps desirable, much more is gained by broadening the outlook of the scholars and training them in resourcefulness and self-reliance; and that the school will always be open to such criticism from those who forget the standards of their own day or look to the elementary school to provide them with specialized ability which they themselves acquired by years of training.

An impetus toward greater freedom in the classroom is given by the methods of teaching the newer subjects, like handwork, where the forces of a bad tradition are not strong. Complaint is made, however, that too much attention is still given to formal drill work; writing and reading still survive for the sake of no other end than practice. The teacher tends to monopolize the whole time, or, as one teacher seriously put it, the work is becoming more and more oral on the part of the teacher.

Of the subjects of the curriculum, arithmetic illustrates better than any other the great improvement that is taking place. The formal and mechanical drill in numbers is very generally replaced by insistence on clear and systematic thinking about number relations in practical situations more or less within the range of the pupils' experience, while accuracy is secured not so much by the old methods of disciplinary drill as by variety and the application of intelligent method to diverse problems. Reasoning rather than mere mechanical figuring, logical setting out rather than working by rule, are the newer aims of instruction in this field. In framing syllabuses due consideration is given to the varying needs of different localities and the probable future needs of the pupils. With beginners the number work is almost wholly concrete, and this aspect tends to be retained throughout the standards. The problems are such as might arise in the practical every-day life of the pupils either in relation to money, weights, lengths, or areas. Much of the unintelligible and useless exercises in practice, stocks and shares, compound interest, and discount have been discarded. Mental arithmetic, with exercises in rapid calculation and special methods, accompanies the written work. More attention is also being given to rough estimates and approximations, and methods of verifying and checking answers. Number work is more and more correlated with other branches of the curriculum. Thus in the lower classes the scope of arithmetic is extended by exercises in practical mensuration, measurements of the classrooms, the school playground, and models made in the handwork lessons. In the top classes the coordination is with elementary science, wood and metal work, domestic subjects, while interest is stimulated by exercises dealing with materials and cost estimates, wages, family expenditures, the school savings bank, and thrift. Where the circumstances permit, algebra, hitherto taught only to pupils of special ability or those intending to proceed to the secondary schools, is being more extensively introduced as symbolical or literal arithmetic. Elementary geometrical ideas, including the properties of angles and triangles and their application in elementary surveying with instruments made in the workshop, are also taught in many schools as part of the arithmetic syllabus. An interesting experiment is being conducted at the demonstration school of the London Day Training College in the teaching of arithmetic of citizenship to the older pupils, to give them an intelligent grasp and understanding of the finances and statistics of public bodies. Such a course has the incidental and highly important value of giving pupils practical training in civics, with knowledge of the working of public services. A further extension of this work is made by a study of the markets through the medium of the daily press, which serves as an introduction to elementary economics.

The subject hitherto known as arithmetic is so expanded that it might more appropriately be called elementary mathematics. The spirit of the new movement is reflected in numerous "practical arithmetics" which have recently been issued and which cover the ground described above, i. e., practical problems in number, mensuration, elementary algebra, and geometry.

The great progress made recently in the teaching of geography in the elementary schools is a reflection of the increased attention given to the subject by the more advanced institutions, especially the universities, of the country. This has been accompanied by the publication of several excellent textbooks and atlases for school use. It would be difficult to find any school, however backward, which would be satisfied in this subject with the older methods of rote and memory work. While the importance of geographical information is recognized, the better schools aim to train their pupils to reason about geographical matters and to be able to read a map intelligently. The branches which receive the most attention are physical and political geography. In a few schools the top classes are taught something about the elements of mathematical geography, but in general little time is given to this aspect of the subject. The chief emphasis is laid on the interdependence of natural and physical features and human life and activities. The study of the physical factors begins with matters within the range of the pupils' observation and usually forms a part of the course on object lessons and nature study, which are treated in another chapter. Greater use is made of good physical maps and in some schools the ordnance survey maps are introduced for the older scholars. Political geography, or geography in relation to man, is begun in the lower classes or in the infants' departments, with myths, tales of discoveries, distribution of races, with their customs and dress. Pictures, illustrations, and other aids to visualization and the imagination are given a prominent position, and in London many schools use the stereopticon in connection with the geography instruction. Stories of travel and discovery, descriptions of foreign lands and life, and accounts of the development of trade, commerce and industry, and in some schools of the influence of geography in history are increasingly employed in order to render the subject as vivid as possible. By the time a pupil is ready to leave school he is expected to have a thorough knowledge of the geography of his own country and of those countries with which it is most intimately connected by various interests, and some knowledge in outline of the rest of the world. The order in which this knowledge is developed varies somewhat.

All schools begin with the plan of the school and the neighborhood and work out gradually to the home region. After this general

instruction some schools take up the world and its divisions and only then return to a study of the British Isles, followed by the geography of the Empire and the world. In better syllabuses the practice is to follow the study of the neighborhood by the British Isles, the countries with which they are in closest relations, the world, and in the last year to return to a further study of the British Isles in order to insure a knowledge of their own country for the pupils. Very few schools are equipped with special rooms for the study of geography, and although much laboratory work in connection with it is impossible, many schools make their own relief maps in clay or plasticene, paper pulp, sand or flour mixed with salt, or other convenient media. The extension of the school excursions and school journeys, especially in London, is found to be of great assistance to the teaching of geography by furnishing the pupils with certain definite concrete ideas which serve as a starting point for further study. There are very few schools in which geography is taught by a specialist, but the number of teachers who specialize in a study of the subject, either at the universities or in the holiday courses, is increasing, and their influence and advice are important factors in insuring the improvement in the teaching of the subject which has so successfully been begun.

The subject which is perhaps the most important in the curriculum, namely, English, is at the same time the most difficult to handle. In no other subject does the personality of the teacher play such an important part in influencing the pupils. In no other subject is the end to be achieved less definite. Hence it is not surprising that the measure of success in this subject is in general very small. There have been reforms in some of the externalities of the subject; spelling and grammar are not given the prominence which they once enjoyed; the subjects of composition are more within the range of the children's experience; more attention is given to the works of standard authors. But there is something lacking in the results; the pupils in general are deficient in the power to express themselves either orally or in writing; the practice of reading to the teacher a few sentences at a time instead of attempting to convey the meaning and beauty of a passage to the class as a whole still prevails; in reciting poetry the conception and even the actual intonation of the teacher take the place of the pupils' own interpretation. The mechanics of reading are well taught almost universally, but there is little training in good reading for personal pleasure (silent reading) or for the pleasure or information of others (reading aloud). Spelling is taught from lists of words collected by the teachers for their own classes or drawn from the reading books of these classes. Grammar is postponed to the upper standards and comprises mainly analysis and simple parsing. It is felt by some teachers that the subject might be

abandoned entirely if it were not for certain examination requirements.

The greatest advance has been in an increase in the number of books used in each class. While geographical, historical, and nature study readers are still retained, two or three books or stories by well-known authors are read in each class during the year, as well as selections of poetry. Generally, however, the teaching of literature resolves itself into a reading lesson or a discussion of facts bearing on the story rather than appreciation of literary value. Most schools, and in London all schools, are now provided with libraries for the use of the pupils; in some schools the books are graded and distributed among the classes. These form a valuable adjunct to the school work and enable the teachers to guide the reading of their pupils. The books are mainly stories, books of travel and adventure, and books on hobbies. A few schools have formed branches of the National Home Reading Union, and in London the council pays the subscriptions on behalf of teachers and classes joining the union, an organization founded to make home reading educational and to give advice and help in the subject. A few head teachers work in conjunction with local lending libraries, but the public lending libraries in England do not generally pay much attention to the needs of school children, while many do not issue readers' tickets to children under 14. Some libraries have drawn up lists of children's books, but there is nowhere that specialized training and expert guidance which is to be found in so many American libraries. There are accordingly elements which indicate that improvement in the teaching of English is but delayed and that it will certainly be brought about when the size of classes is reduced and teachers become better acquainted with the excellent work that may already be found, especially in some of the girls' schools. It is not to be supposed that such obscurantist views as were expressed at the L. C. C. Conference of Teachers, held in January of this year, are anything more than a relic of the past. In respect to home reading, one speaker, with the approval of a member of the education committee, seriously asked the question whether, in view of the fact that most girls from the elementary schools enter business houses or take up domestic service, "it is advisable for a servant to be a full man or a full woman" (alluding to the saying that reading makes a full man). The same speaker would not allow this class of people to read classical books, since such reading demands much physical and spiritual energy, and also insists that frivolous literature should be guarded against. Instead of putting such temptations in the way of the lower classes, "if we give them a beautiful thought each day, and let them take it home, and write it and learn it, it will do them far more good than reading cheap editions of the classics." It is fortunate for the future progress of the schools that

the teachers as a body and the local education authorities have greater faith in the virtues and possibilities of an educated democracy than to share such extremely reactionary opinions, which would put back the clock almost a complete century.

Unlike the American schools, where the teaching of history and citizenship forms an important feature of the school work, these subjects receive but very little attention in the English elementary schools. Only the newer central schools are giving at all adequate attention to the different aspects of the subject. In the ordinary schools either a historical reader which emphasizes the picturesque and those features supposed to be of chief interest to children, is used, or the teacher tells the stories in his own way. There is little of the valuable systematic instruction which can accompany the teaching of history and afford a training in estimating the importance of facts, as well as a knowledge of the chief lines of historical development of the country. Most children accordingly leave the elementary schools with some notion of the chief incidents in the political history of England, very little about the social life, or the development of commerce and industry, and but vague ideas of the history of the nineteenth century, the growth of democracy in England, and the relations of England to her neighbors. Civics, or the study of local and national institutions, hardly enters into the elementary school curriculum at all. There seems to be a widespread, though probably mistaken, feeling that neither history nor civics can be satisfactorily taught in the elementary schools, as the pupils are too young.

In no subject do the standards of attainment vary so much as in drawing, more particularly in the upper classes. The work is based on observation and it is a growing practice in the lower classes to provide a model for each child and to furnish as great a variety of models as possible. Some attention is given to memory drawing, but this is not carried further to include illustration of stories except in the infant's departments and in a few schools in other classes. The most common medium is, of course, the pencil, but crayon, pastel, and brushwork are frequently used. The influence of the specialist teacher or of teachers with special ability in this field is very strong and leads in those schools where they are present to a genuine love and appreciation of beauty of form and color. In such schools the pupils are able to draw or paint from a wide selection of objects, to make their own designs for decorative or other purposes, and to illustrate ideas drawn from literature or history. Excellent work of this character is done at the Malmesbury Road Central School, London, at the Brae Street elementary school, Liverpool, where the older pupils work in connection with a local natural history museum, and at the Mosely Road elementary school, Manchester. Very little attention is, however, given except by individual teachers, to the importance of some training in the appreciation of standard pictures.

Valuable work in this direction, for the promotion of both art and music, is done in Liverpool by the Art Studies Association. Few schools are provided with reproductions of well-known famous pictures. Here again there is a fear that such work would be beyond the abilities of elementary school children.

In the teaching of music the chief reform has been in the introduction of a broader selection of good songs. English and other national songs and folk songs are more and more being drawn upon. The quality of the singing is improved by the importance placed upon breathing exercises and voice exercises. Some of the elements of musical knowledge are introduced and the pupils are trained to sing from the sol-fa and staff notations and to recognize the differences of time and key. But beyond this pupils are not trained in musical appreciation or to know the differences between good and bad music. In one school, at least, the Mosely Road elementary school, Manchester, individual singing is encouraged on the same principle as individual reading. Instrumental music is not taught during school hours, but many schools arrange for the purchase of violins for their pupils and allow the school to be used for instruction after school hours. Orchestras have been formed in several schools, and are used for accompaniments or for special school entertainments. In Liverpool the Art Studies Association arranges concerts of classical music in the elementary schools, criticisms and descriptions of the music being given.

As was pointed out at the beginning of this chapter, not every school teaches all the subjects mentioned in the Code. Among these, hygiene and a modern language may be mentioned. The latter is taught in the top classes of a few schools where the circumstances permit, French being the language generally selected. Hygiene is not taught systematically except in some girls' schools in connection with the domestic subjects. Otherwise many of the topics, such as fresh air, sunshine, cleanliness, food and clothing, are introduced incidentally under nature study. The teaching of thrift is another of the optional subjects which is not found very generally. Where it is included in the curriculum, it is taught to older children only. The following syllabus is recommended for use in London schools (see L. C. C. Elementary Schools Handbook, p. 43):

Distinction between thrift and parsimony; examples of wasteful and economic expenditure; the dearness of cheap things; individual and collective saving; how the individual may save; simple investments; the Post Office savings bank; the stamp-form; economy of time; the value of method; what to do on leaving school; skilled and unskilled employments; apprenticeship; apprenticeship societies; wages in different classes of occupation—at first and afterwards; betting and gambling; the principles of compound interest; life insurance; types of policies; friendly societies; different types of insurance and friendly societies; how friendly societies are managed; valuations of friendly societies; trade-unions as societies for encouragement of thrift; juvenile friendly societies.

An important practical side of the subject of thrift is the establishment of school savings banks in a very large number of schools. In Manchester, for example, in 1911 there were 341 school banks, the total number of elementary school departments being 392. The deposits in that year were $242,545 to the credit of 55,724 accounts. The money is handed in every Monday morning to the head teachers, collected by an official of the education committee, and deposited in the Manchester and Salford Savings Bank. No interest is paid on the deposits, but when any account reaches the amount of $5 it is transferred to the above bank, which does pay interest. The interest received by the education committee on account of its scholars is set aside as a reserve fund, which is sometimes drawn upon for allowances to teachers in cases of urgency or used for the benefit of scholars. Another form of banking, based on the same principle, links up the school bank with the Post Office Savings Bank.

Reference has been made in discussing some of the school subjects to the greater importance which is now being attached to educational visits, school excursions, and school journeys. The Board of Education now recognizes for purposes of the attendance grant "any time occupied by visits during the school hours to places of educational value or interest, or by field work or by rambles * * *." (Code, art. 44 (b).) The London County Council has given more attention to this subject than any other education authority. For the purpose of visiting places of educational interest, in which London so richly abounds, special facilities are afforded to teachers and classes to use the Council's tramways at reduced rates, and where these can not be used the Council makes a grant toward the traveling expenses. For the guidance of teachers who desire to take their classes on these visits the Council has issued a Handbook on Educational Visits, giving the places of interest, the hours when they are open, the subjects of educational interest, and special facilities or assistance there available. There are also special lectures to teachers in connection with some of these places to prepare them for conducting classes around. The visits are correlated with literature, history, nature study, art, and architecture. School journeys in connection with the nature study or geography course are also permitted under this heading. School journeys, which are also recognized for purposes of school attendance, are understood to be further afield and to last about a week. The London County Council gives a grant to schools or classes undertaking these school journeys of not more than $30 a week or $60 for a longer period to pay for a supply teacher, provide equipment, and defray the traveling expenses of the teachers. The journeys are becoming increasingly popular and their scope is being extended. Thus in 1912 a large party of scholars were taken to Paris. But, as a rule, the journeys are made nearer home. The following quotations from the recently published School Journey

Record, issued by the School Journey Association, which is doing much to foster a wider interest in the work, may serve to indicate the type of work attempted by different schools:

Open-air geography. Survey work in village. Nature study and study of country occupations.

General study of Hastings and district with special reference to Battle of Hastings. Social side important.

To study coast erosion. Scenery making. Gault fossils. Local history. Kent coal measures. Map making and surveying. Canterbury and the introduction of Christianity into South Britain.

Geography, geology, history, social intercourse, etc.

To study generally—history, geography, geology, architecture, nature study.

Such work can not fail of its main purpose, to quicken the teaching of the school and open up to the scholars a world which under the older methods of book work at the desk would have been impossible.

As a rule little is done to show the pupils how to study and gather information for themselves. Few, if any, schools are equipped with a sufficient supply of supplementary books or standard works of reference to serve as a guide to the pupils. Most schools are provided with dictionaries, but little use seems to be made of them. English education, as already stated, develops "in spots." Excellent work can be found in all the school subjects and in all matters affecting education, but search must be made for it. It is for this reason that the Government inspectors, and through them the Board of Education, have exceptional opportunities at their command to spread educational enlightenment. The English teacher rarely advertises any special experiment, whether it be through modesty, or through an absence of professional feeling, or through inability to estimate the value of the contribution. There are, however, schools where pupils are taught to study and are introduced to the methods and tools required. In Liverpool arrangements have been made between several schools and local public libraries by which pupils in the top classes are taken by their teachers to the libraries and are there assisted by the teachers and librarians to use the catalogues and the works of reference in working up special topics bearing on some branch of the school work. On returning to school the pupils write essays incorporating the material obtained in the library or submit carefully organized notes to their teachers. It has been found that the system affords valuable training. The chief value of the practice, however, will appear in the future, if it should be generally recognized that ability to do independent intellectual work is the greatest asset with which the schools can equip their pupils.

The leaving age under most local by-laws is 14 years. Exemptions from school attendance are granted under certain conditions, but are not common in the more progressive centers. In the three cities under consideration the majority of the pupils leave school at the

age of 14. There are no regulations as to the period of year at which a pupil may leave school, nor is there any public ceremony of any kind. The pupil simply drops out of school. The London County Council awards an elementary school-leaving certificate on the basis of the March terminal examinations to pupils who will reach the age of 14 and will leave school within the following year, and who have not less than two years previously reached Standard V. Such pupils must be recommended by the local inspector and must be certified by the head teacher to be of good character and conduct and proficient in the work of the school. The certificates are handed to the successful pupils by the head teacher when they leave the school.

If a general summary of the standard of work of the elementary schools may be attempted, it may be stated that in most schools the pupils in the top classes are as a rule not worked up to the maximum of their ability. The course of study, say of the seventh standard, is merely a more intensive repetition of the work of the lower standards. It seems very probable that the curriculum could be more broadened and enriched on the one side in accordance with the expanding interests of the adolescent, and on the other to meet the probable requirements of the pupils when they leave school. Many pupils of ability, who for some reason or other are unable to proceed to a secondary or other school, but are able to reach the top class, are marking time until they leave school. The boy or girl of average ability who is fortunate enough to have parents of means may enter the secondary school at the age of 10 and enjoy a highly diversified curriculum. The children of poor parents are not credited with sufficient ability to do more than the traditional course of the elementary school. The margin which divides the newly established central schools, discussed in another chapter, from the elementary schools, is very small.

It is a matter of some difficulty to institute a detailed comparison of the standards attained in different subjects in the elementary schools of England and the United States. The schools are necessarily an expression of the ideals and aims of each country, a fact which ultimately determines the differences of standards between the schools of any two nations. The American elementary school has for nearly a century been the national school, the common school of all the people. In England the elementary school is in the process of developing into a national institution, a public service for national needs instead of being regarded as a charity school for the education of the lower classes. Slowly the elementary school is becoming an educational institution to prepare its members for participation in civic and national life, and to give them their share in the spiritual possessions of the race—a far broader conception than mere instruc-

tion in the three R's. This ideal has long been the commonplace of the educator and the politician in the United States. Another factor also enters to render any comparison more difficult. There are inherent characteristic differences between the English and the American child. The latter is by nature more precocious, matures earlier, is by circumstances of his upbringing thrown more into the company of adults, with the consequence that he is less reserved and self-conscious and more alert than the former.

Although the English child enters school a year earlier than the American child of the larger cities, it is doubtful whether any advantage is reaped by this gain of a year. The American boy or girl on leaving the elementary school at the age of 14 has a wider range of general information at his command and has read more, even if he is less accurate on the formal side of school work. It would be difficult to detect any differences in standard in such subjects as arithmetic, nature study, and geography, or in any of the school subjects up to about the sixth grade. It is at this period that the other subjects of the curriculum become fuller and richer. Particularly is this true in such subjects as history, local and national government, and English literature. American children have a far better knowledge of the history of their country and in some cases of general history than is to be found among English elementary school children. The same is certainly true of their knowledge of local government and national departments. In English language the American child has a better command of oral expression; he is more given to debating and discussing than is the English child, while in written composition the courses of study provide for exercises in different forms of expression to meet different requirements, in writing stories, and even composing verse. The reading of English literature is also more extensive and more attention is given to the different forms of literary expression than in the English elementary schools. In art work there is also greater variety in the media used, greater scope in the application, and more appeal on the intellectual side to an appreciation of beauty in form and color. There is, on the whole, a bolder conception of the possibilities of the school than has prevailed in England until very recently; it seems highly probable that the future will see a development of a similar character in England, since all the tendencies of the present point in that direction. If the development should be slow, it is because the English teacher is more cautious and less inclined to make experiments than his American colleague. But if the English elementary school has much to gain from a study of the American curriculum, American educational administration would profit as greatly from what is the strength of the English system—the freedom of the individual school.

Chapter VII.

THE TEACHING OF SPECIAL SUBJECTS.

(1) NATURE STUDY.

No other subject in the school curriculum is so wide and unlimited in scope as nature study. Combined with observation lessons this branch of school work is intended to have "special reference to the surroundings of the scholars, the natural and historical features and plant life of the locality, and the industries of the inhabitants, with the view of forming the habit of intelligent and accurate observation." [1] These subjects are the substitutes for the former study of common objects, and may be compared to the instruction given in German schools under the title of *Realien*. Such instruction [2] "directs the attention of the scholars to real things, makes them acquainted with simple natural facts, and will develop a love of nature." The purpose of the observation lessons, which should be introductory to nature study, is to teach the scholars to observe, to contrast, to compare, and in general to acquire a knowledge of common things and to describe accurately what they see. Nature study, which, according to the Suggestions, should be begun by scholars in their tenth year, may deal with any subject illustrating the relation of man or the earth to nature; "it is that class of elementary instruction," to quote the Suggestions, "which deals with the outdoor world, with the life of animals and plants, with the clouds and the seasons, the rocks and the soil, in fact with any side of the changing panorama we call Nature." Hence it is intended that under the heading of nature study the scholars shall be taught to appreciate the manifold aspects of their own environment. The subject has, however, been narrowed down, and one does not find that variety which might be expected to follow from differences in environment. Nature study now means, even in town schools, the study of plants, trees, flowers, and animal life. Those things which contribute to the activities of a large town, the life of the street, the industries, the traffic, the public services, are as a rule neglected, and syllabuses are drawn up more suited to the needs of children in the country. There is no intention here of disparaging the value of this aspect of nature study, but in the town schools it can, and often does, absorb too much time. Much can of course be done, as in London, to make up for the deficiency of a "nature" environment, but it is done at a cost of something that is more vital and immediate in the London child's life.

[1] Bd. of Ed., The Elementary School Code, art. 2 (5).
[2] Bd. of Ed., Suggestions for the Consideration of Teachers, p. 36.

The type of work that is done may perhaps be illustrated by the following extract from the nature-study syllabus of a city infant school, which at the same time indicates the attempts of some infant schools to anticipate the work of later years:

The plant, its parts and their functions; stems; pressing and mounting flowers and leaves; young leaves and their foldings; folding of developed leaves; collection of seeds, roots, fruits, and nuts.

Stems, their use to the plant, their kinds. Roots in the same way.

Flowers: To recognize buttercup, daisy, dandelion, cowslip, primrose, rose, water lily, wallflower, forget-me-not, garden pea, gorze, snowdrop, etc., in season. Uses of each part of the flower. To recognize catkins of poplar, hazel, and oak; to examine, draw, and mount specimens.

Leaves, their uses, forms, and arrangements; buds, modes of protection.

Fruits, their seeds; examine various seeds; sow seeds and note process of growth; drawing.

Trees: Oak, elm, beech, hawthorn, lilac, laburnum, poplar, horse-chestnut, elder, etc.

How plants defend themselves.

Grasses: Collection and mounting.

Animal life: History of frog, butterfly, dragon fly, worm; a pond and its inhabitants; squirrel, bees, spider, fly. Structure of birds, and adaptation to life; sparrow, song birds, water birds.

Physical geography: Thames from source to mouth in outline. Our minerals: Coal, iron, tin, salt, and chalk; how obtained and used. Wind, rain, snow, and frost; mist.

It is clear that with such a scheme there is little left for the upper classes to learn beyond recapitulating more intensively. It will also be noticed that the instruction in nature study is not postponed until the scholars are 10 years old.

Few schools in the country receive so much assistance from the education authorities in making instruction in nature study concrete as do the schools under the London County Council. In Manchester the cost of equipment and specimens for this subject is included in the per capita supply grant of 60 cents. In Liverpool the local museum distributes geological and other specimens for use in schools. But in London head teachers receive a special allowance varying with the size of the school from $3 to $5 a year for the purchase of objects for lessons, and an allowance not exceeding $2.50 to be spent in the purchase of seeds, small flower pots, mold, manure, etc. The equipment for nature study consists in most schools of plants, bulbs, and flowers, with the addition in some schools of small aquaria and vivaria. Thus the scholars have opportunities of observing plant and animal life in the school. These opportunities are further extended in various ways. Under a botany scheme introduced by the Council, approved schools are supplied with specimens from the Council's botany depot at Avery Hill, while seeds or cuttings are supplied to children for their own cultivation by the Parks department. In 1911 schools were provided under the botany scheme with 10,404 boxes, containing 8,402,000 specimens, while 68,300 plants were supplied for cultivation and 614

bushels of mold were furnished to school gardens. A further source of supply has been found by some schools in the mutual-aid scheme, by which arrangements are made with country schools to receive picture post cards, etc., in exchange for specimens. The recognition by the Board of Education of time spent during school hours on visits to places of educational interest or on field work or rambles as part of the minimum time required for the attendance grants has also been used in London schools for the advantage of instruction in nature study. Excursions to the parks or the country and visits to special collections are undertaken more frequently for this purpose. Thus the botanical beds in some of the Council's parks are visited, and teachers also take their classes to the Horniman Museum, which contains ethnological and natural-history collections, and the Stepney Borough Museum, where the curator lectures to the scholars on the natural-history collection, etc. Some of the natural-history museums provide courses of lectures for teachers who intend to bring their scholars. Finally, school gardens are being introduced at the rate of 20 additions each year in connection with those schools which show a prospect of making good use of them.

The method of instruction is almost entirely observational and oral. There is an absence of technical terms and of those phases of the work which properly belong to botany. Measurements and records of such growing plants and flowers as can be kept in the school or the school garden are made, and in some schools nature calendars are prepared by the scholars. Generally the aim is to give the scholars some knowledge of the different parts of trees, plants, and flowers, of their growth, and of their adaptation to environment. The study of nature is frequently correlated with drawing and brushwork, mainly with a view to assist the scholars in their observations. Very little written work accompanies the instruction; where it is encouraged, it takes the form of simple notes based on personal observation, with a sketch of the object. The use of textbooks or nature-study readers is not general and is not recommended by the Board of Education.

The study of animal life is very similar in method to that described above. Where the syllabus is not too ambitious, the study is confined to a few domestic animals, to birds and insects, and, if there is a pond near the school, to its inhabitants. The different parts of the object studied and their use, its method of life, and its usefulness are considered. In some schools cases are kept in which the development of the butterfly, silkworm, the earthworm, slugs and snails, ants, and small fish can be observed. The keeping of pets in connection with the schoolwork is not usual except in some infant classes.

An introduction to the study of physical geography is also made under the heading of nature study. Observations are made of the weather, sunshine, wind and rain, the sky, clouds and mists, snow,

frost, and hail. Weather charts and temperature and barometric graphs are made by the scholars. On the basis of local observations the study of climate and its influence is taken up. The nature of the earth and its formation, touching on the elements of geology and mineralogy, are also considered in this part of the course.

In the last year of school life some attention is given to elementary science in the case of boys. The science for the girls is usually connected with the domestic science work—cookery, laundry, and housewifery. Elementary science includes instruction in simple measuring and the instruments used, e. g., calipers, verniers, balance, thermometer, spirit level, barometer, etc. This is followed by lessons in the elements of heat, light, and sound, density and gravity, and the science of common things. The absence of laboratories limits the possibility of experimenting, and the work is largely conducted by demonstration by the teacher and observation by the scholars. The introduction of "practical workrooms" for manual work will also serve the purpose of instruction by experimental methods in elementary science.

(2) HANDWORK.

The teaching of handwork is at present in a transition stage between the purely formal or disciplinary and the educational conceptions of its value. Although considerable attention has in recent years been paid to the subject both by the central and local educational authorities, a complete recognition of the value of the motor activities as an important means of general mental development has not yet been brought about. This failure may in part be due to a lack of sympathy with modern educational movements among older teachers, who are wedded to the literary and disciplinary curriculum of a former generation, and in some measure to the failure of many training colleges to pay adequate attention to handwork. Hence, though handwork may be found in most schools, its position in the curriculum may range all the way from complete isolation as a separate subject to its complete embodiment as an educational means with the motives furnished by the other subjects, as in an experiment conducted at the Moston Lane (boys) School in Manchester. Without passing any criticism on the mechanical skill and dexterity attained, the defect most generally observed is the want of relation with other parts of the curriculum. There is progress, however, in the movement to coordinate the technical and educational values of handwork, and the success of the experiments made in several schools in London and Manchester and in Liverpool generally will undoubtedly prove stimulating.

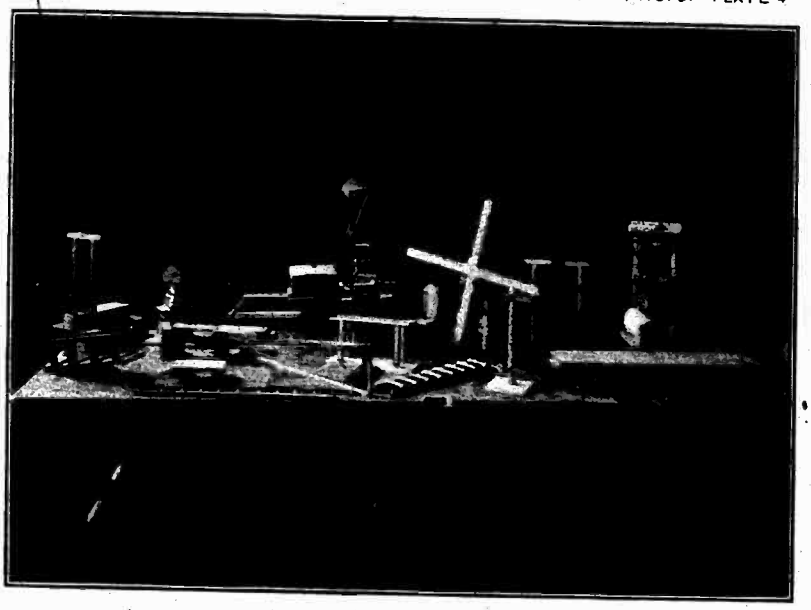
There is considerable variety in the number of media used for handwork. There are to be found at different stages of the schools such materials as paper, carton, cardboard, raffia, cane, string, clay, plasticene, strip wood, matchwood, wire, wood, and metal. In the

infant schools, where a healthy stimulus has been given to the handwork by the very general adoption of kindergarten principles, all these materials, with the exception of the last few, are used. The manual occupations are paper folding, paper cutting, modeling in clay or plasticene, raffia, basket weaving, knotting, and knitting. A few schools in Manchester are experimenting with strip wood in the highest infant classes, but it is doubtful whether this medium can be made as effective as those which are more easily manipulated by young children. The paper is used for making flowers, lanterns, boxes, trays, figures to illustrate stories, and, with older infants, for introducing simple measurements. The articles made in paper are frequently colored in by the children with their own designs. The clay or plasticene work (it is impossible to decide which is considered the better of the two) is correlated generally with nature study and drawing; sometimes cooperative work to illustrate some story is attempted. The raffia work and knotting lend themselves to exercises in design and the careful combination of color effects. All these occupations are of course not to be found in any one school, but they are in general typical of what may be expected without including such variations as are introduced by the originality and initiative of individual teachers. Nor is it to be inferred that the same value is universally attached to handwork. The attitude toward this subject varies in proportion as the work of a school is organized on kindergarten principles or as a formal preparation for the upper school. But more encouragement will be given to the work of the infant school as handwork gains a firmer position in the departments for older children.

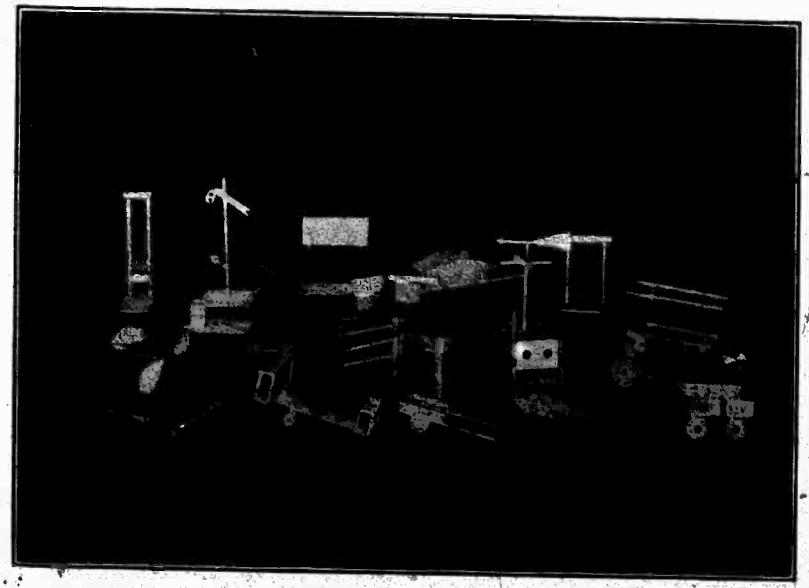
Until recently there was in most schools a gap between the handwork of the infant schools and the manual training of the upper standards. This deficiency is being rapidly corrected, and continuity throughout all the departments of a school is increasing. Different forms of handwork are adopted to suit the needs of boys (girls in general do needlework only) up to Standards IV or V. Paper, cardboard, clay or plasticene, raffia, and light woodwork are used. The points of correlation, varying with the materials, are practical arithmetic, drawing, nature study, geography, and history. Paper and cardboard are found particularly useful for concrete work in practical arithmetic and geometry, while clay lends itself especially to expression work in nature study and geography. In Liverpool the scheme for cardboard work is correlated with geometry, practical arithmetic, and history, in connection with which models of old types of buildings, castles, boats and ships, etc., are made. At the Moston Lane (boys) School, Manchester, experimental work has been begun to see how far handwork can be carried as a means of rendering other subjects more living and real to the scholars. Clay is used to illustrate

A. WOODWORK SHOP—A LIVERPOOL ELEMENTARY HANDICRAFT CENTER.

B. METAL WORKSHOP—A LIVERPOOL HANDICRAFT CENTER.



A. MODELS MADE IN A LIVERPOOL HANDICRAFT CENTER.



B. MODELS MADE IN A LIVERPOOL HANDICRAFT CENTER.

the history, and models are made of weapons, helmets, vases, and other antiquities in a local museum, while plans of Roman camps and old Manchester are constructed. It is intended to extend the experiment to other subjects to see how far handwork can be made a part of the general curriculum. In London the introduction of handwork into the junior classes is very recent, but the early experiments have justified themselves and a rapid extension is taking place. Practical arithmetic and geometry are the subjects which receive most assistance from the paper and cardboard modeling. But as a training in the exercise of initiative and self-reliance the work suffers from the too detailed instruction given by the teachers, who are devoting more attention to the perfection of the results than to the value of the method. Apart from the formal work involved in making such articles as boxes, trays, tidies, picture frames, etc., larger models are made, such as plans of the classrooms, the school, motor busses, shops, and other subjects suggested by the scholars, when they have the opportunity. Some of the larger exercises introduce valuable cooperative work.

Light woodwork is introduced into many schools either as a preliminary preparation for the woodwork at the bench or as a substitute where the larger equipment is not provided. This form of handwork has the advantage of requiring only a simple equipment which can be used at the ordinary school desk. The most important part of the equipment is the work board to which a sawing block is attached. Simple tools are used, and prepared wood is supplied. The simplicity of the equipment, and its availability in the ordinary classroom, the short time required for the purely formal introductory instruction, and the great variety of simple models and working toys which can readily be made render the light woodwork a valuable addition to manual training. The combination of wire and metal with the wood makes further demands on the ingenuity of the pupils and offers increased scope for the development of manual dexterity and aesthetic perception. But, as with any other forms of handwork, successful results are proportionate to the extent to which the teacher eliminates himself and allows his scholars freedom.

The increasing recognition that handwork must have a place in the school curriculum draws attention to the fact that most schools at present lack a suitable room for the purpose. The newer schools in Liverpool are being equipped with handicraft rooms similar in size and arrangement to the ordinary science laboratory. It is intended that these rooms shall also serve as museums to exhibit the work of the scholars, which at present are too frequently locked out of the way in the teachers' cupboards. Similar provision is being made in London schools in all new buildings and so far as possible in existing buildings. Such practical workrooms will have an area

of 600 square feet and are intended for classes of 40. A practical workroom has been introduced in connection with one of the schools for backward children. The Manchester authorities have already set aside an ordinary classroom in one of their schools to be used for light woodwork only. The tendency in the newer buildings, however, is to make the classrooms too small for anything but seatwork. The increasing financial burden on local authorities and the growing cost of school buildings will, unless some new form of aid is introduced, prevent extensive additions, however much their need may be recognized.

The most general form of handicraft for the senior scholars is woodwork. By the regulations of the Board of Education boys are not admitted to the woodwork classes until they are 11 years old, to which the local education authorities add a standard qualification (generally Standard V). In London all boys over 11 years and 9 months are admitted, if there is sufficient accommodation, even though they have not reached the qualifying standard. The board's regulations limit the size of classes under one instructor to 20. The system of handicraft "centers" prevails and these are used by a number of contributory schools. The centers and the instructors in charge are, with few exceptions, under the control of the special handicraft supervisor. This is the weakness of the scheme educationally. It means generally the continuance of the old system in which handicrafts were extras and practically stood outside the curriculum. Local regulations and suggestions from the board can not bridge the gap which distance places between a center and its contributory school. The difficulty is overcome where a handicraft center is on the same site as a school. It is in such cases that the encouragement to close cooperation between the two is bearing fruit. Here the handicraft instructor is in a position to make himself acquainted with the work of the school and to discuss the possibilities of cooperation with the teachers. Under any other conditions the centers and the instructors tend to be isolated, especially as the instructors are as a rule not attached to any school as members of the staff and are paid a lower scale of salary than ordinary teachers. A further limitation to the possibility of rendering handicraft completely educational is the retention of set schemes of models, as in London and Manchester, for the main purpose of a "scheme" is to provide a graded series of exercises, and although the models of to-day are a vast improvement on the formal exercise of an earlier period, they do not in general respond to the needs and purposes of the scholars. Even the recent concession to the demands of the educationist, namely, the interposition of "free expression" models, is really of little value, for in most cases the free model is merely a new variation of some other model in the room. The newer move-

ment is well represented in Liverpool, where in a recent "Memorandum by the Director on Schemes of Handicraft (Woodwork)" the teachers are requested to draw up their own schemes and to "bear in mind the suggestions of teachers from the contributory schools, the character of the boys from those schools, and the syllabuses of work in the other school subjects, and so far as possible arrange the work for the particular classes in accordance therewith." There is here no scheme prescribed by the superintendent of handicrafts. And it may be said in general that the most successful results are attained in those centers where the cooperation with the contributory school is closest and where, so far as is possible, the "scheme" can be disregarded.

The handicraft centers are well equipped with benches and the necessary tools, and there is a generous supply of different kinds of wood. The introductory lessons in the woodwork course deal with the geographical distribution of the woods, their natural qualities, scientific properties, and uses. Many of the centers are supplied with sections of the various kinds of wood used, with pictures of the trees, and specimen leaves. Where possible, the teachers use opportunities afforded by school excursions to give further lessons on trees and their ultimate destination. The method of instruction in the uses of the various tools varies; some teachers, guided more by the risk of danger from misuse than by educational principles, give lessons on all the tools from the beginning; others introduce one or two of the more important and let the pupils discover the uses of the remainder as their needs arise, merely giving a general warning in the careful use of the edge tools.

Drawing forms an important accompaniment to the woodwork and a very good standard is maintained in this branch. Each model is usually sketched in freehand before it is commenced, and finished drawings to scale and with the necessary instruments are made of the completed article, with plans and elevations.

It would be impossible to do more than suggest the type of models which are produced. The numerous pencil sharpeners, dishstands, towel rollers, boxes, shelves, brackets, egg stands, letter racks, picture frames, toothbrush racks, soap boxes, and inkstands show the underlying uniformity of a "scheme." Of much greater educational value is the result produced where the manual work is coordinated with some other subject. At the Essendine Road L. C. C. elementary school the correlation of the woodwork with the science has helped to develop a keen interest among the boys in both subjects. The models include theodolites, sextants, sight rules, plane tables, thermometer frames, spirit levels, balances, steelyards, compasses, and other articles required in connection with mechanics or physics. A few of the boys were allowed to make a working waterwheel and

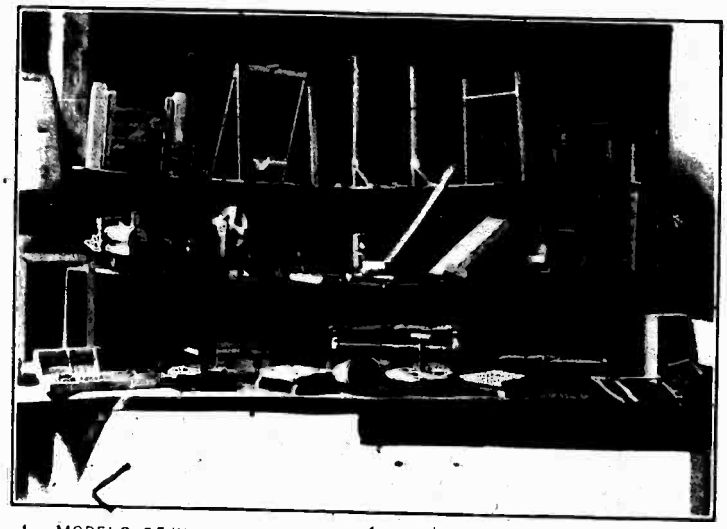
showed great ingenuity in utilizing scraps of tin and other material not supplied at the center. This school, however, is not typical, since it was specially selected for an experiment in correlation. In Liverpool there is neither a prescribed scheme nor definite correlation with any particular subject or subjects. The guiding principle in the selection of any model is that the teacher recognizes some educational purpose or motive. "So far as possible," to quote from the memorandum previously referred to, "the attitude of the boy toward his work should be either that of solving a problem and working out a difficulty, which will eventually lead him to the knowledge of some principle or truth, or the illustration of the subject matter of one of his school lessons." With such a guiding principle the workshop becomes the place for making things commonly seen, things that will work, things to play with, and things read about or discussed in class. The two boys who had their geography books before them, the one to make a model of a colonist's log cabin there illustrated and the other to make a Boer trek wagon, were probably not isolated instances. The broad view taken of handicraft is further illustrated by the fact that in several centers a metal workshop is attached to the wood workshop and boys may pass from one to the other as need arises. The same freedom is being slowly introduced in Manchester, especially in those schools where the head teachers take a personal interest in handwork. But at present the work is essentially a compromise between the requirements of the scheme and the demands of sound pedagogy.

Metalwork is not so extensively taught as woodwork, but the softer forms of metal which do not require the elaborate equipment of lathe and forge and can be worked with simple tools have been introduced. Wire, Venetian iron, zinc, copper foil, and tin plate can be easily manipulated and used in combination with wood. Specially equipped metal work centers are not as a rule found in connection with elementary schools, and the work is usually limited to the older boys, who already have some facility in working with wood. Repoussé, bent ironwork, geometrical models, and the making of simple articles for common use represent the type of work done in the elementary stages. Where a complete equipment for work in the heavier metals is provided, as in several of the London central schools (see Ch. XVI), a two years' course is arranged, of which the first year is devoted to bench work, soldering, and forging, most of the early models being of a disciplinary character, while in the second year more freedom is allowed in the selection of models and the choice of design.

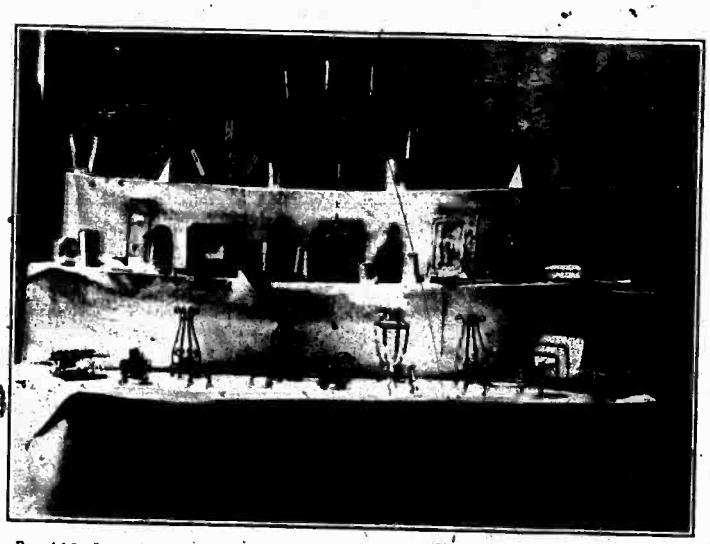
In the Suggestions for the Consideration of Teachers, issued by the Board of Education, training in handicraft is declared to be valuable for "awakening an interest in the industrial (not excluding the agricultural) side of national life, and in encouraging boys to look forward

A. SCHEME OF METAL WORK FOR TWO YEARS. THOMAS STREET L. C. C. CENTRAL SCHOOL.

B. SCHEME OF METAL WORK FOR TWO YEARS. THOMAS STREET L. C. C. CENTRAL SCHOOL.



A. MODELS OF WOODWORK IN A MANCHESTER ELEMENTARY SCHOOL.



B. MODELS OF LIGHT METAL WORK IN A MANCHESTER ELEMENTARY SCHOOL.

to earning their living by manual work instead of preparing to seek positions as clerks or office boys." This view has an important bearing on the question of the choice of teachers for handicraft. For the elementary forms of handwork taught in the junior classes of the elementary schools, the regular teachers must be responsible. Of these a few receive instruction in handwork in the training colleges, but the majority have studied the subject in special classes provided by the local educational authorities and in the numerous summer schools for handwork, which have been established in recent years. But for the more advanced forms of handicrafts specialized training is essential. Since the scale of pay of wood and metalwork teachers is as a rule lower than that of ordinary teachers, very few of the latter class take up the specialized work. The majority of the teachers of the handicraft subjects are accordingly artisans with experience in the woodwork and engineering trades, who have obtained one of the qualifications recognized by the Board of Education, viz: The Teacher's Certificate in Manual Training, issued by the City and Guilds of London Institute, or the teacher's certificate in woodwork and metalwork of the board of examinations for educational handwork. London, in addition to providing facilities for the training of artisans for the work of the schools, also awards annually 10 pupil-teacherships of handicraft to suitable candidates, who enter on a course of training for four years at Shoreditch Technical Institute. The employment of artisans as teachers of handicraft possesses the advantage that they are in a position to introduce the actual methods of the trade workshop and to "form habits of industrious, careful, and accurate work," as recommended in the Suggestions, in accordance with trade standards. This type of teacher may also imbue the work with the craft ideal. On the other hand, since the emphasis of the instruction in elementary school handicraft should be educational and not technical or vocational, many of the teachers of this class are likely to be handicapped, unless they cooperate closely with the ordinary teachers or the head teachers of the contributory schools and make themselves acquainted with their work. The pupil-teacher system in London, while it is superior, also has the disadvantage of laying the emphasis on the technical aspects. Probably the best type of teacher, and probably the teacher of the future, will be the ordinary elementary school teacher who has gone through some special training in the handicrafts; the artisan teacher would find his place in the trade, technical, and central schools.

(3) NEEDLEWORK AND DOMESTIC SUBJECTS.

There has been a steady improvement within recent years in the teaching of those subjects which appear to belong peculiarly to the education of girls. Hampered at first by an educational tradition which emphasized the formal and theoretical, these subjects hardly

justified their inclusion in the curriculum. These defects, however, are disappearing gradually, and increasing stress is laid on the practical value of thorough instruction in the subjects which are so closely connected with the home. Needlework is now taught to girls in all elementary schools; the domestic subjects—cookery, laundry work, and housewifery—are being introduced more extensively under the inducement of special Government grants.

Needlework is introduced in many schools in the last year of the infants' department; but little more is attempted here than coarse stitching with large needles and roughly putting together dolls' clothes. It is found that raffia work forms a satisfactory introduction to the use of the needle. Knitting, which does not require such close work, is carried to a more advanced stage in the infants' departments than is needlework. In one school the children between 6 and 7 had knitted woolen bonnets for themselves. In the schools for older children the instruction in needlework is almost entirely practical. The working of specimen pieces, while still to be found, is rapidly disappearing, and practical applications are so far as possible made of the sewing. In the early stages the center of interest is the doll, and small articles of clothing which give opportunity for the use of different kinds of stitches are made. As the girls grow older they are taught how to make articles of apparel for themselves, such as the necessary underwear, blouses, aprons, and overalls. It is the aim of the course that every girl by the time she leaves school shall be able to make the measurements, design a rough sketch, and cut out garments for herself or members of her family. An important part of the work is the instruction in repairing and patching clothes. Valuable as this part of the instruction is, the teachers find some difficulty in persuading the girls to bring articles of their own to practice upon. In the upper classes, where the girls are engaged in more advanced work which requires longer hems and seams, it is felt by some teachers that unnecessary waste of time and energy is involved by the entire absence or inadequate supply of sewing machines. In some schools the girls are allowed to take home work which requires the use of the sewing machine. By those who insist on the formal value of sewing it is objected that although most of the girls in any school may have access to machines at home, the variety of makes renders it inadvisable as well as useless to introduce one machine into the school. The practice varies in respect to the provision of material upon which to work. In London the Council provides the material and the girls are allowed to purchase any article which they make at cost price for all the material involved. Thus in 1909–10 the Council spent $20,000 on material for teaching purposes and $30,000 on material for making up. This practice is generally followed elsewhere, but in Manchester the girls may bring their own materials.

In many schools instruction in needlework is correlated with practical arithmetic, both in measuring and estimating costs of garments and in making the sketches. Embroidery is introduced in a very few schools, particularly in the central schools for girls, and where this work is correlated with drawing and design excellent results are produced, as, for example, at Malmesbury Road Central School in London and the Brae Street School in Liverpool. Instruction in the hygiene of clothing and the value of materials is given in connection with the teaching of domestic subjects. No attention is given by direct instruction to such matters as taste and simplicity in dress.

The following outline[1] of a needlework scheme which has been introduced experimentally in some 20 of the London schools may serve to indicate the present tendencies in the teaching of this subject:

(1) That not less than two and not more than three hours per week be spent in needlework.

(2) That at least two finished articles or garments be made by each pupil in the course of the year, the garments being suitable for her own use.

(3) That each pupil above Standard III shall cut out the garments made by her.

(4) That sewing machines be supplied to each of the selected departments.

(5) That the use of specimen pieces be discontinued as far as possible.

Part of the time allotted to needlework is assigned to knitting, which is applied to the making of undergarments and stockings. Since the majority of children now wear ready-made stockings, attention is usually confined to darning and repairing, chiefly the knitting of heel and toe or refooting, for which purpose girls are encouraged to bring their own material.

The subjects of the domestic course are cookery, laundry work, and housewifery, which are taught separately, or in a mixed course, or in a combined course requiring the more complete equipment of a model home. The classes in these subjects are limited in size to 18 scholars. For the adoption and encouragement of these subjects special grants are offered by the Board of Education, which requires in a year a minimum of 40 hours' instruction in cookery, 20 hours in laundry work, 20 hours in housewifery, and 80 hours in either the mixed or the combined course. By the same regulations teachers of special subjects must hold a diploma recognized by the board or must be specially approved by that body.

The domestic subjects are taught in specially equipped centers which are visited in turn by scholars of several schools in a district. The teachers in charge of these centers may be responsible for administrative purposes to the head teacher of the school on whose site the center is situated or only to the superintendents of special subjects. Provision is made for the correlation of the instruction in elementary science and in any of the domestic subjects either by means of con-

[1] L. C. C. An. Rep., 1911, Vol. IV, p. 23.

sultation between the teachers concerned or through the special-subjects superintendents. Generally, except where the elementary science is confined to botany, instruction is given in hygiene and physiology and simple chemistry, with special reference to the work in domestic subjects. The scholars who are admitted to the courses in cookery, laundry work, and housewifery, must, by the regulations of the Board of Education, be over 11 years of age, but preference is given to older girls. The local education authorities also require the attainment of some standard (VI in London, V in Manchester and Liverpool) as a qualification for admission, although all girls above a certain age, e. g., 12 years and 9 months in London, must be admitted. No girl under 12 is permitted to take the course in household management or combined domestic subjects. The study of domestic subjects is arranged to cover either two years, as in London, or three, as in Manchester. The course begins as a rule with cookery, after which laundry work is taken up, to be followed by housewifery and the combined domestic subjects, if these are taught.

The aim of the instruction in domestic subjects is to prepare the girls to take their part in household duties when they leave school. It is intended to give them not merely practical ability in this work, but to teach them the value of cleanliness, foresight, thrift, and economy in household management for the purpose of preserving health and well-being. It may be objected that, however laudable such aims may be, the majority of the girls forget much of what they have learned long before they are called upon to put their knowledge into practice. The extension of the facilities for studying these subjects in the evening schools will serve to revive the knowledge at a time when it is really needed.

It follows from the aim which governs the teaching of domestic subjects generally that the teaching of cookery is designed as much to give the girls a knowledge of foodstuffs and their dietetic value, the selection and purchase of food, its cost, economy in the outlay on food, the need of planning a week or more in advance, as facility in its preparation. Emphasis is placed on the importance of variety of food rather than quantity, and instruction is given in the preparation of special meals for infants, invalids, and convalescents. Attention is also given to such matters as the preservation of food, reheating, the use of scraps and general economy in the kitchen, and care in the use of tinned food; and exercises are provided in drawing up menus for varying incomes and families of different sizes. The length of each lesson varies from two to two and a half hours, about one-quarter of which is given to theory and demonstration and the remainder to practice and the copying of notes and records. In general the introductory lessons are devoted to the chief principles and the illustrations in practice. Thus the various methods of

A. ST. JAMES SCHOOL, LIVERPOOL. BOYS' COOKERY.

B. ST. JAMES SCHOOL, LIVERPOOL. GIRLS' COOKERY.

A. COOKING CLASS AT BURGESS STREET CENTER, MANCHESTER ELEMENTARY SCHOOL.

B. LAUNDRY WORK IN A MANCHESTER ELEMENTARY SCHOOL.

baking, roasting, boiling, steaming, stewing, and frying are considered. After this the practice varies. In London, where an excellent syllabus has been adopted, the remainder of the course, about two-thirds of the time devoted to cookery, is given to particular menus with demonstrations by the teacher of one important dish at each lesson. The menus vary in accordance with the probable incomes prevailing in the district in which the center is situated. This scheme permits much freedom and brings the instruction nearer to the homes of the children. The plan has another advantage in that the product can more easily be sold, either to those teachers and children who take their meals at the school or to the care committees for providing meals to the necessitous children. Under any other scheme there is not only the danger that attention may be confined to specimen dishes without regard to practical requirements, but also that only those things will be cooked which can most easily be sold. Different methods have been adopted for the purchase of materials to be used in the cookery classes. In London the teachers buy what they need from the tradesmen on an order from the Council, which settles the accounts monthly. In Manchester and Liverpool the teachers advance the money for the purchases and are reimbursed at the end of each month. The teachers generally prefer the latter system, for it affords an opportunity of teaching their scholars how to do marketing.

The Board of Education sanctions the teaching of cookery to boys over 12 in seaport towns. Liverpool has made use of this opportunity, and boys who are thinking of going to sea receive instruction in cooking for one afternoon a week. The boys appear to be very keen and earnest about the work, and there seems to be no difficulty in disposing of any of the dishes made, particularly to the maker. An extension of facilities for teaching boys is being requested in connection with the Boy Scout movement, but it is doubtful whether expenditure would be sanctioned for this purpose until all the requirements for girls are satisfied.

The courses in laundry work, which is either taught concurrently with or immediately after cookery, is directed to the demonstration of the chemical properties and value of the different materials used in the washing process and to imparting a certain degree of skill. Instruction is thus given in the different properties of hard and soft water, and in the use of ammonia, turpentine, borax, methylated spirits, bran, and paraffin in cleansing clothes and removing stains. The rules for washing different fabrics and colored materials are taught and carried out in practice. The courses also include the folding, mangling, ironing, and starching of clothes. In connection with laundry work the importance of timely repair and care of clothing and the suitability of different materials for clothing are discussed.

The materials which are used for practical work are, as a rule, brought by the pupils from their homes.

Housewifery, which is not taught so commonly as cookery and laundry work, is a general course dealing with the care of the home and household management. For practical work in connection with this course either a set of rooms in the domestic-science center or a cottage home is equipped. The subject forms the last of the three domestic subjects, and in London is taken during the last year of school life for one session a week. In Manchester the subject is taught as part of the combined domestic-subjects course for which the girls attend the center for about eight weeks at a time toward the close of their school careers, during which period they omit all other school work. The experiment is also being tried in a few London schools. The course in housewifery includes such subjects as household accounts, the apportionment of income, the choice of a house, the choice of furniture, household hygiene and sanitation, household sewing, and the arrangement of household cleaning for the day or week. On the practical side each girl takes her part in cleaning the house or center. In connection with housewifery, or if it is not taught in connection with the other subjects, personal hygiene and the care of infants are taught, and instruction is given in home nursing, first aid to the injured, the treatment of slight ailments, and simple remedies. In Manchester, the instruction in the care of infants is taught to the older girls by a school nurse, who frequently illustrates the bathing and dressing of babies on living subjects accommodatingly lent for the occasion.

In the combined course the three subjects cookery, laundry work, and housewifery are brought together in the practical management of a model home, which, as pointed out in the last paragraph, consists either of a set of rooms or a small house rented locally. The course is taken continuously or once a week throughout a longer period. Under the scheme of continuous instruction the girls have the advantage of crystallizing in actual experience the knowledge gained in the separate courses far better than is possible under the alternative plan. In spite of the objection previously raised that this part of the curriculum comes at too early a stage in the lives of the girls to be of permanent value, the keen interest of the girls and the earnestness of the teachers of these subjects are adequate testimony of the immediate success attained.

(4) PHYSICAL TRAINING AND ORGANIZED GAMES.

As in the matter of medical inspection and the provision of meals to necessitous children, attention was drawn to the importance of physical training in elementary schools by the alarmist views on physical degeneration of the nation which were prevalent a few years ago. Physical training of children is accordingly now [illegible]

service for promoting the physical welfare of the nation. In 1904 the question of physical training was considered by an interdepartmental committee, and a Syllabus of Physical Exercises was issued for use in the elementary schools. The syllabus was based entirely on the Swedish system, which had already been introduced in London, replacing the Model Course issued in 1902, which had a military bias. Modified editions of this syllabus were issued in 1905 and 1909, and through the recommendation of the board have been introduced in most elementary schools, except where an alternative scheme approved by the board is in use, as in Manchester. The inspection of physical training has been placed in the hands of the medical department of the Board of Education.

The aim of the syllabus is to secure physical and educational results by means of a series of progressive exercises. On the one hand the careful performance of the exercises should lead to the general and harmonious physical development of the scholars and serve as a corrective, for example, in the case of mouth breathing, spinal curvature, and flat foot. The syllabus does not deal with the remedial value of physical exercises, especially in connection with the school medical inspection. On the educational side the aim is to secure habits of order and discipline, activity and alertness of mind, determination and endurance, and æsthetic perception of physical beauty and form. The exercises, which are based on the physiological needs of growing children, are described in simple terms, and a uniform system of commands is used. It is hoped by uniformity of teaching to make the scheme national.

About one hour in each week is devoted to physical exercises in most schools, divided either into three lessons of 20 minutes or two lessons of 30 minutes each. In addition to the regular exercises teachers may introduce a few simple exercises in the classroom between any two lessons, for their recreative effect. From lack of space these usually consist of breathing exercises. The regular lessons are, so far as possible, taken in the playground by the ordinary class teacher. The central hall, if there is one, is used in bad weather; otherwise the exercises are taken in the classrooms. Some local educational authorities employ superintendents of physical exercises (e. g., London has six, Manchester one), whose duty is not only to supervise the teaching of the subject but also to provide classes for the training of teachers. The necessity of providing special classes for teachers will gradually disappear as the newer generation of teachers takes its place in the schools; for physical training in accordance with the official syllabus must now be taught in all training colleges. The subject is generally very well taught, and the scholars perform their exercises with admirable accuracy and precision. The chief defect [illegible]

scholars. In a few girls' schools a simple costume, suitable for general school wear as well as physical exercises, is worn, but generally both the boys and girls wear too much clothing to obtain the full benefit of the free exercises. Some teachers allow the boys to remove their coats, but in this matter the parents need to be educated more than their children.

The syllabus recommends the following arrangement of the groups of exercises to constitute a complete lesson: Introductory and breathing exercises; trunk bending, backward and forward; arm bending and stretching; balance exercises; shoulder-blade exercises; trunk turning and bending sideways; marching, running, jumping (including games), and breathing exercises,[1] which may be interspersed between the other exercises. The introductory exercises include the necessary evolutions for getting the class into lines. The exercises are performed to simple words of command and explanation, and one effect of the general adoption of the syllabus has been the introduction of uniformity of commands and terminology throughout the country. The classes are taught by the personal demonstration of the teachers or one or two selected pupils after the teachers have shown the exercises. The syllabus is arranged to suit the physical needs and capabilities of children of different ages, beginning at the age of 7. The physical training of infant school children is not required to be formal and is sufficiently provided for in the games, plays, and other exercises commonly taught them.

Physical training, when originally introduced, was intended to serve as a recreation, a break from the excessive mental work of the ordinary subjects. But the modern recognition that physical exercises must to a certain extent be exacting, mentally and physically, for children has led to the addition of games and dancing in order to vary the formal exercises with exercises involving free movements. While the games are valuable in introducing variety, cooperation, and a love of play of a wholesome character, the introduction of dancing steps, especially in girls' schools results in improved carriage and graceful movement. In one school in Lambeth, a very poor district of London, highly successful results are attained among the girls by instruction in barefoot dancing. Not only do the girls perform the dances with much grace of poise and balance, but the removal of the boots and stockings makes them careful about the appearance of their feet, and no girl is prevented from receiving the full physical benefits of the exercises by badly fitting or almost useless footgear.

Since 1906 the Board of Education has permitted the introduction of organized games into the curriculum. The period occupied with these games must be confined to one morning or one afternoon in

[1] See [illegible] Syllabus [illegible] Exercises, p. [illegible]

each week. Not less than one-half hour and not more than two hours may be given to this form of physical exercise, exclusive of any time taken in going to and from the playing field. The chief games in which boys take part are cricket, football, and rounders, while the chief games for girls are cricket, rounders, hockey, and basket ball. The games are commonly played in the school playgrounds, but increasing attention is paid by local education authorities to the question of providing adequate playing fields, at any rate for the older children, in the same way as they are provided for secondary schools. In London arrangements were made in 1911 with the Parks and Open Space Committee for the use of 30 parks and open spaces for organized games of school children. In Liverpool arrangements are made for some 30 schools to use parks and recreation grounds for the purpose of organized games, while similar facilities exist and are extending in Manchester. The children are under the care of a teacher during the games. The introduction of organized games has been one of the strongest factors in promoting a corporate spirit in elementary schools, as effective in some of these as in the secondary schools. Much depends on the interest of the teachers, who are more and more devoting themselves to this side of school life both in and out of school hours. Interscholastic leagues are everywhere being formed and in the north an intercity school athletic league exists; and series of matches, which must be played out of school hours, are being arranged between schools. The expenses are met either by voluntary contributions of scholars and parents or out of the proceeds of school concerts, etc. Track athletics are similarly encouraged, as in Manchester, by the holding of an annual field day open to all elementary-school children.

Instruction in swimming forms another important branch of physical education. Attendance at swimming baths is recognized by the Board of Education as part of the minimum time required for attendance grants. A few elementary schools, as in Liverpool, are equipped with swimming tanks, but these are the rare exceptions. The usual practice is for the local education authority to make arrangements with the baths committee of the Council to admit school children to the baths for purposes of instruction or practice in swimming. In London the baths belonging to the Council, borough councils, and private owners are utilized, and in the summer months a few of the lakes in the public parks are used. Swimming is taught from April to the end of October. Children over 11 years of age, provided they have no physical debility, are allowed to take part in the lessons, not more than 25 being given during the summer months and 35 during the year, if the lessons continue throughout that period. Not more than 40 children are allowed in a class for instruction in swimming, which is given either by a special instructor or

by the class teacher. Certificates of proficiency are awarded to scholars who pass the tests, viz, 40 yards for boys and 20 yards for girls. Children who are able to swim, the test being 10 yards, are allowed to receive instruction in life-saving and may be entered for the examination and certificate of the Royal Life Saving Society, which grants medals and certificates for proficiency in life-saving throughout the country. The London County Council also grants scholarships in swimming, entitling the holders to use the baths once each day for half an hour.

In Manchester the baths committee of the city council grants free admission to the swimming baths to scholars in the elementary schools over 7 years of age, if accompanied by a teacher, and provides instruction. Scholars who are not accompanied by a teacher are admitted at a cost of 2 cents or 1 cent, according to the class of bath used, on the presentation of a pass ticket, which is supplied to the school authorities. During the midsummer holidays free admission is granted at certain times to elementary-school children without any formality. In addition the committee grants free admissions to the baths for 12 months to scholars who win any of the championships competed for under the auspices of the Manchester and Salford district school swimming association or obtain the proficiency certificates of the Royal Life Saving Society.

Chapter VIII.

PLAYGROUNDS.

There are very few elementary schools, and those the oldest, which are not provided with some form of open space around the buildings. Since 1871 the building regulations of the central educational authority have required playgrounds "properly leveled, drained, and inclosed." The present regulations draw attention to the need of an open, airy playground suited to the size of the school and so arranged that direct sunlight may be admitted to the classrooms. "The minimum size of site is, in the absence of exceptional circumstances, a quarter of an acre for every 250 children, irrespective of the space required for a teacher's or caretaker's house, or for a cookery or other center. If the school is of more than one story, this area may be proportionately reduced; but a minimum unbuilt-on or open space of 30 square feet per child should be preserved." Separate playgrounds are required for boys and for girls, but infants are allowed to share the same playground as the girls. The playgrounds are to be square or rectangular in shape and free from buttresses, corners, or recesses, and a portion is to be covered. It is obvious that such requirements can only be applied to new schools, but it is the intention of the Board of Education to press for the observance of these regulations in remodeling older schools.

In an inquiry[1] recently conducted into the whole question of playgrounds by a departmental committee of the Board of Education it was found that generally local education authorities were opposed to the requirement of 30 square feet of space for each child. The objection was made largely on the ground of expense in providing large playgrounds in thickly congested areas, as well as on the ground that the requirement is larger than is necessary for all ordinary school purposes. The committee, however, came to the decision that the requirement of 30 square feet per child should continue to be insisted upon for new schools, but local circumstances, such as the provision or use of playing fields outside the school area, should be considered in allowing a reduction. In the case of old schools it was recommended, in view of the difficulties in making extensions and the cost of land, that an extension of time should be allowed,

[1] See Bd. of Ed. Report of the departmental committee appointed to inquire into certain questions in connection with the playgrounds of public elementary schools, London, 1912.

and that by 1920 a school with less than 10 square feet per child should be regarded as unsatisfactory, while after 1925 less than 15 square feet should not be regarded as sufficient.[1]

The chief uses of the playground are for recreation during school intervals, for physical exercises, and for organized games. The committee concluded that for the purpose of recreation, for free motion and unrestrained activity during the 10 or 15 minutes of the recess, 20 square feet per child are ample, provided that the number of children in a department is large and the playground is of a satisfactory shape. Both boys and girls require the same amount of space, but it is probable that a somewhat smaller provision is adequate for young children up to about 7 or 8. The advantage of conducting physical exercises in the open air so far as possible furnishes another reason for a good playground large enough to afford the teacher a full view of the class during instruction; to allow room for marching, running, and games; and to accommodate eight classes during the day. To meet these requirements about 50 square feet per child ought to be available. But the minimum of 30 square feet per child, as suggested by the Board of Education, is essential if any attempt is made to introduce organized games. It is recognized that at best the playgrounds are a poor substitute for playing fields and that games played on them must be modified on account of the proximity of the school buildings and the hard surface, but since the playgrounds, especially in congested areas, will frequently provide the only opportunities for organized games, the minimum is fixed at 30 square feet per child. Exceptions are to be allowed, however, in favor of small schools with less than 200 children and for schools which are within easy reach of open spaces, parks, or playing fields. In the latter case only the minimum requirements of space needed for recreation will be considered, i. e., 20 square feet per child, while in the former a minimum requirement of 2,000 square feet and 10 square feet beyond that for each child in the school.

In practice there is little variation in the uses to which the playgrounds are put. In all schools the pupils are assembled in line by classes before proceeding to their rooms before school opens and after the intervals. Separate playgrounds are provided for boys and for

[1] It may be of interest to quote the final recommendations of the departmental committee referred to above on the size of playgrounds in new schools (loc. cit., p. 56):

"That where provision is made for games—

(a) Each undivided playground for 200 children and upward should provide—(i) 20 square feet for each older child; (ii) 16 square feet for each infant.

(b) Each undivided playground for less than 200 children should provide 2,000 square feet, together with—(i) 10 square feet for each older child; (ii) 6 square feet for each infant.

That where no other provision is made for games—

(a) Each undivided playground for 200 children and upward should provide—(i) 30 square feet for each older child; (ii) 16 square feet for each infant.

(b) Each undivided playground for less than 200 children should provide 2,000 square feet, together with—(i) 20 square feet for each older child; (ii) 6 square feet for each infant."

girls, but with few exceptions the girls share their playground with the infant department. An interval of 10 or 15 minutes is provided for recreation during each school session, and during these periods the children are allowed to relax as they please. One or more teachers may exercise a general supervision, but otherwise no restraint is enforced. In wet weather the covered sheds of the playgrounds may be used, but it is generally admitted that these are dark and dismal and, when crowded with children, tend to become unwholesome. Indoor playrooms of the kind provided in many schools in New York are not found; nor are they regarded as adequate substitutes for the open-air playgrounds.

Within recent years the wholesome practice of conducting the physical exercises out of doors has grown up, and with older children is carried on right through the year except when it is wet. But while the scholars have the advantage of the open air, the amount of dust raised during the work may counteract the beneficial effects; nor in most cases are the lavatory accommodations of the schools sufficient to enable the pupils to wash off the dirt which necessarily accompanies some of the exercises.

The teachers, especially the women, often object to taking the physical exercises in the open on account of the passers-by, but such objections are not insuperable. When the weather does not warrant taking classes out of doors or in the covered sheds, which are not favored by teachers, the exercises are conducted in the halls, where the careful teachers do not forget to admit sufficient air by opening the windows.

It has been estimated that there are between 40 and 50 games which can be played in school playgrounds. The favorite games can, however, be reduced to a much smaller number; they include cricket, football, rounders, and running games for boys; and rounders, basket ball, and hockey for girls. Since these are the most popular games, and since a playing field is the best place for them, there are many teachers who do not think that the playground is at all suitable for organized games. The children do not seem to have the same objection, and although the games must be modified—cricket can not be played with a hard ball, and footballers must often be content with grounds much below the regulation size, while in both cases the hard surfaces of the playgrounds are not the best places to fall on—the popularity of the games in school playgrounds is rapidly increasing.

These three uses practically exhaust the purposes for which the playgrounds are at present employed. Other occasional uses are dealt with elsewhere; they include the teaching of practical arithmetic, scale drawing, and the drawing of plans (see pp. 46, 133), open-air classes (see Ch. XII), and vacation classes (see Ch. XIII). Many of the newer school playgrounds are equipped for school gar-

dening and nature study. It has been found that a perimeter round the playground of about 3½ feet from the boundary is practically useless for purposes of play; this space is now frequently utilized for planting shrubs, plants, and flowers.

Roof playgrounds, which are so common in the schools of the larger American cities, are found in but small numbers in the English schools. The need for them, in spite of the rise in the price of land, has not been so pressing as, for example, in New York or Chicago. The older schools, which were established before the importance of the playground was recognized, are mainly in the centers of the towns, from which the population is receding. The newer schools are accordingly built in the outskirts, where land is cheaper and the expense for adequate playgrounds is not so great. In fact, many local education authorities are exceeding the minimum of 30 square feet per child in the playgrounds of their newer schools. Roof playgrounds are accepted as meeting the requirements of the Board of Education and are regarded as adapted for instruction in certain subjects, as well as for play, but their cost is often prohibitive, and in congested areas they are exposed to the smoke from the neighboring houses and even factories.

The essential requirement of a school playground is that it shall withstand the necessary wear and tear to which it is subjected and satisfactorily fulfill the purposes for which it exists. The surfaces must be hard, but not too hard, in order to avoid risk of serious injury to the children when they fall; they must dry quickly and not be dirty and dusty. No standard type of material for the surfaces of playgrounds has been adopted, but those in most general use are tar paving (London), asphalt (Manchester), and granolithic preparations (Liverpool). Gravel, shale, ashes, and cinders are also used by some authorities. It has been found that the material used in Liverpool—4 inches of broken stones or brick, with a granolithic face of 2½ inches in thickness composed of granolithic chippings and cement—gives a surface at a cost of 75 cents a square yard which will last for 25 years with little repair. The London surfaces—layers of Kentish rag stone mixed with hot tar to a thickness of 2½ inches over a basis of 6-inch hardcore—cost about 56 cents and remain in good condition for 10 to 15 years or even longer. The cost of asphalt surfaces in Manchester is 40 cents a square yard. Each authority claims advantages for its playgrounds, but the opinion generally is that asphalt is too slippery and difficult to keep in repair, does not dry quickly, and is very hard.

Chapter IX.

MEDICAL INSPECTION OF SCHOOLS.

The beginning of the twentieth century has seen a rapid extension in England of the provisions for the conservation and protection of child life. Probably the most important and wide-reaching of these measures is that which provides for the medical inspection of elementary school children. Defective children had already been cared for by the elementary education (Blind and Deaf Children) act of 1893 and the elementary education (Defective and Epileptic Children) act of 1899. Several factors contributed to the promotion of medical inspection of all school children. The subject of school hygiene, which had already occupied for some time past the attention of specialists, was brought into public notice by the Second International Congress on School Hygiene. Hence it is realized that there is an important connection between physical and mental conditions, and that many pupils are unable, owing to physical unfitness, to profit by school instruction. The importance of a school medical service was further emphasized by the reports of the royal commission on physical training (Scotland), 1903, which recommended the appointment of school medical officers for remedial and statistical purposes, and of the interdepartmental committee on physical degeneration, 1904, which included within the scope of its report the questions of physical training, medical inspection, and the feeding of school children. In the following year a committee appointed by the president of the Board of Education reported on the existing arrangements for medical inspection and its results, and on the feeding of children. School medical officers had been employed in London since 1890 and in Bradford since 1893, while some of the secondary schools, notably Rugby, had appointed an officer before these dates. The result of these reports and of public interest in the question was the passing of the education (Provision of Meals) act of 1906, and a proposal in the education (England and Wales) bill, introduced in the same year, to empower local education authorities to establish a school medical service. The bill failed to become law, but in the next year, 1907, the education (Administrative Provisions) act contained under section 13 1(*b*) the following provision:

> 13. The powers and duties of the local education authority under Part III of the Education Act, 1902, shall include—
>
> (*b*) The duty to provide for the medical inspection of children immediately before or at the time of or as soon as possible after their admission to a public elementary school, and on such other occasion as the Board of Education direct, and the power to make such arrangements as may be sanctioned by the Board of Education for attending to the health and physical condition of the children educated in public elementary schools.

The act was further supplemented by article 25(c) of the elementary school code for 1908, which made the satisfactory provision of medical inspection of school children one of the conditions for obtaining the annual grant. In 1907 a medical department was established in the Board of Education.

In the Memorandum on Medical Inspection of Children in Public Elementary Schools, circular 576, issued in 1907, to explain the scope and purposes of the act and to suggest a scheme for the organization of the medical service, medical inspection is declared to be a measure for the prevention of national physical unfitness by the improvement of the environment and physical life of children, and "seeks to secure ultimately for every child, normal or defective, conditions of life compatible with that full and effective development of its organic functions, its special senses, and its mental powers which constitute a true education." The aim of the act is thus both social, in that its ultimate purpose is the physical and moral improvement of the nation, and educational, since it involves an adaptation of "the methods of teaching to the special physical needs of the children."

In accordance with this twofold aim close cooperation between the school medical service and the public health service, operated under the local government board, was recommended. Under the latter, medical officers of health had already been required to report on the sanitary condition of schools and "the action taken (by the local sanitary authorities) in relation to the health of the scholars and for preventing the spread of infectious disease." The majority of the local education authorities, accordingly, appointed the existing medical officer as school medical officer and provided him with such assistance as was demanded by the needs of their districts. Where a special school medical officer was appointed, provision was made for thorough coordination with the public-health service. Thus the school medical staff of the London County Council consisted in October, 1912, of 64 officers acting under the supervision of the school medical officer, who is also county medical officer of health. The same arrangement exists in Liverpool, where the city medical officer of health is also the school medical officer, and is assisted by a staff of five doctors. The dual arrangement, where the supervision of the two services is not in the same hands, is found in Manchester, which has both a medical officer of health and a school medical officer assisted by six doctors. Where the two services are distinct, they cooperate closely in such matters as the supervision of infectious diseases, exclusion of pupils from school and the closure of schools on medical grounds, the cleansing of verminous children and the homes from which they come, and other matters which would come under the category of improvement of the general environment

of records is involved and arrangements have, in Manchester, for example, been successfully made for this purpose.

While the Board of Education does not prescribe the qualifications of school medical officers, it recommends that in making appointments "preference should be given to medical men and women who (1) have had adequate training in state edicine or hold a diploma in public health, (2) have had some d nite experience of school hygiene, and (3) have enjoyed special opportunities for the study of diseases in children." The school medical service has hardly been established long enough to demand a knowledge of education or of the hygiene of teaching as a qualification, but, from the extremely interesting studies made in school hygiene and the physical life of school children, there is some warrant for believing that the other problems will also be investigated. Among such studies the following, made by the assistant school medical officers of Manchester, may be mentioned: Conditions associated with "backwardness in school children"; physical condition and mental powers; the eyesight of school children; the effect of environment on physique; notes on the artificial illumination of schools; the physique of Jewish and other children.[1]

In addition to the professional staff, the school medical officers are assisted by school nurses or health visitors and teachers. The school nurses may assist the medical officers in preparing scholars for inspection, making the records of inspection, securing personal cleanliness of the children, carrying out simple medical treatment, and above all in serving as the links between the school and the home. Not only may they follow up cases, but they can observe home conditions, advise parents, and generally help to secure the wider aims of the act.

The teachers have been found of the greatest service in the cause of school medical inspection. Recognizing, as they do, the great importance of physical well-being for educational progress, they readily cooperate in the work. They are able to furnish data about the scholars, and in some cases to undertake such parts of inspection as the testing of vision and hearing. Under the system adopted by many authorities, they frequently select the special cases which, in their opinion, require inspection not provided for in the routine. They also have the power to exclude children temporarily to await the decision of the medical officer, and they cooperate with the school nurse or health visitor in drawing his attention to dirty or verminous children.

As the system is organized at present, provision is made for the routine inspection of children once on their admission to school and

[1] For a list of other studies made in England and Wales, see Rep. of the Chief Med. Officer of the Bd. of Ed., for 1911, pp. 10-12.

a second time before they leave—that is, between the ages of 5 and 6 on the one hand and 13 and 14 on the other. It was soon found, however, that the teachers referred special cases for examination. Hence the inspection includes "entrants," "leavers," and special cases. In London special provision is made for the examination of an additional group between the ages of 8 and 9. It was the original intention of the Board of Education that there should be not less than four inspections, as follows: The first at about the time of admission to school; the second at or about the third year of school life, that is, at about the seventh year of age; and the third at or about the sixth year of school life, that is, the tenth year of age; with a final examination at or about the time of leaving school. When the system is fully organized it seems highly probable that these four inspections, as well as the inspection of special cases, will be demanded by the board. Particular stress is laid by the chief medical officer of the board on the thorough examination of leavers, since the examination of this group may serve as a test of the success of the system, may be of service to authorities administering the National Insurance Act, and may be of direct assistance in advising juveniles on the choice of employment suitable to their physical condition. For the last purpose, close cooperation is recommended, and is in fact in practice under many authorities, between the school medical service and the juvenile employment exchanges or committees.[1] In London[2] head teachers are advised to—

> bring to the doctor's notice those pupils who are about to leave school, and to whom it is desirable, having regard to their physical condition, that the doctor should give advice as to the kind of work which should or should not be taken up by them after leaving school.

Parents are advised of the time when the inspection is to take place, and are requested to be present. The interest of the parents is being fostered, but, while the percentage of attendances is increasing, it is still somewhat low, and higher for the inspection of the entrants than for the leavers. Thus, in Liverpool, in 1911, 38.8 per cent of the parents, who were notified of the time, attended the inspection of their children; in Manchester the average for the same period was only 24 per cent; while for London the figure rises to 62 per cent. The presence of the parents, while it is of importance at the inspection of young children for the purpose of answering questions, is regarded as more valuable for the purpose of giving advice as to treatment where defects are discovered. In the absence of the parents notifications are sent, if necessary, through the children, the school nurse, the post, or, in graver cases, are served by the school-attendance officer.

[1] Rep. of Chief Med. Off. of Bd. of Ed. for 1911, Sec. XIII, pp. 245–268.

[2] L. C. C. Handbook containing general information with reference to the work in connection with the children's care (central) subcommittee, par. 40.

The examinations must take place on school premises and during school hours, with as little disturbance of the school arrangements as possible. Accordingly, vacant classrooms, teachers' rooms, or even the corner of a classroom, in which instruction is going on, are utilized. The purpose of the medical examination is to secure "the broad, simple necessities of a healthy life;" it is not intended that it shall be "thorough and elaborate," and it has been found in practice that seven or eight children can thus be examined in an hour. It is suggested in the Memorandum referred to above that the following matters should form the subjects of the examination:

(1) Previous disease, including infectious diseases.

(2) General condition and circumstances: (*a*) Height and weight; (*b*) nutrition [good, medium, bad]; (*c*) cleanliness [including vermin of head and body]; (*d*) clothing [sufficiency, cleanliness, and footgear].

(3) Throat, nose, and articulation [mouth breathing, snoring, stammering, tonsillar and glandular conditions, adenoids].

(4) External eye disease and vision testing.

(5) Ear disease and deafness.

(6) Teeth and oral sepsis.

(7) Mental capacity [normal, backward, defective].

(8) Present disease or defect: [(*a*) Deformities or paralyses; (*b*) rickets; (*c*) tuberculosis (glandular, pulmonary, osseous, or other forms); (*d*) diseases of skin and lymph glands; (*e*) disease of heart or lungs; (*f*) anæmia; (*g*) epilepsy; (*h*) chorea; (*i*) ruptures; (*j*) spinal disease; (*k*) any weakness or defect unfitting the child for ordinary school life or physical drill, or requiring either exemption from special branches of instruction or particular supervision].

At the request of several local education authorities the Board of Education published a suggested schedule of medical inspection. The accompanying schedule is used in Manchester, and is based on that suggested by the board, but has included some additional details of value. It will be noticed that provision is here made for the four medical examinations, which will no doubt be ultimately introduced. Provision is also made on the back of this card for securing information as to the home conditions of the children, which would be of value for the purpose of following up.

City of Manchester Education Committee—Schedule of Medical Inspection.

[FRONT.]

	19 13	19 10	19 7	19 5
Date of inspection and M. O.'s initials				
External eye disease				
Vision				
Mental capacity				
Speech				
Ear disease				
Hearing				
Clothing				
Footgear				
Cleanliness				
Hair and scalp				
Nutrition				
Skin				
Heart and circulation				
Lungs				
Nervous system				
Tuberculosis				
Rickets				
Deformities, spinal disease, etc.				
Infectious or contagious disease				
Other disease or defect				
Nose				
Teeth				
Throat				
Tonsils				
Adenoids				
Submaxillary and cervical glands				

School ..... Dept. .....

Name .....

Address .....

Date of birth .....

Previous illnesses of child.

Measles		Diphtheria	
Whooping cough		Chicken pox	
Scarlet fever		Other diseases	

Height				
Weight				
Age				
Standard				
Regularity of attendance				
Mental capacity				
Vision				
R.				
L.				
Recent illness				

General observations and special family history, etc.

Directions to parent or teacher.

[1] The removal of one of these squares leaves an indicator showing the date at which the child matures again for inspection.

[BACK.]

Action taken as result of examinations:

Parent notified					
Parent visited					
Parent warned					
Result					

Notes of intermediate or special examinations:

Date.

School attendance officer's notes.

X, Yes. 0, No. ?, Not obtainable.

Are parents living { Father? / Mother?	
Are either of parents foreign born?	
Are parents living at home { Father? / Mother?	
Is mother mostly out at work?	
How many, including the child, live in the home?	
How many rooms does this family occupy?	
Father's employment? Wages?	
Mother's employment? Wages?	
House rent?	
What district of Manchester is the home situated in?	
Special information for the sources of income, family history, etc.	

Date.

But the system of medical inspection was not established for the purposes of making records and statistical collections. Its ultimate value depends on the arrangements for amelioration and the raising of the standards of health. The complete school medical service accordingly provides for medical treatment and aftercare. In section 13 of the education (Administrative Provisions) act power was granted to local education authorities to make arrangements for attending to the health and physical condition of children. The expense of establishing and maintaining the school medical service and providing for medical treatment was felt to be a considerable addition to the heavy financial burden of the local authorities. The board of education, however, has set aside the sum of $300,000 to provide grants toward approved arrangements for medical treatment. The employment of hitherto existing agencies was not excluded. These included the measures under the public health acts for sanitation, disinfection, the supervision and care of infectious diseases, and the establishment of hospitals; the regulations for the sanitation of schools; the provisions for the treatment of physically and mentally defective children; the provision of meals; and the powers under the children act of 1908.

The experience of the first few years of medical inspection suggested the need of adopting measures for the treatment, in particular, of ringworm, teeth, eyes and ears, skin diseases, and dirty and verminous conditions in children. The tracing of infectious diseases and the cleansing of children are conducted generally by the school medical and the public health services in cooperation. The teachers, school nurses, and the school medical officers notify the medical officer of health, if he is not also the school medical officer, of all cases of infectious diseases, suspects, and carriers or contacts, while the medical officer of health keeps the school authorities informed of outbreaks of infectious diseases. Cases of infection are followed up by the officers of the public health department, which also undertakes the cleansing and disinfection of the homes of the affected persons. Both the school medical officer and the medical officer of health are now authorized to order the exclusion of suspects or carriers from school or the complete or partial closure of schools in the event of the outbreak of an epidemic. Of the infectious diseases, school attendance is most affected by measles and very markedly by whooping cough. The school medical officers are making strenuous efforts to enlighten the public on the subject of measles, to explode some of the popular notions as to its inevitability and mildness, and to impress them with some of the seriousness of the aftereffects. Teachers have also been instructed to watch for the premonitory symptoms, and in Manchester have been provided with a booklet giving information on the subject of infectious diseases. In the case of skin diseases,

defective eyesight, diseases of the ear, uncleanliness, and other defects discovered at the medical inspection, parents are informed and treatment is recommended. The treatment may be applied in simple cases at home by the parent or by the school nurse or health visitor, who in any case visits the home to advise and assist where necessary, or a recommendation may be made that a private practitioner should be consulted. Cases referred for treatment are noted by the medical officer for reexamination when the school is next visited, and are kept under observation. In more serious cases, where the routine examination does not permit of a thorough inspection, children may be put back for examination at the inspection or observation clinic. In following up the cases recommended for treatment, the nurses are assisted by the observations of the teachers, by school managers, or members of school care committees, who advise parents, inquire into financial conditions, and give information, when this has not already been given by the school medical officer, as to the existing agencies for the provision of free or cheap medical treatment. Where it is found that parents have neglected to provide medical treatment, two courses are open to the local education authorities: They may (1) exclude a child from school and prosecute the parents for its nonattendance, or (2) proceed against the parents under the children act of 1908, for neglecting to provide medical treatment. Where parents have received notice to cleanse a child infected with vermin or in a filthy condition and have neglected to do so within 24 hours of the notice, the school medical officer is empowered by section 122 of the children act of 1908, and in London under the L. C. C. general powers act of 1907, to have the child removed to be cleansed in suitable premises. In most cases the cleansing stations provided by the local sanitary authority are used for this purpose.

The problem of treatment in the case of other defects has been surrounded with considerable difficulties, except of course where school clinics have been established. Experience has shown that there has been a considerable amount of leakage between medical inspection and treatment. The Board of Education may approve arrangements for treatment in hospitals and dispensaries, but here there enters the difficulty of adequate coordination, since these agencies are for the general use of the public and not confined to children only. Teachers generally are critical of this system, since it involves loss of time in going to and from and in waiting at the hospitals or centers, and it is also found that parents, who must also sacrifice time in accompanying their children, frequently do not continue until a complete cure is attained. A satisfactory scheme, based on the use of hospitals and voluntary treatment centers established by local bodies of medical practitioners, has, however, been

inaugurated in London. Arrangements have been made with 11 hospitals and 17 treatment centers to provide for the treatment of school children suffering from certain ailments; usually defects of the eye, ear, nose, and throat; ringworm; and defects of teeth. An assistant organizer of school care committees is in attendance at the centers to regulate the attendance of the children and to keep the care committees in touch with cases under treatment. There are, in addition, centers for the provision of X-ray treatment of ringworm. These measures provide for the treatment of about two-thirds of the school children annually needing treatment, the remaining third being treated privately. In Liverpool and Manchester no thoroughgoing arrangement for medical treatment has yet been established, but there is a strong movement in both cities for the establishment very shortly of school clinics along the lines of the successful school clinic existing for some time in Bradford, which provides adequate arrangements for the treatment of defective vision, diseases of the external eye and eyelids, ringworm (both drug and X-ray treatment), skin diseases, ear discharge, and defects of teeth. A center for the X-ray treatment of ringworm has been established recently in Liverpool, and an inspection center for this and other defects is in existence in Manchester. From the point of view of school attendance, medical inspection has disclosed that ringworm is responsible for the largest percentage of absentees, and without an X-ray equipment is the most stubborn disease to eradicate, thus involving the loss of considerable amount of the Government grant annually. For the treatment of cases of defective vision local educational authorities may, with the sanction of the Board of Education, supply suitable and inexpensive spectacles, provided proper precautions are taken that the examination and prescription are adequate. In London parents are assisted in the purchase of spectacles by the Association for the Supply of Spectacles in London Elementary Schools and by the Ogilvie Trust, both of which may remit the cost. In this connection a fairly widespread objection to wearing spectacles has been disclosed among the poorer classes, owing in the majority of cases to the fear that the wearing of spectacles may prove a handicap to securing employment.

Besides treatment through the provision of spectacles, other remedial measures as suggested by school hygiene are adopted, especially the adequate supervision of the type of school textbooks, a subject which was reported upon by a committee of the British association in 1911. Another matter, in which the school medical officers are confronted with much difficulty, is the education of parents on the importance of careful attention to the teeth. A great deal of indifference and ignorance exists on the subject among parents, but some excuse may be found for them in the inadequate provision for

free or cheap dental treatment. The dental hospitals could not cope with the amount of work with which the medical officers would supply them, while the charges of the private practitioners are beyond the means of many parents of elementary-school children. The solution has, of course, been found in the provision of separate dental clinics or of facilities in the general school clinics, where they already exist. In Liverpool an experimental dental clinic was opened in connection with one of the schools and met with much success, while provision is made for the regular dental treatment of children in the industrial schools. In Manchester some success has attended the following up and observation of the most urgent cases. Much is also done by the teachers, in connection with the lessons in hygiene, to impress on the scholars the importance of cleaning the teeth.

Although the local education authorities are permitted to provide medical treatment and spectacles, they are authorized by the Local Authorities Medical Treatment Act of 1909 to make a charge not exceeding the cost of the treatment, and to sue for the recovery of the amount except in cases where they are satisfied that the parents are clearly unable to meet the expense.

The medical work of the school medical officer is not completed by the medical examination and the provision of medical treatment. The chief function of the service will always be ultimately prevention rather than cure. To this end the school medical officers are charged with the duty of advising local authorities on matters affecting the sanitary conditions of the school buildings. The changing requirements and the higher standards of school hygiene demand increasing attention on the part of medical officers, not only in dealing with old, but also in planning new buildings. Such matters as ventilation, lighting, heating, the suitable provision of cloakrooms, the drinking water, the playgrounds, the offices, the prevention of dust in the classrooms all come within the purview of the school medical officers. Less attention has been paid to these branches of school architecture in England than in America, and many reports of medical officers contain references to the inadequacy of the arrangements. The cooperation of the medical service with the school architects will lead to improvement not only in these matters, but to the provision of additional accommodation in school buildings for baths, open-air classes, etc. In the classroom more attention will be paid from the hygienic and physical points of view to desks and seats, to the text-books, to the lessons in hygiene, and to the physical exercises. Lastly, mention may be made of the educational experiments of publishing and distributing to parents and children leaflets containing rules of health for children; the arrangement of parents' evenings, as in London, with stereopticon lectures and talks on health; the

establishment by voluntary agencies of "schools for mothers," as in Manchester, in connection with which classes may be held in hygiene, cookery, sewing; and the instruction in infant care and management to the older girls in elementary schools. Under this heading the education committee of the London County Council has published "Health Hints to Parents," and the Liverpool education committee "Some Simple Health Rules for School Children," which is here reprinted.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

LIVERPOOL EDUCATION COMMITTEE.

Some Simple Health Rules for School Children.

The following few rules will, it is hoped, be found serviceable to parents of school children:

Fresh air.—This is as necessary at night as it is in the daytime, and the bedroom window should always be kept open at the top during the night time, unless some special circumstance, such as bad weather, prevents it.

Cleanliness.—1. No child should have nits (eggs of lice) in the hair. The only really satisfactory method of getting rid of nits is to cut the hair short where the nits are found.

2. To avoid having the hair infected, boys' hair should be kept quite short, and girls' hair should be worn in plaits.

3. Parents should impress upon their children the danger of putting on other children's caps or hats; ringworm as well as vermin may be spread by neglect of this precaution.

Sleep.—It is very important that children should have more sleep than they generally do nowadays. Children of 5 to 7 should go to bed about 6 o'clock, 8 to 10 about 7 o'clock, 11 to 13 not later than 8.30 o'clock, these rules being but slightly relaxed in the summer time. Late hours are responsible for much subsequent ill health.

Food.—1. Oatmeal in the form of porridge is especially suitable for children.

2. Cow's milk should always be taken, not machine-skimmed condensed milk, as the latter has been deprived of much of its nourishing value. Milk puddings and bread and milk are suitable for children.

3. Some meat or fish should be given to children every day.

4. Tea is harmful to children; alcohol in any form even more so.

5. Sweets, especially soft sweets, such as toffee or chocolates, should be sparingly taken.

Care of the teeth.—1. Every child from the age of 4 should have a toothbrush, and should use it twice a day, but certainly before going to bed. It is very important to wash the mouth out well with water after the teeth have been brushed. Camphorated chalk or precipitated chalk forms a good tooth powder. It will, of course, be necessary for the mother to attend to the brushing of the teeth of the younger children, but she should personally see that the toothbrush is used until the children have got into the habit of using it for themselves. Much future pain and discomfort will be avoided by its use, and some teeth will be saved from decaying.

2. No biscuits or sweets should be given after the teeth have been brushed at night-time.

3. All badly decayed teeth should be removed, and teeth of the second set commencing to decay should be stopped by a dentist.

Clothing.—1. This should be warm in texture and should fit loosely on the body.

2. Woolen or flannel undergarments are the warmest, and help to prevent chills.

3. No child should go to bed wearing any of the garments worn during the daytime.

4. More clothing is required in cold than in hot weather.

5. Girls should never be allowed to wear stiff corsets nor tight garments round the chest or waist, as this interferes with the proper growth and with breathing.

6. Stockings should be kept up by the use of suspenders Tight garters are very harmful.

7. Boots should be water-tight, and high or narrow heels should be especially avoided.

Squint, or "*turn of the eye.*" is always due to defective eyesight, and it is very important that it should be attended to as soon as it is noticed.

Mouth breathing.—Many children instead of breathing, as they should do, through the nose, breathe habitually with their mouths open. In some instances this is merely a bad habit, but it is also frequently, especially when snoring occurs during sleep, due to enlarged tonsils or to growths at the back of the nose. Special breathing exercises fully described in a leaflet, which can be had through the teachers, from the school medical officer, materially assist in counteracting this habit.

Discharging ears.—Some children suffer from a discharge from the ears. Medical advice should always be obtained for this, as neglect in many cases leads to very serious consequences.

Measles and whooping cough.—These diseases are very fatal to infants and young children, and the longer an attack can be put off the less likely is it to be dangerous. Some children altogether escape having these diseases. No child, therefore, should be taken into or allowed to enter a house in which these or other infectious diseases are being treated.

MEDICAL OFFICER TO THE EDUCATIONAL AUTHORITY.

Chapter X.

THE FEEDING OF NECESSITOUS CHILDREN.

Like the medical inspection of school children, the feeding of necessitous children in the elementary schools is as much an educational as a social measure. It is national in scope, for its aim is the improvement of the physical standards of the nation; it is educational in so far as it is a provision for those children "unable, by reason of lack of food, to take full advantage of the education provided for them." Voluntary agencies had existed for some time to provide meals for poor children in the elementary schools, but their work was conceived rather as a charity than as a measure to insure conditions conducive to the highest benefit resulting to the children from the instruction given in school. As a consequence of the reports of the physical deterioration committee (1904) and the interdepartmental committee on medical inspection and school feeding (1905), the education (Provision of Meals) act was passed in 1906, investing local education authorities with power to provide meals to children attending the elementary schools. For this purpose the local education authorities adopting the act may associate with themselves a committee, known as the "school canteen committee," on which they are represented, to undertake the provision of food, and may furnish to such a committee the necessary equipment for organizing, preparing, and serving the meals. Wherever possible, funds other than public must be employed to defray the cost of food, but where voluntary agencies do not exist local education authorities are empowered to meet this cost out of the rates. A charge must be fixed for each meal, and the authorities have power to recover the cost of meals from parents.

The selection of children who come under this act may be made in several ways. Parents may make application to the school canteen committee that their children should be provided with meals, or teachers may recommend pupils from their classes who are apparently underfed to the notice of the authority providing the meals, or the school medical officers may make the same recommendation as a result of routine or special examinations. In its further interpretation of the act the Board of Education strongly advises the closest cooperation between the school medical service and the authority charged with carrying out the provisions of the act. It recommends that the school medical officer shall be allowed to nominate children

for school feeding on account of malnutrition; that he shall be consulted as to the dietary; that he shall be allowed to inspect the arrangements for preparing, distributing, and serving the meals; and that he shall be consulted in cases of doubt as to the retention of children on the feeding list owing to their physical condition.[1] As a general rule, however, children are selected on a poverty rather than a physical test. Thus in London meals are, with certain exceptions, only provided to children whose parents can not pay the full cost, while in Manchester free meals are provided only to those children whose family income falls within a certain scale. On the other hand some authorities provide meals for all children who are apparently underfed, whether through poverty or another cause.

The provision of meals in the London schools has been intrusted to the children's care committees and their local associations, which receive applications for meals. Arrangements have been made for the provision of dinner, breakfast, and milk or cod-liver oil for delicate children. The meals are prepared either by a large firm of caterers or are purchased from cooking centers of local schools. The equipment is provided by the Council and the meals are served either in special centers or in school halls. The supervision of the children at their meals is undertaken by paid and voluntary helpers, often including teachers, who serve the meals with the assistance, if required, of the monitors. The names of children are placed on the feeding list after applications have been considered by the care committees, but head teachers are empowered to send children who are apparently in need of food to the feeding centers pending the consideration of their cases by the care committees, and they also bring necessitous children to the notice of the school doctors. In all cases the care committees investigate the home conditions of the children and may bring cases of temporary distress to the attention of charitable agencies, and in the case of neglect may recommend the prosecution of parents. By these means the care committees are in a position to know whether the necessitous children who come to their notice are in fact improperly fed, suffer from want of sleep, are overworked out of school hours, or are living under unhealthy home conditions. In every case, however, an attempt must be made to recover the cost of the meals provided, and fixed charges have been established of 2 cents for breakfast, 3 cents for dinner, 1.5 cents for a milk meal, and 2 cents a week for cod-liver oil. Every case on the necessitous list is reviewed once a month and names are at once removed as soon as home circumstances improve. That the fears of those who opposed the introduction of the measure for the provision of meals on the ground that parents would be pauperized are groundless is shown by the fact that very few parents will allow their children to receive the

[1] Rep. of Chief Med. Of. of Bd. of Ed. for 1911, p. 220.

benefits of the act as soon as they find that they can provide for them at home. Undoubtedly there are "chronic cases," but these are being carefully inquired into.

The following are some of the typical menus supplied to the children at the feeding centers of London:

1. Haricot bean soup. Bread. Treacle pudding.	2. Cheese and potato pie. Bread. Apple roll.	3. Meat pudding. Potatoes. Bread.
4. Fish and potato pie. Bread. Baked raisin pudding.	5. Mutton stewed with haricot beans. Steamed potatoes. Bread. Suet pudding.	

The cost of the meals to the Council for each child, when provided by the caterers, is for breakfast 2.88 cents and for dinners 3.76 cents; for each dinner supplied by the cookery centers the cost is 3 cents. In 1910–11 the average weekly number of children fed was 41,672, to whom 203,461 meals were provided. The expenditure for the same year on food alone was $240,630, and the total cost of the scheme for providing meals was $438,180.

In Manchester the arrangements for the provision of meals are in the hands of a school canteen committee. Centers have been organized in the poorest districts, to which meals are distributed from a central kitchen established by the education committee and placed under the charge of a general superintendent. Parents may make applications on behalf of their children, and teachers report cases of ill-nourished and underfed children. The cases are examined by the school medical officers, and the circumstances of the parents are investigated by the school attendance officers. For purposes of relief the weekly income of the family, after payment of rent, must come within the following scale: Five or more in the family, 60 cents per head; three or four in the family, 66 cents per head; one or two in the family, 72 cents per head. Where the income exceeds this scale 2 cents is charged for each meal. The expenditure on food alone in 1911–12 was $7,555, and the total cost of the scheme was $16,610. The number of individual children fed during the year was 4,518, and 328,334 meals were provided. A similar scheme will probably be adopted in in Liverpool, which at present arranges with a firm of caterers to supply the meals.

The act does not permit the provision of meals at public expense on days on which children are not in attendance at school. In many towns voluntary agencies have undertaken the provision of meals to necessitous children during holidays. Amendments of the act to remove the prohibition as to holidays are at present before Parliament and will probably be passed.

It is difficult to estimate the effects of the provision of meals. Up to the present, in the few instances where the school medical officers

are conducting observations, the physical effects, as measured by weight and height, are reported to be good, while teachers report an improvement in the school work of the children who are fed. On the mental effect there do not seem to be any reports of actual tests or measurements of the improvement, although something more than a prima facie judgment might be expected, since the act is educational in intent. Improvement is also reported in table manners, in cleanliness at meals, and in the actual process of eating. These, of course, depend on the character of the supervision, on the appearance of the center, and on the general attention to the neatness of the table and the equipment. As a means for social education the provision of properly supervised meals and menus should be highly effective in teaching both the children and the parents what nutritious food is and what form the proper feeding of children should take. Too frequently the children who appear to be suffering from malnutrition are really the victims of improper feeding, and it requires effort at first to induce these children to eat what is generally regarded as nutritious food. The cheap cookshops too often provide parents with an excuse for neglecting their duty. The feeding center, under suitable supervision, combined with the practical lessons in cookery, should in time dispel much of the ignorance prevailing on the feeding of children.

Chapter XI.

THE SCHOLARSHIP SYSTEM.

The establishment of secondary schools in England in numbers at all adequate to the needs of the population has been the result of effort stimulated by the act of 1902. Until the beginning of the twentieth century not only were the secondary schools few in number, but their organization on a class basis, with different types of schools serving different social grades, would have precluded many children of the lower middle and poorer classes from enjoying the benefits of higher education but for the existence of scholarships. The educational ladder was only accessible, however, to children of exceptional ability from the elementary schools. Many of the endowed schools offered scholarships to poor children of intellectual ability who otherwise would have been unable to proceed to secondary schools and beyond. In the last decade of the nineteenth century the existing scholarship system was supplemented by the addition of scholarships and exhibitions offered by local bodies with the aid of the Science and Art Department. But the total provision from the latter source did not amount to more than 5,500 scholarships. The value of scholarships of all types—in public schools, other secondary schools, universities, technical schools for the training of teachers, in trade schools, evening schools, etc.—is estimated to be at present over $6,000,000.

The powers granted to local education authorities by the education act of 1902 to incur expenses out of the rates for higher education led almost immediately to an increase in the number of secondary schools, many of them charging lower fees than previously existing schools, and to an extension of the scholarship system for boys and girls. Scholarships are, however, essentially selective in their nature and are intended to afford poor children of intellectual promise an opportunity not only of further education, but also of rising in the social scale. Such a system was not calculated to satisfy the ideals of the democratic leaders, and demands for an increase of the opportunities for higher education have been raised. There are those who are dissatisfied with the educational ladder, limited to the able but selected few, and prefer a broad educational highway open to all who can avail themselves of it. But a free system of higher education is not likely to be introduced for many years to come; instead, a compromise has been effected which, while it involves the principle

of selection, is not intended for the supernormal so much as the normal pupils in the elementary schools. By the regulations of the Board of Education, in all secondary schools which desire to qualify for the Government grant, "free places must be offered at the beginning of each school year to pupils entering from public elementary schools * * *. The number to be offered will ordinarily be 25 per cent of the total number of pupils admitted to the school during the previous year, or, in the case of a new school, at its opening, but this percentage may be reduced or varied by the board on sufficient grounds in the case of any particular school." For the purposes of this regulation, pupils must have attended an elementary school for two years before entering the secondary schools.

The number of scholarships and free places maintained by the local education authorities in 1911–12 was 38,000, of which probably 34,500 were held by pupils from elementary schools. To this number must be added the scholarships granted by the endowed schools and other bodies, bringing the total number of pupils receiving free tuition up to 52,583, or 34.8 per cent of the total number of pupils in secondary schools recognized by the board, i. e., 151,045. Of these, 49,120 had previously attended the elementary schools. So far as possible the number of free places are divided equally between boys and girls. The provision of free places throughout the country varies from one free place for every 48 children in average attendance in the elementary schools to one place for every 170 children. For the administrative county of London the provision is one free place for every 70 children over 5 years of age in average attendance. If the number of scholarships and free places offered by other than the public authorities be taken into consideration, the number is of course raised. Of the children annually leaving the elementary schools 1 in 22 enters a secondary school, and 1 in 46 receives free education there.[1]

Since the introduction of the free places it is becoming more difficult to distinguish them from scholarships, for both are intended to assist poor but able pupils who would otherwise not continue their education to enter the secondary schools. As a rule the award of scholarships is not limited to boys and girls who have previously attended an elementary school, and they may be of higher financial value than the free places, while a higher standard of performance in the examination may be required. But both scholarships and free places vary in character in that they may carry with them (i) free tuition only, (ii) free tuition, books, and in some cases, traveling expenses, (iii) a maintenance grant in addition to the last. Since the free places are in most cases awarded one or two years before the age of compulsory school attendance is reached, the bur-

[1] Bd. of Ed. Rep. for Year 1911-12, pp. 3-33.

den of maintenance to parents is hardly greater than if a child remained at the elementary school, although the cost of books and other incidental expenses are in some cases felt to be heavy. It is the extension of the period of schooling after the age of 14 which needs, and under many authorities finds, encouragement by the grant of maintenance allowances. A few of the rural districts also pay traveling expenses or the cost of boarding at or near a secondary school. A free place may be held by a pupil so long as he chooses to remain in the school, and exclusion is only permitted on the same grounds as would warrant the exclusion of a fee-paying pupil. But in cases where parents of limited means are only enabled to keep a child at school by the aid of a maintenance grant, its withdrawal on account of bad work or poor progress may have the same effect as exclusion. Scholarships, however, are usually awarded in the first instance for periods of three years and are subject to renewal only if the holder shows promise. Some authorities at the end of a three-year period provide for the substitution of free tuition only in place of a scholarship, which may carry additional emoluments, in cases where a pupil's work is only up to the average. In London, again, a scholarship holder who does not show promise of benefiting by a secondary education may be transferred to a school of another type, e. g., a trade school.

But whatever advantages and opportunities a free place, maintenance grants, or scholarships may offer, there is a small proportion of the population which, owing to poverty, can not take advantage of the openings. It may be that the home conditions are too poor or that attendance at a school in a very poor district may result in a lower standard of attainments, but whatever the reasons the very poor are not found to avail themselves of the educational advantages. Where children from such homes have been able by their abilities to win scholarships, it has been found that they can not rise above their home surroundings, and the suggestion has been made that the local authority should enable them to board at a distance from their homes. It is probable, however, that with further experience these difficulties will adjust themselves.

The scholarships and free places for entrance to an elementary school are awarded on the results of competitive examinations, for which the age limits vary from 11 to 14. In London the candidates for junior county scholarships must be between the ages of 11 and 12; in Manchester the age limits for scholarships of similar grade are 10 and 13, a percentage of marks being added for each month that a candidate is below the age of 13. It is desired that, so far as possible, pupils shall enter the secondary schools before they reach the age of 12. So far as the examination is concerned, the present tendency is to limit the number of subjects so far as possible. The

usual subjects are arithmetic and English (composition and grammar); to these geography, history, and drawing are added by some authorities. The examination may be conducted in writing or orally, or both. The limitation of the subjects and the addition of an oral test are intended to eliminate any advantage which might be obtained by special preparation, and accordingly to equalize the chances. Very few elementary schools provide special preparation other than that of the ordinary curriculum to scholarship candidates; where preparation is given it takes the form of a little home work in arithmetic or English. Instances of special scholarship classes, receiving instruction in algebra and French in addition to the ordinary subjects, are to be found, but are rare. But there are very few schools where the bright and promising children are not watched with the definite intention that they shall proceed to secondary schools with the aid of the scholarship or free place (see p. 97), while for their encouragement honor boards on which scholastic distinctions are recorded are placed in prominent position.

Since scholarships are intended to enable the children of limited means to secure the opportunities offered for higher education, most of the local authorities have established systems of scholarships to assist the ablest boys and girls to advance through the secondary schools to the universities. As the cost of education increases in proportion to its scope, so does the value of the scholarships rise in the later years of the school career and the university, and the fewer they become in number. Hence the scholarship system selects an intellectual elite which helps to recruit the professional classes and indirectly promotes an upward social movement. The scholarships and exhibitions offered by the universities and other institutions of higher learning have been supplemented by the efforts of the local education authorities.

Up to this point only those scholarships and free places which lead to the secondary schools and offer opportunities for higher education have been dealt with. But the increasing variation in educational demands and the differentiation of institutions have led to the establishment of scholarships and exhibitions to these. The local education authorities also took over the system of scholarships to technical and art schools, which had been introduced under the influence of the Science and Art Department. Thus the provision of scholarships, while not so great in number or even in value as those leading to the secondary schools and universities, now extends to the recently established central schools (see Ch. XVI), to trade schools, to evening schools, to schools for domestic economy, and to the technical and art schools.

The London system offers the following opportunities for proceeding to the secondary schools and universities to the boys and girls of the elementary schools. The maintenance grants which accompany

the scholarships vary according to the incomes of the parents, the maximum being as a rule given to the children of parents whose income does not exceed $800 a year. About 1,700 junior county scholarships are offered annually to boys and girls of the elementary school class between the ages of 11 and 12, and carry with them free tuition in a secondary school for five years and maintenance grants of $30 a year for the first three years and $75 a year for the last two years. For scholars who fail to obtain one of these scholarships, but hold free places in a secondary school and are between the ages of 13 and 14, 300 supplementary junior county scholarships, available with maintenance grants for three years, are offered. There are, in addition, about 8,800 free places in the numerous secondary schools of the London area. To enable the better scholars to continue their education until the end of the school year in which they are 18 years of age, 300 intermediate county scholarships, available for three years with maintenance grants of $100 for each of the first two years and $125 for the third year, are awarded to scholars already in the secondary schools between the ages of 16 and 17. The culminating point of this scholastic career is marked by the offer of 100 senior county scholarships with adequate maintenance grants to enable the highly selected group of scholars to proceed to the universities. A number of free places at the Imperial College of Science and Technology are also awarded to scholars at the end of their school careers.

These scholarships are at once the most numerous and the most valuable in the London system. Provision is made, however, to assist young people who by choice or native endowment are unable to profit by a secondary school education. There are thus the numerous free places and maintenance grants in the central schools (see Ch. XVI). To promote special preparation for the trades, 166 scholarships for boys and 250 scholarships for girls between the ages, approximately, of 13 to 16 are awarded annually and carry free tuition with maintenance grants in a trade school. The 12 half-time trade scholarships are intended to offer an opportunity of combining apprenticeship in certain trades with attendance at a trade school. For girls there are 500 junior domestic scholarships which carry with them one year's training in domestic subjects and a small maintenance grant, while an opportunity of attending a 12 weeks' course in cookery is offered by the 54 cookery scholarships for domestic servants.

For adults who have already entered on their careers the Council offers opportunities for further study in science or art by means of scholarships and exhibitions. The scholarships are granted to those who are willing to give their whole time to the study of some branch of science or art bearing upon their work. Maintenance grants up to the value of $250 are paid in connection with these scholarships. The

exhibitions are intended to enable artisans to attend evening classes in subjects bearing on their trades. Finally, the scholarships to enable the most capable among the blind, deaf, and crippled scholars between the ages of 15 and 17 to continue their education deserve mention. In this list no reference has been made to the scholarships which have been placed at the disposal of the Council by individuals and corporations, nor to the scholarships and bursaries to secure a supply of teachers, to assist teachers in training, and to encourage the further training of teachers in service.

The system of scholarships and exhibitions under the Manchester Education Committee, while necessarily less ambitious than the London scheme, more nearly indicates the general practice of the larger cities of the country, including Liverpool. In connection with the central schools there are 150 free admissions and 160 bursaries (see p. 129). The free admissions to the three secondary schools under the control of the education committee are awarded in accordance with the regulations of the Board of Education, but there are in addition 50 bursaries or maintenance grants in sums varying for each of the five years for which they are awarded, to enable those who otherwise could not remain to continue at the secondary schools. Of a higher value and requiring a higher standard of attainments than the free admissions are the 20 junior secondary school scholarships for boys and girls under 13. These scholarships carry with them a monetary reward and are tenable at any of the secondary schools of the city, whether municipal or not. Ten senior secondary school scholarships are awarded to assist scholars over the age of 15 to continue at a secondary school for two years longer. To assist the ablest of the boys and girls to proceed from the secondary schools to the school of technology of the city or to the universities, 15 scholarships are awarded to be held at the former institution and 8 at the latter, each of the annual value of $300 and tenable for three years. As in London, a number of scholarships for short courses in domestic subjects is offered to girls. For adult students at least 200 exhibitions are offered annually giving free education and the necessary books at the advanced evening courses in the different schools. Here again no mention is made of the numerous scholarships established by private individuals and placed at the disposal of the committee, nor to the awards made to teachers in service and to intending teachers.

The scholarship system is effective in selecting out those of the greatest intellectual ability who are able to profit by the opportunities opened up before them. There is, however, a feeling that there are too many cases where a scholarship has resulted in making a second-rate clerk of a boy who might have become a first-class artisan. There is also a certain hesitancy among persons of limited

means in accepting scholarships or free places for their children on the ground that, whatever the educational advantages, the ultimate opportunities are not such as warrant a sacrifice on their part. As compared with a free system of higher education, the scholarship system is perhaps not so wasteful, for those who wish to see whether a secondary school will suit them must pay for the privilege. Hence the majority of the eliminations will be from the fee-paying class, although they also receive State and local support for their education in so far as the fees hardly cover as much as half the cost of maintenance of the secondary schools. But the scholarship holders, selected as they are on an intellectual basis, are more likely to make the best of their opportunity than fee-paying boys, or, under a free system, than the general run of pupils who claim entrance to the secondary schools as a right.

Chapter XII.

OPEN-AIR SCHOOLS AND CLASSES.

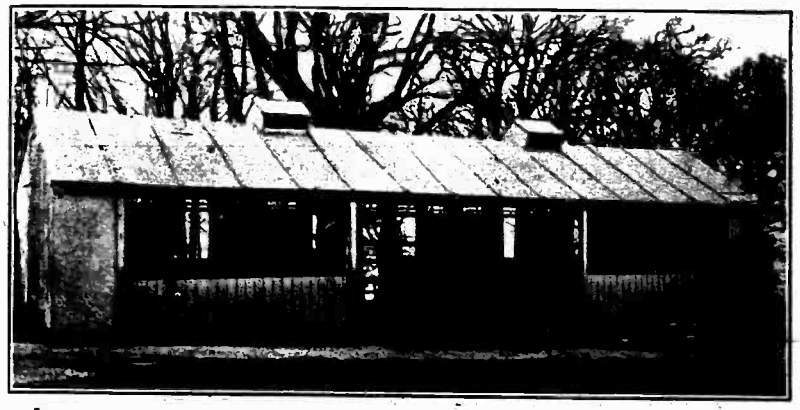
The rapidly extending recognition that it falls within the duty of educational authorities to provide not only for the mental growth of the nation's young but also for an environment suited to their physical needs, has led to the establishment of facilities of different kinds, not the least interesting of which are the open-air schools. The number of these schools in various forms has been increasing since 1899, when local educational authorities were empowered, under the elementary education (Defective and Epileptic Children) act to make special provisions for the education of physically defective (crippled, tuberculous, anemic, etc.) and mentally defective children. Nine such schools had been established in England and were maintained under the act in 1911–12. The open-air schools are intended for those children who "by reason of physical defect are incapable of receiving proper benefit from instruction in the ordinary public elementary schools." These children include those who are generally debilitated or suffering from malnutrition, anemia, glandular enlargements, bronchial troubles, incipient tuberculosis, heart disease, chorea, and nervousness, or are recovering from some operation. Under the provisions of the act such children must be specially selected by the school medical officer, and must be taught in small classes with short hours of instruction, while the curriculum must include manual training. These schools may be kept open during the ordinary school holidays.

The first open-air school was opened in London as an experiment during the summer of 1907 and proved so successful that in the following summer three schools were opened. Since 1911 the education committee has maintained two permanent schools, Shooters Hill School, Woolwich, and Birley House School, Dulwich, and has kept these open throughout the year. They have accommodation, respectively, for 100 and 90 children, boys and girls. Pupils who are considered physically defective as indicated above are nominated by their teachers and are further selected by the school medical officer. Each school draws children from a distance of about 5 miles, and the education committee pays the tram fares where necessary. A fee of 60 cents a week is charged, but may be reduced or remitted entirely in cases of poverty. The staff of each school includes a nurse and cook. The pupils receive three meals a day, breakfast, dinner, and tea, and, if necessary, milk and cod-liver oil. After the midday dinner all pupils must sleep for about two hours. A medical

examination takes place every fortnight, and weight and height records are carefully kept. It has been found that, while the weight records of each child may show variation and the increase may not be consistently maintained, the improvement in the hæmoglobin content of the blood is always well marked. Special clothes are not provided, but each child is furnished with an army blanket and at Birley House School with a loose coat made out of army blankets by the girls. Clogs are supplied in both schools by voluntary agencies. Each child remains at the open-air school for one year as a rule and then returns to its place in the ordinary elementary school.

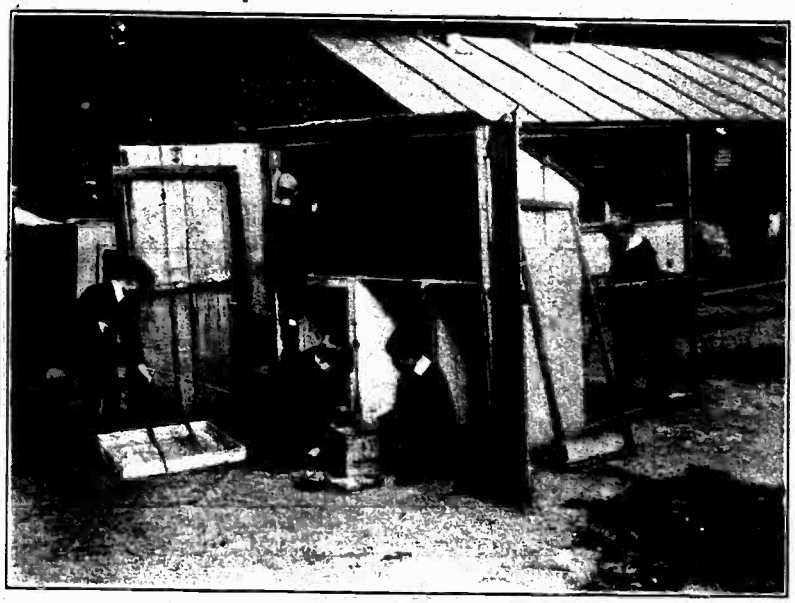
The Shooters Hill School is situated on a well-wooded estate on an eminence which commands a fine view for many miles around. The Birley House School is located in a private house with a large garden. The chief building in each case is a Doecker building. Each building is 50 feet long by 15 feet broad and about 9 feet in height, and is open on one side only, a feature which somewhat detracts from the usefulness of the buildings when the wind happens to be in the direction of the exposed side. To remedy this defect an additional classroom has been erected by the headmaster and the boys at the Birley House School, which consists of wooden frames covered with canvas, which can easily be removed and replaced to afford protection from the wind. The floors of the buildings are of wood and are raised from the ground on wooden blocks. In addition to the central building there are teachers' rooms, tool houses, pet houses, and offices. The classrooms are, however, intended to serve mainly as a protection in rainy or severe weather, and the instruction is, so far as possible, given in the open. To prevent the children's feet coming into contact with the damp ground the desks and seats rest on wooden slats partly provided by the council and partly made by the boys. The schools are equipped with dual desks and seats, but for reading or oral work the deck chairs, intended for the afternoon sleep, are used. The equipment of the Shooters Hill School is defective in this respect, that there is no supply of water; this prevents the provision of a kitchen and necessitates a walk of several minutes to a neighboring school for meals and washing. At Birley House the residence is only used for purposes of storage, cooking, bathing, and teachers' rooms.

If the arrangements for the physical welfare of the children fulfill successfully the aims which prompted the establishment of this type of school, the provision for their education is no less interesting. The two schools are fortunately under the charge of teachers of broad educational outlook, who have been able to make the most of the opportunity afforded to them. While the reports on the pupils returned to the ordinary elementary schools bear universal testimony to their quicker response, greater keenness, and higher mental

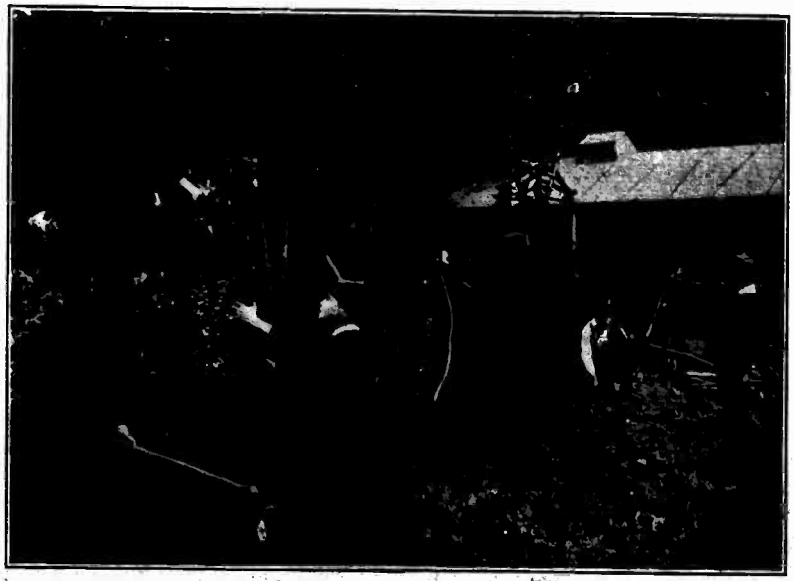


A. SHOOTERS HILL OPEN-AIR SCHOOL—THE SCHOOLHOUSE.

B. SHOOTERS HILL OPEN-AIR SCHOOL—GARDENING.



A. SHOOTERS HILL OPEN-AIR SCHOOL—THE PET HOUSE.



B. SHOOTERS HILL OPEN-AIR SCHOOL—FENCING SCHOOL GARDEN.

tional experiments carried on at the two schools as to the increased physical fitness of the scholars. Relieved as they were from the necessity of following the scheme of work of the ordinary elementary school, both Mr. Turner, of the Shooters Hill School, and Mr. Green, of the Birley House School, turned their attention to the adaptation of the environment to the needs of the school. It must be borne in mind that in both cases there is considerable difficulty in grading and classifying pupils of different attainments drawn from different schools. At Shooters Hill School the pupils are arranged in four classes and at Birley House School in three. The difficulty is greatest in the case of the boys and girls near the limit of the elementary school age.

At the Shooters Hill School the greater part of the curriculum consists of manual work in some form or other, nature study, and gardening. In the manual work, in the lighter forms of which the girls also take part, the pupils not only have the ordinary instruction at the bench, both in wood and light metal, but they make parts of the school equipment, as the need arises. Thus the fencing around the garden was done wholly by the boys, who performed all the processes of sharpening the stakes, hammering them into the ground, and binding them with metal ribbon. The tool houses, rabbit hutches, pet houses, a waterproof "lean-to" to serve as a cloak-room, the wooden slats for footrests, and the boarding up of the lower part of the exposed side of the schoolroom as a protection against wind and rain were included in the manual work of the boys. In connection with this work the practical arithmetic and the drawing of rough sketches were taken. For nature study the environment offers excellent opportunities, to which must be added the practical gardening. The garden was reclaimed originally by the scholars and is used for growing flowers and vegetables. The garden paths and draining system were made by the boys, who also fitted up a small ornamental pond and sundial. The girls, in addition to such assistance as they give in the other manual work, also do needlework. The geography scheme is based largely on the advantage which the school has in its position. The River Thames, with its shipping and docks, is in sight for several miles of its course, while the location of the school estate on an eminence with a wide prospect makes physical geography a living thing to the scholars; large relief maps are made in the neighboring clay and soil. In the same way the history lessons find a starting point in the places of historical interest almost within sight and certainly within easy reach of the school, and these are supplemented by the construction of castles and model villages. For the drawing and brushwork there is no lack of subjects in the trees and flowers around the school. For the rest instruction in arithmetic, reading, poetry, and singing are not neglected. On Saturday afternoon pupils may return at their option for games.

Shooters Hill, Woolwich, Open-air School.

TIME-TABLE.

	9.00	9.40	9.55	10.05	10.40	10.55	11.25	11.30	12.00	12.40	1.45	3.15	3.30	4.15	5–6
	Breakfast.	Registration, prayers, scripture.	Current events, nature talks, walks, etc.		Recreation.		Breathing exercises.		Packing of apparatus; washing up.	Dinner.	Sleep.	Recreation.			Prayers; tea; dismissal.
Monday				Arithmetic.		Nature study.		Drawing.					1. Gardening. 2. Reading. 3, 4. Singing.	Reading. Gardening. Reading.	
Tuesday				Plasticene or gardening.		Geography.		Reading.					C. Needlework. B. Manual work.		
Wednesday				Arithmetic.		History.		Poetry.					Drawing.	Word building and reading.	
Thursday				Arithmetic.		Nature study.		Drawing.					1, 2. Singing. 3. Gardening. 4. Plasticene.	Reading.	
Friday				Arithmetic.		Geography.		Composition.					C. Needlework. B. Manual work.		
Saturday				History.		Manual work.							Play.		

In the summer a few of the boys spend the nights in the open around the school, but the absence of facilities for washing render this arrangement inconvenient. At the end of the year pupils return to their own schools. At first the teachers in these schools were somewhat sceptical about the educational value of the work done at the open-air school, and it was felt by some that the year spent there was practically wasted. Such criticism is, however, gradually disappearing, as it is realized that the pupils from the open-air schools can more than hold their own in their grip of the work, in habits of study, and in general mental keenness and alertness.

At the Birley House School Mr. Green, the headmaster, has organized the curriculum on a colonization scheme. Various minerals—coal, iron ore, copper ore, lead ore, and gold quartz—are buried in different parts of the garden, and the children go out to prospect for these. The finders become captains of industry. To work the mines the captains of industry engage laborers at the labor exchange, which is managed by one of the pupils, or receive applications for work. Boring is then proceeded with, shafts are sunk, winding apparatus is constructed, and the mineral is brought to the surface. Here arises the need of coal, and a system of transportation in the form of a miniature railway is organized, furnaces are set up, factories are planned, the possible markets for the products are considered, and the importance of a merchant service is recognized. So much for the industrial side of the colonization plan. Side by side with this the agricultural plans are developed. A portion of the garden is cleared and a miniature farm of six fields is prepared, and the different modes of fencing are applied to these fields. The ground is plowed and crops are sown in rotation, including wheat, potatoes, turnips, barley, and oats, clover, and cabbages. A thatched log hut is built and furnished to serve as a homestead for the farmers, and the necessary outhouses—barn, stable, wagon shed, pigsty, henroost, and dog kennel—are built around it. The nature study scheme is correlated throughout with the work done on the farm and with the gardening operations. The general manual work is as varied as the activities which stimulate it. A rabbit warren, an aviary, insect cases, garden frames, cases for the weather instruments, etc., constitute the work in wood. Other media, involving puddling clay, making of concrete, and the mixing of cement, are employed in constructing a pond and making the garden and agricultural rollers on the basis of a drainpipe. Sufficient scope is afforded in this scheme for the work in practical arithmetic in the measurement of lengths and distances, in estimating costs and quantities, in finding heights by means of simple measuring instruments, in making the graphical records of rainfall, barometer, thermometer, sunshine, etc., and in working out the other calculations required in connection with the garden and manual work. Provision is made

in the time-table for the other subjects of the curriculum, i. e., geography, history, reading, composition, drawing, and singing.

Arrangements have been made for removing the Birley House School to a larger and more suitable site and for the opening of a third school. The cost of maintaining these schools is about $110 per pupil per year, as against a cost of about $35 per pupil per year in the ordinary elementary schools. To this sum the Government, under the elementary education (Defective and Epileptic Children) act, gives a grant of about $25 per pupil. The expense of this system necessarily sets a limit to its extension and to the type of pupil who can be accommodated. While there are always a number of children who require the special treatment that can only be provided at an open-air school, there are still large numbers of delicate children in the ordinary elementary schools who can profit by open-air treatment. For these there have been established by many local authorities open-air classes, conducted either in specially constructed classrooms, as in Carlisle and Carnarvonshire, or in playgrounds and parks. The latter system has been most widely developed in London. About 80 classes of delicate children have been organized, and with three exceptions are held in school playgrounds; the remaining three classes are taken to parks, and negotiations are on foot between the education committee and the parks and open spaces committee with a view to an extension of these facilities. The holding of classes in playgrounds is not wholly free from objections, mainly on account of the dust, the inadequate protection from the sun and the wind, the difficulty of holding the children's attention, and the disturbance caused by passers-by. There is evidence on the other side, however, that the children "are fresher, brighter, less subject to fatigue toward the end of the school session, suffer less from colds and minor ailments, necessitating absence from school; that there is less dullness and sleepiness, and that the activity, carriage, and appearance of the children have improved."[1] The parents also mention the fact that the children eat and sleep better. The open-air classes are formed in April and are conducted in the open until October. The subjects for which classes are held out of doors consist as a rule of practical arithmetic and mensuration, physical geography, and nature study, together with visits to places of educational interest. The evidence of the reports on the mental progress of the children in the open-air classes is that they "are more alert, and grip their work better; they show more intelligence and zest in setting about their work; there is more concentration; and the greatest interest in outdoor practical work is shown. There is also a more natural form of discipline, improvement in temper and character, less irritability, more independence, resourcefulness, and reliability."[2]

[1] L. C. C. An. Rep., 1911, Vol. IV, p. 14.
[2] Loc. cit.

The system is developing in other cities, and mention may be made of the work along these lines in Leicester, Sheffield, Blackburn, and Halifax. The extension of open-air instruction to other than subnormal children is also treated in connection with the discussion of the use of playgrounds, while the school journey or excursion may also be regarded as part of the provision for outdoor work, both for normal and delicate children.

(1) COUNTRY HOLIDAY SCHOOLS.

A further development of the open-air classes has been the establishment of country schools for town children. Since the law does not sanction the expenditure of rate money on these schools, they have been established and maintained by voluntary contributions. The Board of Education, however, recognizes the attendance of children at country holiday schools for purposes of the education grant. A school of this type was established for Manchester children in 1904 by voluntary effort at Knolls Green, Mobberley, at a distance of 10 miles from the city. The accommodation at first was limited to 128 children, but since 1907, when the committee of the country school transferred the school to the Manchester education committee, the accommodation has been extended by the erection of a new dormitory with 380 beds. The buildings—which include the dormitory, a dining room, and a schoolroom—and spray baths and playing fields have been provided by voluntary contributions, of which the Manchester teachers helped to raise a large part by means of bazaars, concerts, and parties. With the increase in the accommodation, the cost of maintenance, including the railway fare, can be met by a charge of $1.75 for each child for the two weeks' holiday. The school is open to any child over 7 years of age attending the public elementary schools of Manchester whose parents make due application and pay the sum charged in advance. The school is intended for normal children only, and each child is medically examined before admission. The holiday extends over two weeks. Not less than 40 children are taken from each school under the charge of one of their teachers. The usual school subjects are taken in the forenoons, and the afternoons are devoted to nature study, object lessons in the open, to physical exercises, and excursions. Four meals—breakfast, dinner, tea, and supper—are provided. The following table represents the program for each day:

A. M.:	P. M.:
6.45. Rise.	2–4.30. In schoolroom or open air.
8.00. Breakfast.	4.30. Tea (later if there is an excursion).
9–12. In schoolroom or open air.	8.00. Supper.
12.00. Dinner.	8.30. Bed.
	9.00. Lights out.

The session extends from April to October, and about 3,000 children are each year enabled to enjoy the benefit of a fortnight's stay in the country.

A country school for physically defective children is maintained by the Liverpool education committee at the Bowring House, Roby. The school is open for five months during the summer, and children from the special schools are sent out in parties of 50 for a stay of five weeks. The work is carried on in conjunction with the Invalid Children's Association.

(2) HOLIDAYS FOR POOR CHILDREN.

Numerous voluntary associations exist for the purpose of enabling the poorer children in elementary schools to leave the towns for a brief holiday in the summer. The best known of these are the Fresh Air Fund and the Children's Country Holidays Fund The former, which is worked in cooperation by the Ragged School Union and the proprietors of a large publishing house, raises funds for children in towns with a population of over 90,000 and takes parties into the country or to the seaside for a day or longer periods. The estimated cost per child is 18 cents per day and $2.50 for a fortnight. The Country Holidays Fund provides a fortnight's holiday for poor children. Local committees receive applications from parents, assess the amount which they can contribute toward the cost, and collect the sums in installments, if necessary. Correspondents in the country make arrangements for boarding out the children at a cost of $2.50 for two weeks, while the railway companies offer reductions in the fares. It is the aim of those who administer the fund, which has been in existence more than 25 years, that the children shall benefit not only physically but also educationally by their holiday. In 1910 as many as 43,000 children in London alone were enabled to take advantage of the fund.

Chapter XIII.

EXTRA-SCHOOL ACTIVITIES.

(1) VACATION SCHOOLS.

The vacation school movement is practically limited to London. Until very recently local education authorities were not permitted to incur expenditure on vacation schools, play centers, or other activities of the same character out of school hours or during the holidays. But there was nothing to prevent such work being conducted by voluntary bodies. The English vacation school movement owes its origin to Mrs. Humphry Ward, who opened such a school in 1902 at the Passmore Edwards Settlement in London. The movement was slowly extended each summer, the Council granting the use of school premises, but incurring no financial responsibility. In 1907 local education authorities were given power under the education (Administrative Provisions) act, section 13. (1), "to provide, for children attending a public elementary school, vacation schools, vacation classes, play centers, or other means of recreation during their holidays or at such other times as the local education authority may prescribe, etc." Immediate use was not made of the power granted by this act, and in London the vacation schools continued under the charge of Mrs. Ward and the evening play centers committee, whose efforts were supplemented by the Robert Browning Settlement. In 1910 the Council organized two vacation schools in addition to the four conducted by the voluntary associations. It was not, however, until the summer of 1911 that the Council embarked on an experiment with a new type of vacation school. Two schools, Battersea Park Road and Lauriston Road, were selected and organized with three departments (boys, girls, and junior mixed), each under the charge of a head teacher and assistants. The poorest children of the districts round the school, who were underfed, physically weak, backward, or under the influence of evil surroundings, were selected, the age limits being fixed at 6 and 12. Each school was open for a month, and by admitting an entirely new batch of children at the end of the first fortnight 2,424 children were enrolled. Both schools possessed the advantage of being in the neighborhood of parks, which were utilized for open-air work, games, and swimming. Through the aid of volunteer agencies, meals were provided to the necessitous children. The chief portion of the time was given to manual occupations and games. Of the school subjects, reading,

singing, and nature study received some attention, and for the older children excursions and visits to places of interest were arranged. The manual occupations of each department showed considerable variety. The boys engaged in strip woodwork, cobbling, plasticene, rug and kite making, and raffia work. For the girls doll dressing and toy making were the chief occupations, while the junior children engaged in paper cutting and modeling, knitting, clay modeling, painting, drawing, and raffia work. The results of the experiment are reported to have been highly satisfactory from the physical, educational, and moral points of view. There was an improvement in physical condition owing to the healthy surroundings and the open air; there was an increase in manual dexterity and a more intelligent appreciation of the surroundings; while the freer discipline and the introduction of group work conduced to the development of greater self-reliance. The most important result probably was that the vacation schools taught the children how to play and amuse themselves instead of leading the idle and aimless existence usual in holiday periods.

The cost of maintaining a vacation school of this type was found to be between $750 and $800 during the month that it was kept open. This sum included the payment of substitute teachers to take the place of those who had been engaged in the vacation schools when they took their postponed holiday from their ordinary school duties. One rearrangement suggested by the experiment for future years was the advisability of keeping children in touch with the vacation schools during the whole of the month by admitting one section for morning and the other for afternoon sessions. Since the success of the schools opened in 1911 was so marked, it was proposed to open 40 schools to accommodate about 24,000 children during the summer holidays of 1912. This ambitious scheme was not carried out, but two schools were established, and 2,200 children were admitted on the half-time system throughout the month.

As an alternative to the organized vacation schools, which are considered to be too expensive and too small for the number of poor children who might make use of them, there have been established organized vacation playgrounds, for which there were 26 centers in the summer holidays of 1911, conducted by the Evening Play Centers Committee. The Council placed 50 playgrounds, connected with 26 schools, at the disposal of the committee. Each playground is under the charge of a superintendent, usually a teacher or teacher in training, assisted by boy and girl monitors. The playgrounds are open five days a week, from 10.30 to 12, from 2.30 to 4.30, and from 5.30 to 7 p. m. They are used by children of the district without any rules of admission or selection beyond good behavior. No curriculum or time-table is in force; the children merely come to play, and the

educational and other results are such as may be expected from orderly games and the personal influence of the superintendent. Besides football, cricket, and other ball games, opportunities are afforded for quieter forms of relaxation, such as drawing, painting, crayon work, stenciling, needlework, basket making, etc. The organized playground is naturally open to far more children than the vacation schools could reach, except at enormous expense. The attendances at the 2,790 sessions in 1911 were 424,000. The cost of maintaining an organized playground for four weeks is about $200.[1] The playgrounds, well supervised, have advantages which are not possessed by the vacation schools; they are within easy reach of the children; they are open to all children without selection; they help to remove large numbers of children from the streets in the most congested parts; they teach the children how to play. On the other hand, they have not the advantages of the vacation schools in being in a selected environment. The educational influences of the vacation schools are direct and intensive, while the influences of the playgrounds are indirect and unorganized. The vacation schools, again, are intended to be remedial and deal with children who are physically, morally, or intellectually subnormal; the playgrounds afford a normal outlet for as many normal children as possible. It seems very probable, if only on the ground of expense, that the future will see a more rapid development of organized playgrounds, extended, it is to be hoped, to open spaces and parks.

In Manchester the education committee has for several years allowed the school playgrounds to remain open between May and September from 4.30 p. m. until dusk on every week day except Saturday, when they are open the whole day until dusk. There is, however, no supervision of the children except in a general way by the school keepers. The city also affords facilities to enable children from the poorer districts to travel at reduced fares by the municipal trams to the large open spaces and parks. The country holiday home for children of the Manchester elementary schools is referred to elsewhere (see p. 109).

(2) THE SCHOOL AS A SOCIAL CENTER.

The extended use of school buildings for other than purposes of education in the technical sense is hardly known in England. Schools may by special permission be utilized occasionally for meetings or concerts, or for social purposes in connection with the evening classes, but with the exceptions about to be indicated they have not become social centers. As with vacation schools and organized playgrounds, London is also the pioneer in allowing the use of schools for purposes of

[1] In 1912 the Council itself conducted 40 centers for four weeks, with 4,560 sessions and 800,000 attendances.

recreation for children of the elementary school age. But the work is conducted by voluntary agencies. The education (Administrative Provisions) act of 1907, section 13 (1) (see p. 111), has given local education authorities power to make further use of schoolhouses for recreational purposes for children, but this power does not yet appear to have been exercised. London is provided with recreation centers in connection with elementary schools mainly by two voluntary organizations, the Evening Play Centers Committee and the Children's Happy Evenings Associations, which also has branches in several of the provincial towns, e. g., in Manchester and Liverpool.

The Evening Play Centers Committee was organized in 1904 as a result of the success during a period of 7 years of a play center or children's recreation school in connection with the Passmore Edwards Settlement. In 1912 17 evening play centers were established in schools in the poorer districts of London. The centers are open to boys and girls between 5 and 14 on five evenings during the week from 5.30 to 7.30 and on Saturday mornings from 10.30 to 12. The centers remain open from September to July, the schools being used from October to Easter and the playgrounds for the rest of the time. Each child is allowed to attend for two sessions a week; but children from neglected homes, or those whose parents are out at work, may attend every evening. Provision is made at each center for various occupations, mainly manual.

The large halls are given up to gymnastics or organized games for boys, singing games, musical drill, or dancing (folk songs and folk dances) for girls, and games for the younger children. In the classrooms the children may spend their time on painting, modeling, needlework, basketmaking, cobbling, fretwork, knitting, scrapbooks, rugmaking, raffia work, quiet games, toys, story books, etc. But the occupation most in favor with the bigger boys is cobbling, of which practical use is made in mending shoes for themselves or their younger brothers and sisters. Needlework is as popular with the girls, who are taught to make their own blouses or make dresses for dolls. This useful art is also taught to boys, who apply it practically to patches and buttons. The centers are under the charge of paid superintendents, who are assisted by paid and voluntary helpers.

The Children's Happy Evenings Association was organized in 1890 to provide recreative evenings in schools. The work is of same type as that of the evening play centers, except that admission depends usually on the presentation of a ticket of punctuality from the head teacher of the school attended by the child. The work is conducted entirely by voluntary helpers. Happy evenings are held in connection with the selected schools on one or two evenings a week from 5.30 to 7.30. The occupations, which are preceded by a march

round the hall, include painting, toy making, cardboard modeling, needlework, quiet games, stories, old English dances and songs, and boxing (for the boys). In 1911 happy evenings were provided weekly to 35,000 children in 176 schools. The association also has affiliated branches in Liverpool and Manchester.

In addition to these two associations work of a similar character was done in London by 14 other bodies. The Council assists in the provision of evening recreation centers by an expenditure of nearly $10,000. There is undoubtedly a great deal of room for the extension of the system of organized play centers, not only during the holidays, although the need may be greatest then, but also throughout the rest of the year when schools and playgrounds remain deserted and unused out of the regular school hours.

But such work is almost entirely philanthropic in character, and as such is confined to the poorer classes. The movement does not imply a recognition of the possibilities of a wider use of the school plant for the social interests of the community. For the adult the school only offers the ordinary evening classes, with social clubs organized here and there in connection with them; public lectures, reading rooms, clubs, and social rooms are provided elsewhere and mainly by voluntary associations. The provision of public lectures in schools on so extensive a scale as that of New York or the use of the schools for social purposes as in Rochester is practically unknown. Nor is it likely that such an extension of the use of schoolhouses will take place in the near future, for the cost of education has been increasing too rapidly in the last few years and will certainly show no abatement for many years to come. Until local education authorities can turn their attention to throwing open their schoolhouses for social purposes the need will have to be met by the clubs and other agencies which exist through the generosity of private citizens.

Chapter XIV.

DAY INDUSTRIAL SCHOOLS.

For the purpose of dealing with children who come under the notice of the education or police authorities as cases under the children act of 1908, power has been given to local authorities to provide for the detention of such cases in industrial schools under an order of the court. The act is intended for the protection of children and their rescue from harmful environment. The following classes of children may be committed to industrial schools: Those found begging, wandering, destitute, and not under proper guardianship; those living with evil associates or with criminal, drunken, or neglectful parents; those beyond the control of their parents or guardians; children under 12 and charged with a criminal offense or contravening local by-laws on street trading. Local education authorities are empowered to have a child who is a persistent truant committed to an industrial school under an attendance order made under the elementary education act of 1876. In exceptional cases, where parents, e. g., widows or widowers, are employed throughout the day, children may be received as voluntary scholars in day industrial schools on payment of a contribution to cover the cost of food. The parents of all children committed to the industrial schools are required, if possible, to contribute toward their maintenance. The charge in London for children in day industrial schools is 50 cents a week, and in residential schools about $2 a week.

The industrial schools, which may be day or residential, must be certified by the Secretary of State and are under the inspection of his department, the Home Office, which corresponds to the Department of the Interior, and are in no way under the control of the Board of Education. The industrial schools are defined as schools "for the industrial training of children, in which children are lodged, clothed, and fed as well as taught." Many local education authorities have established schools of both types. London has 8 residential schools, accommodating 800 children, and 1 day school for 200 children; Liverpool has 5 day industrial schools with accommodation for about 1,100 children; Manchester has only 1 day school, accommodating 300 children. Arrangements are in every case made for the reception of children beyond the number provided for in schools maintained elsewhere and certified by the Secretary of State. Here only the day industrial schools, since these are the schools with which the local education authorities are more nearly concerned, will be dealt with.

The children committed to the day industrial schools must attend for the whole day and are given three meals during that period;

arrangements are provided for regular washing and bathing and cleansing the clothes. In the evening the children return to their homes, only to be exposed to those dangers from which the schools are intended to save them. They are subject to the usual medical supervision provided for the ordinary schools, and in Liverpool a qualified dentist has been appointed to care for the teeth of the day industrial scholars. The work of the day is divided between the ordinary elementary school work and industrial training. Although it is a condition of the parliamentary grant to the day industrial schools that "the education given shall be on such a level of efficiency as would enable the school, if a public elementary school, to obtain a parliamentary grant," the ordinary education in these schools does not reach the standard to be found in the ordinary elementary school. The classes are not well graded; the same room is frequently shared by several classes; the equipment is poor as a rule; and the methods and instruction several years behind that of the ordinary elementary school. It is true, of course, that the children committed to these schools are backward, partly on account of their antecedents, partly by reason of their environment, but there is room for improvement in the attempts made to educate them, for these schools are particularly well situated to exercise a permanent and lasting influence on their pupils. The industrial training, on the other hand, in which these schools were pioneers, is not only as good as that given in the ordinary schools but is more varied and receives more emphasis for its educational value. The work of the boys includes woodwork, shoemaking and repairing, tailoring, and such assistance as they can give with the domestic work of the school. The girls are trained entirely in housework, including laundry and needlework.

The cost of maintaining a child in a day industrial school is high. In Liverpool the per capita cost in 1911 was $70, the cost to the rates after deducting the Government grant and the contributions from parents being $45, or nearly four times the cost of maintaining a child in the ordinary elementary schools. The results, however, appear to justify the high expenditure, for by means of these schools some 90 per cent of the children, who would otherwise be exposed to the worst temptations, become self-respecting members of their communities. The contact with the teachers, many of whom devote their whole time gladly to the work, has an excellent influence on the children who become attached to their schools and look to them for guidance and advice. In Manchester an association of past pupils of the day industrial school has been formed and annual reunions are held. Increased efforts are everywhere made at present to place the children in good employment when they leave the schools at the age of 14 and by keeping in touch with them to help them to overcome the severe handicap with which many of them start.

Chapter XV.

MENTAL DEFECTIVES.

The training and aftercare of mentally deficient children constitute a problem to which the local education authorities and the central Government are attaching ever-increasing importance. It was estimated in the report of the royal commission on the feeble-minded, 1908, on the basis of inquiry in selected areas, that 0.79 per cent of the school population in England and Wales were feeble-minded or imbecile. The recent reports of the school medical officers tend to place the figure at 0.50 per cent, including only feeble-minded; that is, about 27,000 school children. At present special provision is made for the education of only 12,000. The selection of backward and abnormal children has been brought within the scope of the school medical officer's duties and considerably more care is taken in the diagnosis and classification of these cases, while the education authorities will make the further necessary provisions for their education. The local authorities have been empowered since 1899, under the elementary education (Defective and Epileptic Children) act, to provide schools for the education of children who are certified after medical examination to be mentally deficient. A mentally defective child is defined by the act as "one who, not being imbecile and not being merely dull and backward, is by reason of mental defect incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but is not incapable by reason of such defect of receiving benefit from instruction in special schools or classes mentioned in the act." According to the Report of the Chief Medical Officer of the Board of Education (1909, p. 155), "a mentally defective or feeble-minded child may be described as one in whom the powers of response and will, though present, are weakened as regards adequacy, purpose, and promptitude, owing to a partial absence or injury of brain matter." While the diagnosis of the mentally defective child is admittedly difficult, owing to variations in standards, the Board of Education has suggested a schedule of medical examination (here reprinted) to be used in these cases and has recommended the application of the Binet-Simon tests.

Schedule of Medical Examination of Children for Mental Defect.

The object of the following schedule is to facilitate the investigation of suspected cases of mental defect. It is of a suggestive nature only, and is printed in the present form for the convenience of school medical officers making inquiries into the mental condition of feeble-minded children.

I. *Name of child, address, name of school.*

II. *Particulars of home conditions, environment, school attendance, and other factors.*

III. *Family history:*

Insanity, feeble-mindedness, alcoholism, tuberculosis, miscarriage, syphilis, epilepsy, other characteristics.

IV. *Personal history:*

Constitutional defects, injury at birth, malnutrition, rickets, diseases of childhood, commencement of teething.

Walking.

Speech, etc.

Physical state of mother, length of gestation, convulsions, accident.

V. *Physical conditions:*

(*a*) *General*—

Speech: Defective articulation.

Sight: Blindness, total or partial, errors of refraction.

Hearing: Deaf-mutism, partial deafness, partial mutism.

Nose and throat: Enlarged tonsils, adenoids, mouth breathing.

Control of spinal reflexes and of salivation.

(*b*) *Stigmata*—

General retardation—Cretinoid development.

Cranium—Microcephaly, hydrocephaly, asymmetry, rickets, imperfect closure of fontanelles, simple head measurement.

Hair—Double and treble vortices, wiry or supple.

Face—Irregularity of features.

Lower jaw—Protruding or receding.

Eyes—Mongoloid, presence of epicanthic fold.

Ears—Size, setting, conformation, lateral symmetry, size of lobes, attachment of lobe to cheek, supernumerary lobules.

Tongue—Enlarged, furrowed, papillæ enlarged.

Teeth—Irregular, absent, enlarged incisors.

Palate—Arched, narrow.

Fingers—Webbed, clubbed, defective in number or shape, supernumerary digits.

Limbs—Excessive length of upper limbs.

VI. *Mental conditions:*

(*a*) *Reactions of motor mechanism*—

1. Formation of motor ideas. (Execution of simple and new movement from imitation.)
2. Storage of motor ideas. (Execution of simple familiar command by word of mouth.)
3. Power of control, initiative, purpose, and concentration. Success of motor output. (Execution of familiar complex movement.)
4. Motor incompetence. Attitude in standing—position of head, spine, and knees. Gait. Position of arms, hands, fingers, in horizontal extension. General balance.
5. Motor instability. (Habits.) Rocking of body, rubbing hands, spitting, biting nails, or licking lips.
6. Motor disturbance. Tremors (face, hand, tongue), chorea, epilepsy, aphasia, hemiplegia.

VI. *Mental conditions*—Continued.

(*b*) *Reactions resulting from sensory stimulation*—

1. Attention—color, shape, size, smell.
2. Formation of memory images—
   (*a*) Recognition; objects, sounds.
   (*b*) Recollection.
3. Association of ideas.
4. Judgment (for example, length, size, distance).
5. Relationship (similarity, contrast, symbolism).
6. General concepts (possession, self-protection, purpose, concentration, initiative).

(*c*) *Emotional conditions.* Interest, excitement, aggression, cooperation, affection, etc. (positive of negative phases).

(*d*) *Tests of intelligence*—

1. Description of pictures, models, objects, familiar events.
2. Letters, words, reading (word blindness).
3. Counting, manipulation of simple numbers, simple money values.
4. Writing.
5. Manual tests.

(*e*) *Tests of will power under the above headings.*

VII. *Diagnosis:*

(*a*) Physically defective (stating defect)..
(*b*) Blind or partially blind.....
(*c*) Deaf-mute or semi-mute or semi-deaf..
(*d*) Epileptic.....
(*e*) Merely dull or backward.....
(*f*) Mentally defective (feeble-minded)....
(*g*) Imbecile.....

} In this group the symbols "a" to "g" are intended to be correlated when necessary.

VIII. *Treatment recommended:*

(1) An ordinary public elementary school—
   (*a*) Normal.
   (*b*) Normal, but backward.
(2) A special class for dull and backward children.
(3) Special school (day or residential)—
   (*a*) Feeble-minded..
   (*b*) Moral defective..
   (*c*) Epileptic.....

} With notes as to aftercare, custody, and the degree and character of manual training and ordinary school teaching likely to be advisable.

(4) Unsuitable for special schools.
   Imbecile, ineducable, invalid.

The practice at present is for teachers to select all retarded and backward pupils to be examined by the school medical officer. These pupils are tested and classified; those found definitely to be mentally defective are recommended for admission to the special schools for mentally defective children, if they exist; others on the border line may be recommended to these schools on probation and for further observation; a third class may be returned to the ordinary schools to be placed in special classes for backward children, if such have been established (see p. 30). After a child has been admitted to a special school, it is kept under observation and examined frequently by the medical officer. On the reports of the teachers and the doctor some of the children may be returned to the ordinary elementary schools, while others who are found to be low grade and ineducable

are discharged from the school to be sent to a residential home or school or placed under some other form of custodial care. The attendance of the mentally defective at the special schools is compulsory between the ages of 7 and 16, but there are special rules by which they may receive exemption from further attendance after they have reached the age of 14. Such exemption may be obtained in London, for example, in cases where the pupils have opportunities of securing employment or training for employment, or where they can no longer profit by further attendance at school, or where the medical officer advises that prosecution for nonattendance could not be supported on medical grounds.

In the school year 1910 there were 165 day special schools for mentally defective children in England and Wales, out of which London provided 90, with accommodation for about 7,100; Liverpool 5, with about 500 pupils; and Manchester 4, with about 400 pupils. The size of the classes is limited to 20 or 25, and few schools have more than four classes. The teachers, who are not specially trained for the work, are usually selected from those who have already had experience in ordinary elementary schools, and, except for teaching wood and metal work and in the schools for elder boys, are women. An addition of $50 is made to the annual salary of teachers in special schools in London and Manchester, and of $25 in Liverpool.

The school buildings which have been specially erected for the purpose are small and consist of a central hall, classrooms, bathrooms, kitchens, cloakrooms, teachers' rooms, and rooms for manual work. In Liverpool four of the schools are housed in corrugated-iron buildings, a special feature of which is the amount of glass space. The school hours are, as a rule, from 9.30 to 12 for the morning session, and from 1.30 to 3.30 or 2 to 4 in the afternoon; in schools for older boys the afternoon session is extended by half an hour. Arrangements are made in most of the special schools for the provision of the midday meals, and in Liverpool, where each school is attended by pupils who come some distance, all the pupils are fed, but the cost of the food may by law be recovered from the parents. The equipment provides for bathing facilities and adequate attention is paid to personal hygiene. In those schools where it is possible for a male teacher to accompany the pupils, swimming forms part of the course.

In the curriculum of the special schools for the mentally defective children increasing emphasis is placed on different forms of manual work. When the schools were first established attempts were made to conduct the schools, with such modifications of method as were required by the conditions, along the lines of the ordinary elementary school. Experience has shown that the efforts to bring up the mentally defective children to standards acceptable in the ordinary schools in reading, writing, and arithmetic, are not only unprofitable, but are not suited to their needs. Nor is the manual work—drawing,

color work, mat plaiting, cardboard modeling, paper folding, rug and basket weaving—calculated to attain the end desired, which is "to fit the majority of children retained in the school eventually to gain their own livelihood, partially of not entirely."[1] The impetus which manual training has received in education generally has spread to the special schools, and it has been introduced in various forms both for boys and girls. The curriculum, therefore, includes at present the three R's, nature study, and observation work, physical exercises and games (on which stress is laid), drawing and manual work. The ordinary school subjects are taken in the morning as a rule and the manual work in the afternoon. It is impossible to speak too highly of the devotion, sympathy, and tact of the teachers engaged in the work; difficult as much of the instruction must be, the results attained are in many cases remarkable. The methods of teaching reading and arithmetic are as varied as the situation demands, the concrete, of course, always predominating. In the former subject the teaching of letters and easy combinations is accompanied in some cases by writing, in others by making the letters and words in clay or other media. In the top classes third and fourth standard readers may be used. To prevent any flagging of interest, the pupils in the Manchester schools are constantly reclassified for reading and arithmetic. But it is in other subjects that the efforts of the teachers are crowned with greatest success. The drawing, crayon and brushwork, in some of the schools will bear comparison, allowing for the additional time given to these subjects, with the results in the same subjects in many schools for normal children, while the ordinary handwork—knotting, knitting, raffia work, basketwork, beadwork, etc.—is in many cases superior, showing not only better execution, but, when possible, good taste in design and color. In the last few years industrial training has been added for the older children. The girls are taught needlework, laundry work, and cookery. Where, as in Manchester, the special provisions about to be described have not been made for older boys, wood and metal work only are taught. But a recognition of the importance of giving the older children some special preparation to enable them to earn a livelihood has led in London to the establishment of schools for mentally defective boys between the ages of 12 and 16. These schools are staffed with men, and special attention is given to industrial work, which includes joinery, boot-making, tailoring, gardening in some cases, as well as wood and metal work. The results up to the present have been good; the boys are not only introduced to a trade but they come under the influence of men teachers who perhaps understand them better and can make better arrangements for their physical training and games. Twelve such schools have been established for the older boys. Little progress

[1] Rep. Chief Med. Off. of Bd. of Ed., 1911, p. 199.

has so far been made in providing schools of the same type for girls; there is one school giving instruction in cookery, laundry work, housewifery, advanced needlework, mending of garments, cutting out, and the use of the sewing-machine, and another which is equipped as a domestic economy center. Special elder children schools have not been established in Liverpool, but instruction is given in woodwork, shoemaking, and tailoring to boys, and in cookery, laundry work, and housewifery to girls. Where it is found hopeless to teach a pupil any of the three R's, the instruction in manual training is increased, provided that it is possible to make the pupil concerned industrially useful. Both the London and the Liverpool schemes appear to be justified by the results.

The annual cost of maintaining the special schools for mentally defective children is from $50 to $60 per capita, toward which a Government grant of sums varying from $20 to $22 per capita is paid. It may be of interest for comparison to state that the cost per pupil in the ordinary elementary schools is about $22 a year, or less than half of the lower estimated cost per pupil in the special schools. In the residential schools for the feeble-minded, of which there are eight in the country, the annual cost for each child is from $125 to $200. The schools of this type are all, with one exception, maintained by voluntary bodies.

The chief problem, however, in dealing with the feeble-minded is not so much their education and training as their aftercare, and it is this aspect of the question that is at present exercising those who are interested in the matter. It is felt that, however successful the training of the special schools may be, the children leave at a time when they most need expert assistance and supervision not only in helping them to secure employment which may make them wholly or partially self-supporting, but in looking after their physical and moral welfare. So far as statistics are available, not more than about 30 or 40 per cent of those leaving the special schools secure good or promising employment for any reasonable length of time, and the percentage would be much lower were it not for the assistance in certain areas of aftercare committees. The royal commission on the feeble-minded, which reported in 1908, estimated that the total number of persons in the country coming within the class of feeble-minded was 150,000, and drew attention to the serious danger which the presence of this class threatened to the community, apart from the risk of injury and mischief to the mentally defective person himself. The commission recommended the appointment of a central authority and local committees to deal with these afflicted persons, and the establishment of institutions for their detention to save them from destitution and the propagation of their kind. In 1912 the Government introduced a bill into Parliament, the Mental Deficiency Bill, "to make further

and better provision with respect to feeble-minded and other mentally defective persons." It was proposed to establish a commission with general powers to supervise and control defectives, to certify and inspect institutions for their detention, and to provide State institutions for criminal, violent, and dangerous defectives. Local authorities were to appoint committees for the care of mental defectives, to ascertain the number of persons within the area of their control who come under the provisions of the measure, to register them, and to provide institutions for their detention or place them under guardianship. To these committees the local education authorities were to hand over pupils who were ready to leave the special schools. Parents, guardians, friends, or the local authority might petition a magistrate, who, on the certification of two medical doctors, could place a defective in a certified institution or, if criminal, in a State institution. But only those mental defectives were included in the bill who were found to be wandering, neglected, cruelly treated, habitually drunk, charged with crime, or a danger to the community. The bill was subjected to considerable criticism on the ground that in the present state of incomplete knowledge of what constitutes feeble-mindedness [redacted] was introducing a measure dangerous to the liberty of the su[redacted]. Similar objection was raised against the arguments of those who adduced eugenic principles in support of the bill. The measure was withdrawn and a new bill has recently, April, 1913, been substituted. In place of a new commission the mental deficiency commission is merged with the existing lunacy commission. The proposal of a register has been dropped, and there is no obligation on medical officers of health, constables, and others to report on mental defectives coming under their notice. The prohibition of the marriage of mental defectives has been removed. It is now provided that such cases of defective children as come under the purview of the commissions are to be reviewed at the end of a period of two years, and in the event of its remaining under the commission's charge each case is to be again reviewed after two further periods of five years each, that is, at the ages of 20 and 25. Visiting justices are also to be empowered to review cases at the age of 21, with an appeal from their decision to the commissions. In ordering the detention of mental defectives, either on the medical certificates or after special medical examination, only the benefit of the person concerned and not the benefit of the public is to be considered.

In the absence of legislation the control and guidance of mental defectives has been undertaken in several instances by aftercare committees. This system of voluntary bodies, which was introduced in Birmingham in 1901, has as its objects the following up of mentally defective children after they leave school, helping them to

find employment, visiting them at their employment and in their homes, and supervising them generally. In London the aftercare committees usually include teachers of special schools, managers or their representatives, and others interested in mental defectives. Each member of such a committee undertakes the care of five or six children. The work of the aftercare committees of the country is coordinated to some extent by the national association central aftercare committee, formed under the auspices of the National Association for the Feeble-Minded. Apart from the benefit conferred on the mental defectives by the attention of the aftercare committees they are performing valuable work in keeping records of the after careers of the children who leave the special schools, but it is found that from 20 to 25 per cent of the cases are lost sight of.

On the whole, however, there is a tendency on the part of those who are connected with the care of the mental defectives, whether as teachers or as managers of special schools, to be somewhat pessimistic about the ultimate results of their work without the aid of some form of legislation providing for the detention of many cases of feeble-mindedness in colonies organized on the lines of the Sandlebridge Home for Mentally Defective Children. This well-known institution was established and maintained by the Incorporated Lancashire and Cheshire Society for the Permanent Care of the Feeble-Minded. The foundress of the society was Miss Mary Dendy, whose efforts on behalf of the institution in particular and of the feeble-minded in general have been unremitting. The colony has accommodation for 164 children under 16, who attend the special school, and for 68 adolescents and adults over 16 who are engaged in housework, laundrywork, farmwork, and gardening. The children of a lower grade of intelligence than those treated in the day special schools are sent to the colony by local education and poor-law authorities. The institution, which covers 200 acres, includes residential homes for younger children, for adolescent girls and women, and for adolescent boys and men, a schoolhouse, laundry, cowhouses, farm buildings, gardens, meadows, and pastures. The school provides instruction of the same type as that given in the special schools, and in addition the boys are taught housework, gardening, and farmwork, while the girls learn rugmaking, knitting, laundry, and housework. Only those who have passed through the school are allowed to remain in the colony after they reach the age of 16. The staff consists of 27 persons, or about one member for about 8 inmates. The cost per head is nearly $149 per year, the income being made up of the grant from the Board of Education, the payments of the local authorities, the profits from the farm, and the sale of other products, parents' contributions, and subscriptions.

Chapter XVI.

CENTRAL SCHOOLS.

Within the past few years a new type of school offering an advanced elementary education has been established in London and Manchester to take the place of the higher elementary schools. These schools are not only interesting in themselves as an attempt to provide generalized vocational preparation for pupils who can not remain at school beyond their fifteenth year, but their establishment is a significant indication of the independence of the local authorities in matters on which they find themselves unable to accept the regulations of the Board of Education. The old school boards had already provided and maintained higher grade schools under the regulations of the Science and Art Department of South Kensington, but by the Cockerton judgment of 1899 the use of public funds for schools offering a course to pupils who could remain beyond the ordinary day-school period was declared illegal. The Board of Education, however, by a minute issued in April, 1900, and later included in the code of 1901, permitted the establishment of higher elementary schools. The education acts of 1902 and 1903 further regulated these schools. It was prescribed, and the regulations are still part of the code, that the higher elementary schools should offer a three-years' course to pupils between the ages of 12 and 15 coming from elementary schools. The curriculum, which was to be subject to the approval of the board, was to include English language and literature, elementary mathematics, history, geography, drawing, and manual work (for boys), domestic subjects (for girls), and special instruction bearing on the future occupations of the scholars. The size of classes was restricted to 40, the number of scholars in a department was limited to 350, at least 12 square feet of floor space were required per scholar, and there were prescriptions bearing on the teaching staff. The grants, which were of course higher than for the ordinary elementary schools, were payable in respect of scholars under 15, that is for the three-years' course, but under special circumstances a fourth year might be sanctioned and a grant paid for it.

Several circumstances combined to make the maintenance of the higher elementary schools under these conditions somewhat difficult. The curriculum was found to be inelastic and not easily adapted to local needs; the restrictions on accommodation and floor space per scholar rendered the system expensive; the establishment of secondary schools by local authorities and the institution of scholarships to be

held in these schools, while they were forbidden by law in elementary schools, withdrew a large number of pupils from the higher elementary schools. At the same time it was felt that the needs of those boys and girls whose parents could afford to keep them at schools until 15 or 16, but for whom the curriculum of a secondary school was unsuitable, must not be overlooked. The increasing attention directed to education along practical lines, the demand for training in industrial intelligence, and the desirability of providing some preparation for the future careers of pupils leaving at the age of 15 or 16, were factors which contributed to determine the character of the new types of schools to replace the higher elementary. In 1910 the education committees of London and Manchester, within three months of each other, decided to establish schools to meet these needs under the name of "central schools." By this step the local authorities forfeited the higher elementary school grant, but since the new schools were to be carried on under the ordinary regulations of the Board of Education, they could qualify for the ordinary elementary-school grant.

In establishing the central schools the purpose of the London County Council education committee was to provide for the pupil leaving school at an age between 15 and 16—

> the best possible equipment for entering upon the industrial or commercial world as soon as he leaves school while at the same time qualifying him to enter upon a special course of training for some particular industry at a polytechnic or similar institution if he desires to continue his education further.[1]

As stated by the Manchester Education Committee, the aim of the central schools "will be thoroughly to equip boys and girls for industrial, commercial, and home life."[2] In neither case, however, was it intended in these schools to give special preparation for any trade or occupation in particular, but rather to develop the groundwork of elementary knowledge with a bias in favor of industrial or commercial life. Since these schools were established as a protest against the rigid prescriptions of the board, no attempt has been made to limit their usefulness by narrow definitions of their curriculum, although certain minimum requirements have been laid down in London, and in Manchester a leaving examination, conducted by the local inspectors, has been established. Thus elasticity and adaptation to local needs are the guiding principles in the organization of the central schools, and the head teachers enjoy considerable freedom in framing the curricula of their schools.

The central school system was inaugurated in both London and Manchester in 1911 and appears already to have met with marked success. Six of these schools have been established in Manchester, and in London it is proposed ultimately to establish 60, of which about

[1] L. C. C. Ed. Committee, Rep. on Central Schools, Mar. 1, 1910.
[2] Manchester Ed. Committee, An. Rep. for 1909-10.

three-fourths have already been opened. When the London scheme is complete it is expected that there will be sufficient accommodation annually for about one-fifth of the elementary-school pupils eligible to enter the central schools under the regulations. The provision in Manchester is much lower. Each central school is fed by scholars drawn from neighboring elementary schools. To be eligible for admission to the London central schools boys and girls from the contributory elementary schools must be between the ages of 11 and 12 and must be nominated for the junior county scholarship examination (see p. 98). The selection from among the eligible scholars, nominated by the respective head teachers of the contributory schools, is made by the committee of each central school, which consists of one manager from each of the contributory schools. In determining the choice of suitable candidates the recommendations of head teachers and district inspectors, the marks obtained at the previous terminal examination, the probability that pupils will remain at the central school long enough to profit by the course, and the results of the examination for the junior county scholarship are all taken into consideration, while for admission to schools or departments with an industrial bias specimen drawings and evidence of manual dexterity are also required. The parents of selected candidates must sign a declaration of their intention to retain their children at the central school until the completion of the course offered. In practice the selection is made, as a rule, by the head teacher of the central school in consultation with the head teachers of the respective contributory schools and the district inspectors. Each central school draws on the average from about 18 to 20 contributory schools, but there is no requirement that any proportion be observed in the selection of candidates from each school. It is obvious that a central school can in this way serve to keep up the standards of its contributory schools in a way analogous to that of the accrediting system of some American universities. Provision is also made for the admission in special cases of pupils who, though they have not previously attended an elementary school, are otherwise eligible. In order to encourage pupils to continue until the end of the four-years' course—that is, to the end of the school year in which they attain their fifteenth year—a system of junior county exhibitions has been introduced. The value of these exhibitions, when the full number of central schools has been established, is not to exceed $375,000 a year, a sum which will be saved by a diminution in the number of candidates for the scholarships tenable at secondary schools. The junior county exhibitions are awarded to candidates who have already attended a central school for two years, who are of good health, and whose parents are not in receipt of an income exceeding $800 a year.

The awards are made on the recommendation of the head teachers and the district inspectors by a special selection committee, whose recommendations are confirmed by the education committee. No payment is made in respect of a junior county exhibition until the exhibitioner has attained the age of 14 years. The exhibitions vary in value, but in no case exceed a total aggregate value of $90.

In the Manchester schools the system of selection differs somewhat from that of London, but the standard of entrance is the same. Fees are charged varying in the different schools and districts from 2 cents to 12 cents a week. Candidates for admission must be able to pass an examination equivalent to Standard V of the code. There is, however, a large number of free places, not exceeding 150, or 25 per cent of the accommodation, whichever is less, for each school. The award of the free admissions is dependent on a recommendation from the head teacher of the elementary school last attended by a candidate, the payment of rates in the city by the candidate's parents, and the passing of an examination in the following subjects: Reading and viva voce test; writing from dictation; drawing; composition; arithmetic; English grammar. As in London, parents of successful candidates must enter into an agreement to keep their children at school until the end of the school year in which they attain their fifteenth year. In addition to the free admissions, the education committee also offers annually 160 bursaries of the value of $5 for the first year, $10 for the second year, and $25 for the third and fourth years, and no payments are made until a scholar reaches his twelfth birthday.

The effect of both methods of selection is thus to provide opportunities for the boys and girls of ability to receive an education which, while it is not secondary in character, is higher than that of the ordinary elementary schools. The best pupils are of course drawn off to the secondary schools by means of scholarships. There is thus perhaps some justification for the complaint of the ordinary elementary school teachers that their top classes are denuded of pupils of ability. Added to this there is a feeling in the same quarter, for which it may be said there is no justification, that the education offered in the central schools is not superior to that of the ordinary elementary school. But, as is pointed out elsewhere, the truth would rather seem to be that most elementary schools could by a slight reorganization offer similar instruction to that of the central schools. For this there is in fact some warrant in practice, for in at least one of the Manchester central schools most of the pupils pass through the junior department of the same school, and in Liverpool, as will be described later, two years of specialized work are given in some of the elementary schools. Such a reorganization would perhaps serve to give

point to the last two or three years of elementary school life which is at present generally lacking.

So far as the Board of Education is concerned, the central schools are treated as elementary schools, are conducted under the same regulations, and receive the same grants for all pupils under 15 years of age. The accommodation is calculated as in the ordinary elementary schools on the basis of 10 square feet per child, but the size of classes is restricted to 40. The teachers must possess the same qualifications as teachers in the ordinary elementary schools, but as a rule the tendency is to appoint certificated teachers who possess a university degree. The scale of salaries is the same as for ordinary teachers, but an additional annual sum of $50 may be paid in cases where the teacher is required to produce special qualifications for teaching the subjects in the school course, but the maximum salary remains the same. Similar conditions prevail in Manchester. Many of the teachers in fact do possess qualifications which are as high as those demanded of teachers in secondary schools and include in addition professional training, but are unable, owing to the prevailing obstacles which bar the progress of the elementary school teacher to obtain appointments in secondary schools.

The central schools [1] are organized with a commercial or an industrial bias, or both. Generally the nature of the bias is determined by the character of the district in which the school is situated. Where a school is organized on both commercial and industrial lines, the wishes of the parents, and, if possible, the bent of the pupils, are considered in determining the choice of a course. In some cases the determining factor is the accommodation of the school. Of the two courses the commercial, probably because the requirements are more obvious and because a tradition has already been established, is the more definite and objective. The industrial courses, for boys at any rate, are more generalized and aim at training in alertness and initiative rather than special training for any particular occupation. And, indeed, special preparation in an area like London, where the industries are gradually moving away, would offer a problem of insurmountable difficulty, even if it were desirable. As a matter of fact, many boys who have passed through an industrial course, enter warehouses and offices. This problem is not surrounded with such difficulties in the case of girls' schools, for here the industrial courses combine preparation for the home with general training in needlework and dressmaking.

The commercial courses in schools or departments with a commercial bias are so framed that scholars are able to enter business houses without any further preparation. The minimum requirements as

[1] Since the work of the Manchester schools is very similar in character, attention will only be given here to the London schools.

laid down in the Elementary Schools Handbook of the London County Council are as follows:

(1) At least four hours a week must be given to a modern language during the whole of the four years' course.

(2) Not less than two hours a week must be given to laboratory work in experimental science during the first and second years of the course, and, if thought desirable, this instruction may be continued during the third and fourth years.

(3) At least two hours a week must be given to drawing, including scale drawing, throughout the whole of the course.

(4) In the case of boys, one session a week must be given to handicraft during the first and second years.

(5) In the case of girls, one session a week must be given to domestic economy during the first three years of the course, but its continuance in the fourth year is optional.

(6) Not less than one and a half hours a week must be given to shorthand as an optional subject in the third and fourth years.

(7) Not less than one hour a week must be given to the principles of bookkeeping during the third and fourth years as an optional subject.

(8) Where there is sufficient demand, an optional out-of-school class in typewriting must be held for one hour a day * * *, to be attended only by third and fourth year pupils.

In addition to the above, the ordinary school subjects—Scripture, English, history, geography, mathematics, singing, and physical exercises—are also included. Where both commercial and industrial courses are offered in the same school, the curriculum, with the exception of the modern language, is the same for both groups in the first two years, the bifurcation taking place at the beginning of the third year.

It would be impossible to enter into details of the curriculum, for the standard is found to vary from school to school, and for comparative purposes an outline will be of greater service. As compared with the ordinary elementary schools, it may be said in general that the curriculum of the central schools, in spite of the additional subjects, is richer in content, and since the classes are smaller, a certain improvement in the methods of instruction can be observed. Training in initiative and in habits of independent working and thinking are more successful. The teachers are freer from the bad practice of lecturing, while the pupils show greater ability to work by themselves. It is not forgotten that the pupils of the central schools are selected, nor that as a rule the teachers have higher qualifications (although poor teachers are to be found here too), but it is a fact that here are schools which are attempting to realize the standards of the newer pedagogy. Let it, however, not be inferred that the curriculum is beyond criticism or that the methods of instruction are always unimpeachable. There are schools the head teachers of which feel that the old practice of working for examinations according to the scheme of some outside examining body can not be improved upon, or who hold that a broad general preparation for the career of the

office or the home does not possess educational elements. Three years is perhaps a short period for a new type of school to develop itself fully, but there are schools which have already addressed themselves to a successful solution of the problem. It will perhaps not be regarded as invidious to mention the excellent work in this direction of the commercial departments of the Monnow Road Central School (boys and girls sections), and the Thomas Street (Limehouse) Central School (girls).

In regard to the special subjects, one can not speak too highly of the standard of instruction in modern languages. Not only have the teachers in most cases an excellent command of the language which they teach, but they have thoroughly mastered the difficulties of the direct method of instruction, which has contributed so largely to the improvement of the teaching in this field in recent years. French is the language usually taught, and although its value as a commercial language is open to question, it is at any rate the language which the London boy or girl is most likely to need in later years. With regard to the use of phonetics opinion is divided, but, whatever the method employed, pronunciation is carefully and successfully taught. Ability to converse on simple subjects, to read a simple story book, to write an ordinary or business letter is the standard aimed at. Recitation and singing and the performance of a play are also included in some of the schemes in French. At the Thomas Street Central School for girls about 50 of the better pupils begin German in the third year of the course, and, in spite of the pressure of other special work in the second half of the course, excellent progress is made.

Mathematics, which in the boys' schools includes arithmetic, algebra, geometry, and mensuration, and in the girls' schools is usually confined to arithmetic and geometry, is made practical throughout. The arithmetic of the elementary schools is continued up to discount, commission, brokerage, statistical problems, bankruptcy problems, stocks and shares, coinage and exchange, and compound interest. But, as in the elementary schools, no attention is paid to the "arithmetic of citizenship" or of public financial bodies. Algebra, which is begun in the first year, is continued throughout the course and includes quadratic equations and progressions. In geometry the course deals, with the aid of practical illustrations so far as possible, with the properties of figures covered by the first three books of Euclid. In this connection the interesting mechanical devices invented by one of the assistant masters at the Monnow Road School to illustrate the geometrical properties of different figures deserve mention. The practice varies, but as a rule geometry in the commercial classes is discontinued after the first two years. No subject shows such radical changes of treatment as practical arithmetic, or mensuration. Here

rigid insistence on desk work has been definitely abandoned, and when the need arises, boys may be seen in the corridors and playgrounds of the school conducting their measurements in a workmanlike manner. After an introduction on scale drawing and the use of different measures, measurements are made of plane and solid figures of cardboard, paper, and wood, and the methods are then applied to the measurement and drawing to scale of the classroom and its furniture. Areas of the objects measured are found both by calculation and the use of squared paper, and the calculation of volume, costs, and quantities are also made in the same connection. A little practice in surveying, usually in the playground, is added and measurements are taken with simple surveying instruments made in the manual-training room. The subject is thus correlated with arithmetic, geometry, drawing, the beginnings of elementary science, and with handicraft. In the girls' schools the practical application of the arithmetic arises in connection with the needlework and dressmaking, and also the domestic subjects.

The courses in elementary science for boys, which cover two or three years, are introductory to chemistry and physics, and deal in the main with the elements of these subjects. After some preliminary instruction in the use and construction of the simpler measuring instruments, such as the calipers, wedges, and verniers, the pupils proceed to the study of density, specific gravity, the principle of Archimedes, pressure of air and liquids, the barometer, the thermometer, and heat. The course in chemistry deals with the elements hydrogen, oxygen, and nitrogen, with the composition of air and water, with standard solutions of acids and alkalies, and with formulæ and equations bearing on the subject. The science in the girls' schools has perhaps a closer bearing on the practical everyday experiences, except where, as in some schools, it is wholly devoted to botany. Usually it is correlated with the domestic subjects and includes the chemistry of foods and clothing, hygiene and physiology.

In the technical subjects, i. e., bookkeeping, business routine, shorthand and typewriting, only an introductory course is attempted. It is felt that more than this might not only lead to the danger of exploiting the young employees, but in the case of boys might narrow their opportunities of learning other branches of commerce than mere office routine. Hence in shorthand a speed of not more than 50 or 60 words a minute and in typewriting about 25 or 30 words a minute is aimed at. And in bookkeeping, since the methods are likely to vary in different offices, the pupils are merely instructed in a knowledge of the chief books and their use, of simple accounting, and of the more general business terms.

Of the remaining subjects the teaching of English is still open to the same criticism that was passed on it in the ordinary elementary

schools. In English the amount of reading is somewhat more extensive than in the elementary schools. The lessons in literature are often little more than reading lessons, varied occasionally by dramatic representation. Undoubtedly English is the most difficult subject in the curriculum, but there are not wanting instances of excellent methods in teaching this subject. History in the central schools receives serious attention. As a rule only English history is taken, but in a few schools, generally for girls, an outline of universal history is attempted. The emphasis is not on the biographical and picturesque, which is commonly the case in the ordinary schools, but a survey is made of the growth of institutions, political, social, and economic. In connection with this subject, the study of current events through the medium of the illustrated press may be mentioned. At the Monnow Road School for boys, in addition to a course on the development of commerce, a beginning has been made in the study of economics—the meaning of wealth, capital, income, price, wages, and profits. With regard to the teaching of geography, drawing, and handicrafts, it is perhaps unnecessary to add more than has already been said in dealing with these subjects in the ordinary elementary schools, and the same reference may be made with respect to the remaining subjects—singing, physical exercise, and organized games.

In those schools or departments which have been organized with an industrial bias the objective is perhaps somewhat less well defined than where the commercial bias has been adopted. Here it is clearly impossible to provide the special preparation of the type given in a trade school or polytechnic. The aim, as it is indicated by the headmaster of the Monnow Road school for boys and indorsed by other headmasters, is "to produce an intelligent and alert boy, accurate and skillful of hand, capable of continuous effort, and less book taught." The curriculum is accordingly organized to train industrial intelligence rather than to impart vocational skill. The aim in the girls' schools with an industrial bias is somewhat more specific, and besides affording a preparation for the home, enables the pupils to secure employment in dressmaking, needlework, and millinery establishments.

The minimum requirements for central schools with an industrial bias or a department with such a bias are as follows:

(i) Not less than 10 and not more than 12 hours per week must be given to practical work during the whole of the four years' course. The practical work in the case of boys shall consist of science (including mensuration), drawing, clay-modeling, wood and metal work, and, in special circumstances, leather work and printing or other approved subjects; and in the case of girls it shall consist of elementary science, domestic economy, drawing, practical needlework, or other approved subjects.

(ii) Instruction in a modern foreign language may, in special circumstances, be given, but the minimum of three hours a week to be devoted to instruction in the subject * * * must be observed.[1]

[1] Elementary Schools Handbook, p. 162.

The industrial course for boys is organized on a basis of mensuration, science, drawing, and handicraft. Some indication has already been given, in treating of the commercial courses, of the early work in mensuration and science. After the bifurcation, or in the third year, the industrial pupils continue mensuration with measurements of more difficult objects, such as the parts of machinery, the drawing of plans and elevations of parts of the school which are accessible, the measurement of heights and distances with the aid of simply-constructed theodolites, sextants, anglemeters, etc., perspective drawings, scale drawings, tracings, and the making of blue prints. Trigonometry and the use of logarithms are also introduced. In connection with this subject, lessons are included on the properties of such materials as the pupils come into contact with, and these are again dealt with in the arithmetic lesson in estimating problems of costs and quantities of materials, and in drawing up contractors' estimates. While the course as here described is that given at the Monnow Road school, similar courses, perhaps not so well rounded out, are given in other schools. Thus at the Thomas Street, Limehouse, arithmetic, geometry, and mensuration form the backbone of the curriculum, but less stress is laid upon scale drawing, tracing, and blue prints.

Under elementary science, physics and mechanics are included. The introductory part of the physics course has already been indicated. In the last two years of the course the subject is continued up to magnetism and electricity, and simple models are made to illustrate the working of cell batteries, electric magnets, small motors, the electric bell, the telephone and telegraph. In mechanics the following topics are generally dealt with: Levers, moments of forces, the balance, parallelogram and triangle of forces, pulleys, inclined plane, friction, elasticity, torsion, and rigidity and bending. All the experiments are worked out in graphs. Many of the simpler models are made in the woodwork room to be used in the mechanics lessons. At the Thomas Street school the machinery and lathes of the metal workshop are used for the purposes of instruction in practical mechanics.

Manual work forms part of the instruction throughout the four years of the industrial course. All the schools are equipped with woodwork shops; a few also have metal workshops provided with lathes, anvil, and forge. Where a scheme of correlation has been worked out, models are made in wood for use in connection with instruction in mensuration, physics, and mechanics. The general outline of all the schemes is usually the same as for the elementary schools. There is, however, closer correlation between the workshops and the art rooms in which designs are made under the supervision of the art teacher. In some schools, in the final year of the

course in woodwork, polishing, varnishing, and inlaying are taught, and a few models are made introducing light metal work. But as a rule the combination of the two media, where both metal and wood workshops exist, is very slight. The course in wood at the Monnow Road school provides for the construction of pieces of mechanism, e. g., eccentric, piston, slide-valve, etc., and their combination to produce a working model. The work in metal is organized on the same principles as that in wood. About one year, or 18 months, is spent in working through a set scheme to give facility in the use of the tools and the different metals; tin, iron, steel, brass, and copper are provided. In the latter part of the course the pupils are permitted, after consultation with the instructor, to make their own models, of which they must present preliminary designs. These models include match boxes, match stands, keyholes, hinges, finger-plates, ash trays, etc.

In the central schools for girls and in those departments which have an industrial bias, emphasis is directed to the needlecraft industries and domestic subjects. The courses in needlework include the measurement, cutting out and making of garments, the use of the sewing machine, knitting, repairing and mending of garments, and embroidery. The designs for the last subject are made under the supervision of the art teacher. In some schools, millinery is also included as part of the practical work. The domestic subjects are cookery and laundry and housewifery, where the necessary accommodation and equipment are provided. As in the commercial courses, these subjects afford the starting point for the instruction in science, although nature study and botany sometimes take the place of the chemistry of foods and clothing, nutrition, hygiene and physiology, and chemistry of the household.

The content and scope of the remaining subjects in the industrial courses are the same as already described for the commercial. In some cases the emphasis in the teaching of history and the development of social institutions is laid on the history and organization of industries and the development and influence of inventions.

It is perhaps too early to attempt any estimate of the social value, that is the value to the community, of the central schools. A tradition has yet to be established that the extended education confers an ultimate monetary value on the pupils. Many parents, in spite of their declarations, remove their children from the central schools as soon as they reach the age of 14. The establishment of maintenance grants will undoubtedly serve as a strong inducement to keep pupils at school until the close of the four years' course. That the pupils benefit greatly from a course which is more in accordance with their abilities than that of the upper standards of the ordinary elementary schools there can be little doubt. The other side of the

question is the one which mainly appeals to the parent—does attendance at the central school open up better opportunities for their children? It is difficult to answer this question, especially as some of the head teachers are themselves uncertain on the subject. Where the head teachers place themselves in relation with the employers, and the pupils of their school become known, the question is easily answered, and the better pupils may be sure of finding themselves well placed at the end of the course. Thus the head teacher of the Monnow Road school has established a connection with several local engineering shops and with some commercial houses in the city. But where personal effort of the head teacher is absent, the pupils are at present little better off than the pupils of the ordinary elementary schools, and must rely on the juvenile labor exchanges or advertisements or on their own friends to secure employment. One of the grievances of teachers connected with this type of school is that the central school has no status, and for this reason they would welcome examination and certification by some external authority. It is felt, for example, that for employment in a bank or in the insurance offices the boy who has had some business training in a central school is handicapped in competition with the boy who has attended a secondary school for a couple or years. While there is some truth in these criticisms, it must be remembered that the schools have hardly been established long enough to secure much recognition. The fact remains that the boys and girls do find employment. The majority of those who have taken a commercial course and a few of those who have taken the industrial, enter offices, the boys beginning as a rule with a wage of from 5 shillings to 7 shillings 6 pence, and the girls at a somewhat higher rate. The after-careers of the boys who take the industrial courses can not be dealt with in the same general way. It is presumed that the majority enter upon such of the industrial employments as do not require special previous training. The girls find employment with the large dressmaking establishments, a few take up domestic service, and a small proportion remain at home. There is also one other course open to the pupils of central schools, and that is to proceed to the polytechnics and trade schools, either as paying pupils or by means of scholarships (see Ch. XI).

Liverpool has provided courses which, while similar in aim, differ somewhat in organization from the central schools of Manchester and London. Classes have been organized in Liverpool in connection with the ordinary elementary schools to provide special preparation for commercial careers for both boys and girls. The course, which lasts for two years, begins in the last year of the ordinary elementary school and is only open to those pupils whose parents agree to keep them at school until their fifteenth birthday. These classes are still

in their experimental stage, having been in existence less than two years. They promise, however, to meet a definite demand, and are valuable as an attempt to provide a well-defined "top" in the elementary schools. When the desirability of establishing the commercial classes at the Lawrence Road Council Schools was recognized in January, 1912, the following letter was sent to the parents:

DEAR SIR OR MADAM:

The provision of some special instruction to fit girls and boys for the vocation or calling which they wish to take up has been for some time under consideration. It is felt that many parents would willingly prolong the school life of their children, provided that in the last year or 18 months some means could be adopted of preparing them for their future work.

The advantages of a trade are so obvious that they need not be detailed, but in a commercial city like Liverpool many boys and girls must of necessity enter offices. For these it is proposed to establish a class for instruction in such technical subjects as shorthand, bookkeeping, business routine, possibly typewriting, etc., whilst continuing the general education. * * *

The formation of the class depends on the sanction of the education committee, His Majesty's inspector, and the managers of the school, and on a sufficient number of parents expressing their willingness to allow their children to continue at school at least until their fifteenth birthday.

If, after full consideration and discussion at home, you are willing that ..... should join this class, kindly sign the inclosed guaranty form (i. e., to keep the pupils at school until the end of the course) and return, etc., ...

In comparing the time-tables of the Lawrence Road Council School with that of a central school having a commercial bias, three facts are noticed. In the first place, the foreign language is omitted, and necessarily so since the two years of the course would hardly suffice to give more than the rudiments. Secondly, the manual work for both the boys and girls is continued to the close. Lastly, more time is devoted to the purely commercial subjects than in the London central schools. The classes are mixed, and the girls show a tendency to remain at school longer than the boys. There is, however, a great demand for juvenile labor in Liverpool at present, and the pupils who take the special classes have little difficulty in finding employment. If good openings occur, pupils may by agreement with their principal be allowed to leave before the completion of their course.

It is difficult to estimate the advantages and disadvantages of the two systems. The provision of a definite, self-contained course at the top of an ordinary elementary school, open to all who desire to avail themselves of the opportunity, may serve as a stimulus for prolonging the school life of boys and girls. Such a system should ultimately establish the right of all children to a type of education which will equip them with special fitness in some direction or other, instead of limiting such special preparation to a favored few. The Liverpool system has the further advantage that the pupils remain under the supervision of the principal and teachers already familiar with them.

On the other hand, the special schools of the central type may have the advantage of superior equipment, and so far as the pupils are concerned may have some influence on them through the consciousness of selection. Some loss of time must, however, be involved in discovering the attainments and abilities of pupils drawn together to the central school from some 20 contributory schools. On the whole the Liverpool system is a valuable experiment in the direction of providing a well-defined "top" in the ordinary elementary schools, which in time may well be extended to other than commercial preparation. The curriculum at present is perhaps not so liberal as that of the central schools, but the experience of time will probably lead to improvement in this respect.

Corresponding to the central schools or departments of schools with an industrial bias a trade preparatory school has been established in Liverpool at the Toxteth Technical Institute. The Trade Preparatory School "is intended to provide a sound practical education for boys who, having already had a sound primary education, are preparing to become, at the age of about 15 or 16 years, apprentices to the mechanical engineering, electrical engineering, sheet metal, carpentry and joinery, building, or other trades." Boys are admitted to the school who are not less than 13 years of age, pass an entrance examination in arithmetic, drawing (freehand and geometry), and English, equivalent to Standard VII, and are intended by their parents to remain at school until the course is completed and then to proceed to industrial work. A fee of $3 a term is charged, but 15 entrance scholarships are offered giving free tuition for one year, and 10 scholarships are awarded for a second year's course. The school is equipped with large science laboratories, one workshop for woodwork and another for metal work. The course, which lasts two years, includes the following subjects: Workshop practice in wood and metal, practical mathematics (arithmetic, mensuration, algebra, logarithms, and trigonometry), practical drawing of engineering, building and other details, freehand drawing, elementary science (mechanics, physics, and chemistry), English (reading, composition, geography, industrial history), physical exercises. The boys, "while continuing and improving their ordinary education, are learning practical drawing and measurements and calculations of the kind required in workshops and drawing offices; the use of various tools, machines, and instruments used in the working of wood and metal, and the designing and making-up of various construction models; together with a practical knowledge of the elementary principles of electricity, chemistry, heat, mechanics, and other useful subjects." While the course does not attempt to give preparation for any special branch of the engineering or building trades, it provides a general training which is of the highest value to the future apprentice in any of these

trades. It is intended, however, to introduce a little specialization in the scientific subjects more in accordance with the employments which the pupils intend to enter. Here, again, if a comparison may be instituted with the London central schools or departments with an industrial bias, the advantage rests with the Liverpool scheme. In the first place, Liverpool has a natural advantage in being the center of considerable engineering industries which offer a definite objective for schools of the type of the Trade Preparatory School. Secondly, whether by accident or design, the majority of the staff at the Liverpool school have had workshop experience and are thus acquainted at first hand with the requirements of the trades, whereas in London the one instructor who is likely to have had this experience—the teacher of manual training—occupies a subordinate position on the staff, except in such schools as have been mentioned. The Liverpool committee has further arranged to secure the cooperation of representative employers of the trades concerned in the supervision of the school course. This arrangement to some extent facilitates the introduction of boys to suitable situations, a task performed almost wholly by the head master directly and not through the juvenile employment committee. It is the rare exception that a boy leaves before the end of the course, and the majority of the boys on leaving enter some trade or other.

Chapter XVII.

EVENING SCHOOLS.

The problem of evening continuation schools and further education of adults who are employed during the day is perhaps fraught with more difficulty than any other for the educational administrator. It is receiving considerable attention from all concerned in the subject, but there are so many factors involved and so many of these are beyond the control of the school authorities that it is not surprising to find that opinion is steadily growing in favor of compulsory continuation schools. Under the present voluntary system, the chief factors which militate against success in the larger towns are indifference on the part of the young employees, and the absence of interest among the majority of employers. Even the select number who register in evening schools at the beginning of the annual session find considerable difficulty in making satisfactory attendances. The obstacles in their way are many; the school may be at a distance from their employment or the weather may be unfavorable, or, as happens more frequently, the pressure of work at office or other employment may make school attendance impossible. Mail days, monthly accounts, annual balances in the offices, special orders and overtime in the workshop, and increased business at Christmas in the shops are all contributory factors. And these are cumulative in their effect, for absence from a course which largely involves classroom instruction leads to backwardness which the students can not make up by themselves. Still another difficulty, which tends to disappear with better and more careful methods of registration, is due to attempts to take either too many or too difficult courses. To these reasons there may be added the unattractiveness of many of the school buildings, the poor lighting, the furniture and equipment intended for young scholars of the day schools, and, to some extent, teaching methods which are better suited to children than to adolescents or adults.

On the administrative side there are three important conditions in the problem of evening school attendance: (1) To link up the day and evening school adequately to prevent a breach in the continuity of the educational progress; (2) to secure reasonable attendance during the session and the completion of courses arranged; and (3) to interest employers and parents in the progress of students in evening schools, and thus secure their cooperation.

Most education authorities have made some provision to induce scholars on leaving the elementary schools to join the evening schools. In London more than two-thirds of the ordinary evening continuation schools which provide a general course are free. In Manchester and Liverpool free admissions are granted to all pupils who join the even-

ing schools as soon as possible after they leave the day elementary schools. In Manchester the free admission is obtained on application

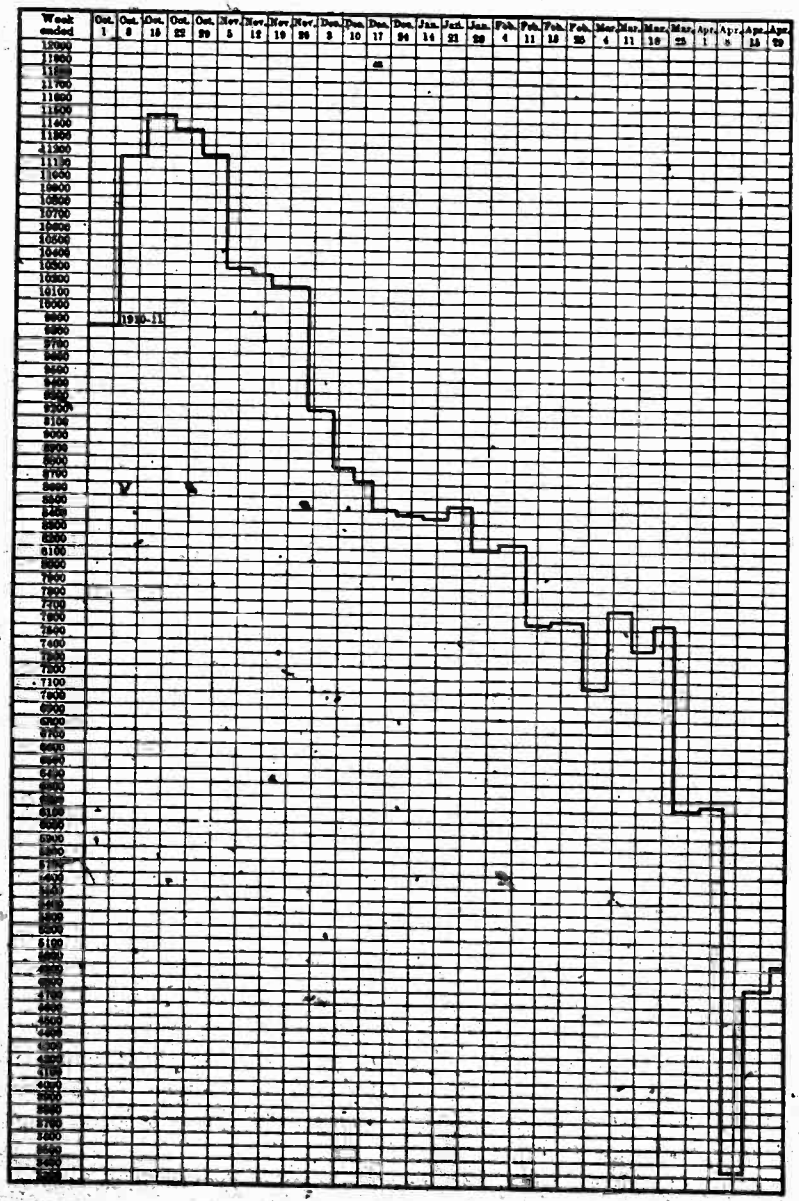


DIAGRAM 2.—Manchester Evening School of Commerce—Number of student hours registered in 1910-10.

to the principal of an evening school. In Liverpool it is granted on the recommendation of the head teacher of the school last attended by the scholar. The head teachers of the day schools always impress

on their leaving scholars the importance and value of immediately joining an evening school, and in Liverpool the head teachers send letters to their scholars shortly before the opening of the evening school session. In Manchester and Liverpool many of the head teachers of day elementary schools also conduct evening schools. These serve to link up the two. But in London the responsible teachers may be engaged during the day as assistants in schools in districts some distance away from their evening schools. The head teachers accordingly transmit the names of scholars leaving the day schools to the responsible teachers of the evening schools, who then conduct the further correspondence. The free admissions in Manchester are only granted on the undertaking of a guarantor, a parent or employer, to return the value of the fees in the event of unsatisfactory attendance, while in Liverpool the parents promise to supervise the attendance. By this system of free admissions the local education authorities are successful in securing the registration of about 50 per cent of the scholars leaving the day schools in any one year. The remainder are prevented from taking advantage of the offer by the conditions of their employment, or by the attractions of the streets, while some will probably fail to respond to any appeal but compulsion. So far as the efforts of the authorities are concerned, there is at any rate no reason to suppose that any one can remain in ignorance of the existence or of the time of opening the evening schools. The methods of publicity range in London from 12 different systems of advertising to the personal appeals from pulpit and platform by ministers of religion and superintendents of Sunday schools. Recently local education authorities have encouraged the formation of evening classes in connection with lads' and girls' clubs, boys' brigades, boy scouts, etc., to the expenses of which they contribute in return for the board of education grant.

To secure continuity of attendance throughout the several years of a course, the Manchester education committee offers annually prizes which carry with them a rebate of the fees for the following session. To obtain these prizes students must have made 90 per cent of the possible attendance, 66 per cent of the possible marks for homework, and must have been successful at the course examination. There are in addition a number of exhibitions carrying free tuition and books. A similar scheme of prizes, reduced fees, and studentships exists in Liverpool. The formation of social organizations, clubs, and societies for different purposes, some continuing during the summer recess, is found more frequently in the London evening schools than elsewhere. They form a valuable means for fostering a corporate spirit and interest in the welfare of a school which are too frequently lacking at present, while at the same time they serve to maintain that continuity which it is the purpose of the prize and other schemes to advance.

Ultimately the responsibility for attendance at evening schools must be placed on the employers. The select few who have sufficient moral earnestness and intellectual interests may be trusted to attend to the best of their ability. But the large majority of young persons require some other inducement and other forms of persuasion, and the employers are in the best position to exercise an influence of the right kind. Hence it is important for the education authorities to secure the cooperation of employers. This is done with ever-increasing effectiveness in Manchester. Many firms make arrangements to allow their employees to leave in time to attend the evening schools, others pay the tuition fees of their employees, while others again refund the fees at the end of the session on the receipt of satisfactory reports. The War Office and Post Office, as large employers of labor, have entered into arrangements with local education authorities to establish evening and continuation classes for their young employees, while many authorities have established special classes for policemen at the request of local watch committees. Another form of encouragement is to make increments of wages depend on the report from the school. In the case of younger students the committee arranges to send monthly reports of progress and conduct. In 1912–13 the Manchester committee was thus in touch with 180 firms in respect of 1,280 employees, while 60 firms paid the tuition fees of their employees. In Liverpool employers are notified at the beginning of the session of any person in their employ who joins the classes and are requested to facilitate their attendance punctually and regularly, and in cases of absence or irregularity of the students information is in some cases sent to their employers. Another form of cooperation is to interest different societies, e. g., masons, builders, plumbers, etc., in the courses provided at the technical schools. The interest of employers is further enlisted both in Manchester and Liverpool by the organization of courses in accordance with the requirements of the various trades and commerce. In London this is further extended by the appointment of consultative committees representing different industries to act as advisory bodies for the schools in which they are respectively interested.

Much good may undoubtedly be effected by these means, but a very large proportion of the public remains unaffected. It is estimated that, of the young persons between the ages of 14 and 17, not more than one-third are enrolled in evening schools, while the students between these ages make up between 40 and 50 per cent of all the students enrolled, except in London where the percentage is much smaller. It is possible that with further variation of the courses which will leave no trade or industry unrepresented there may be an accompanying increase in the number of students.

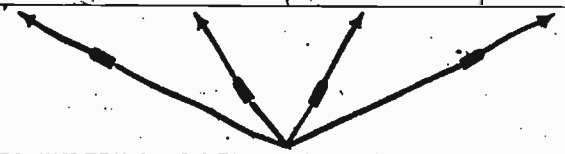
For the purposes of the annual grant in respect of evening school, the board of education recognizes the following divisions of instruction: Preparatory, literary and commercial, art, science, home occupations and industries, and physical training. The work of the evening schools is accordingly organized along these lines, and provision has been made in Manchester and Liverpool for preliminary courses in most of these divisions leading up to advanced instruction in central institutions. In the former city, where a more complete system has been framed, the work of the evening schools is distributed in the following institutions: Continuation schools, branch technical schools, branch art and handicraft schools, branch commercial schools, district evening schools of domestic economy, central evening school of domestic economy, municipal evening school of commerce and languages, and the municipal school of technology. The accompanying diagram represents this organization of evening work.

DIAGRAM 3.

Illustrating the graded system of courses of instruction adapted to the requirements of the different classes of students in the Manchester evening schools.

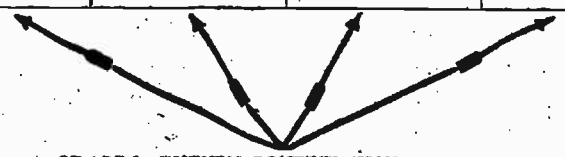
GRADE III.—CENTRAL INSTITUTIONS.

Municipal school of technology.	Municipal school of commerce and languages.	Municipal school of art.	Central evening school of domestic economy.
Advanced instruction in science and technology.	Advanced instruction in commercial subjects and in languages.	Advanced instruction in art and design.	Advanced instruction in domestic subjects.



GRADE II.—BRANCH TECHNICAL SCHOOLS, BRANCH COMMERCIAL SCHOOLS, BRANCH ART CLASSES, AND DISTRICT EVENING SCHOOLS OF DOMESTIC ECONOMY.

Second, third, and fourth year technical courses, to meet the requirements of all classes of technical students.	*Second, third, and fourth year commercial courses*, to meet the requirements of juniors in business houses.	*First and second year art and handicraft courses*, leading up to the instruction at the municipal school of art.	*Specialized instruction in domestic subjects*, for women and girls over 16 years of age.



GRADE I.—EVENING CONTINUATION SCHOOLS.

First and second year technical courses, for boys engaged in manual occupations.	*First and second year commercial courses*, for boys and girls engaged in commercial or distributive occupations.	*First and second year domestic courses*, for girls desirous of receiving a training in domestic subjects.

PREPARATORY COURSE.

For boys and girls who desire to improve their general education or who are not sufficiently prepared to take advantage of the above courses.

The coordination of schools in Liverpool is similar, with the exception that there is no school corresponding to the central school of domestic economy.

The preparatory courses are intended for those who are backward in the ordinary subjects of the elementary school and are therefore unable to enter classes in one of the other divisions. Such courses are found useful by those who have allowed some time to elapse between leaving the day school and entering the evening school.

The commercial courses of the evening continuation schools are general and introductory in character. The complete group of subjects must be taken by junior students; that is, those under 18 years of age. In the third year, when the work is given in the branch commercial school, the courses become more specialized to suit the different branches of commercial houses. Thus in Manchester there are arranged courses for shorthand clerks and typists, junior and invoice clerks, bookkeepers, correspondence and shippers' clerks, while in Liverpool the scheme provides for general clerks, correspondence and shorthand clerks, shipping and forwarding clerks, and bookkeepers, invoice clerks, and cashiers. Advanced courses beyond these are offered in central institutions, in Manchester at the Municipal Evening School of Commerce, and in Liverpool at the High School of Commerce. In the latter the course includes languages, economics, accountancy, commercial work and administration, commercial law, history of commerce and industry, and principles of local government. In the former the courses cover almost every requirement of business life, embracing accounting, commerce, economics, and law. Students may enter for diploma courses in accounting, banking and economics, secretarial and municipal work, general commercial studies, and foreign trade and correspondence, or may attend lecture courses in any of these subjects. In the professional courses preparation is given for the examinations of professional bodies like the actuaries, chartered accountants, bankers, insurance companies, and railway companies. The needs of large commercial centers like Manchester and Liverpool are further met by the provision of language courses. The Municipal Evening School of Commerce, in its school of languages, provides instruction in French, German, Spanish, Portuguese, Italian, Russian, Danish, Dutch, Modern Greek, Arabic, Japanese, Hindustani, Swedish, in any of which a diploma is given at the end of a two years' course and on passing the necessary examinations. In Liverpool a successful experiment has been made in providing courses in French, German, Russian, Italian, Spanish, and Portuguese during the middle of the day and immediately after office hours. It has been found that this arrangement has the support of many employers and seems to be more suited to the needs of the students who are able to make better attendances than at the evening courses. Clubs to provide

practice in modern languages have been formed among the students in Manchester and Liverpool.

The technical courses are intended for those who are engaged in trades and industries. The first two years are devoted to elementary science, mathematics, drawing, and English. In the branch technical schools the courses are differentiated; in Manchester there are provided courses in engineering, building trades, chemical industries, and electrical industries; in Liverpool the groups are the engineering and metal trades, the building trades, and trades apprentices. The centers are equipped with the necessary laboratories and apparatus requisite for practical work in each of the courses. The work of the branch technical schools leads up to the more advanced courses of the better and more fully equipped Municipal School of Technology in Manchester and the Central Technical School in Liverpool. The former institution provides for specialization as follows: Mechanical engineering, electrical engineering, general chemistry, bleaching, dyeing and printing, paper making, brewing, metallurgy, municipal engineering, sanitary engineering, building construction, weaving, and plumbing. In the latter the courses of instruction are organized for the following: Building trades, plumbers, carpenters and joiners, engineering trades, electrical engineers, electric wiremen, motor car engineers, sheet, plate, and bar metal workers, naval architects, and chemistry.

The third important division of the evening school activity comprises instruction in the home occupations and industries for women and girls. The organization is similar to that of the other divisions. The evening continuation schools give the introductory work in arithmetic and household accounts, cookery, needlework and dressmaking, millinery, home nursing, and English, which at the end of the two years leads up to the courses in the branch schools of domestic economy. These comprise instruction in cookery, needlework, dressmaking, millinery, home nursing, laundry work, and domestic economy. In Manchester more advanced courses are offered in the Central Evening School of Domestic Economy, which has recently been established. The complete two years' course of this school leads up to the housewife's diploma. Besides the ordinary courses, there are short courses in first aid to the injured, sick nursing, design, leather work, pottery painting, raffia and basketwork, and gymnastics.

The art and handicraft courses, which necessarily appeal to fewer students, are not provided in the evening continuation schools, and in Liverpool are given only in the Central School of Art. In Manchester a few branch schools are opened in these subjects, which are continued to an advanced stage in the Municipal School of Art.

There are, in addition, special courses for teachers, for students preparing for the civil-service examinations, or for the entrance examinations to the universities. Except to some small extent in London, there has not been developed a system of public lectures of a general character.

In London the organization of the evening-school work does not provide for the same coordination with branch and central institutions as in Manchester or Liverpool. Owing to the area to be covered and the distances, such a scheme would perhaps be impossible for London. But the absence of coordination does not exclude the provision of facilities for instruction as rich and varied as the needs of a large population may demand. There are the ordinary evening schools, the large majority of them free, which offer general, literary and commercial, art, manual instruction, domestic subjects, and physical-training courses. The science and art and commercial centers provide instruction in the ordinary and higher branches of commercial subjects, in foreign languages, in introductory science and art subjects, and general courses in miscellaneous subjects. The most successful part of the London evening work is probably that which is done in the technical institutions, in which the work ranges from the training of the artisan to research work of university standard.[1]

The teachers in the evening schools are drawn partly from the day elementary and secondary school teachers and partly from those engaged in professional, commercial, and industrial pursuits. The adult student seems to have greater confidence in the teacher who is practically engaged during the day in applying the knowledge on the subject which he teaches, and it is probably true that the teaching of men of this type is more living and effective than of the man who only has a book knowledge of his subject. It is also objected that the professional teachers of the elementary or secondary schools do not vary their methods of instruction sufficiently to suit the requirements of the evening students, and there is undoubtedly need for a specialized evening-school pedagogy.

The work of the evening schools is tested annually by examinations conducted by the local education authorities and numerous external bodies. The Board of Education conducts examinations in science and art subjects, in which the City and Guilds of London Institute is also interested. In commercial and ordinary subjects there are examinations by the royal society of arts, the London chamber of commerce, the national union of teachers, and the union of Lancashire and Cheshire institutes. Each of these bodies awards prizes and certificates to the successful students.

The London system of continuation education is to be revised for the coming session, 1913–14, with a view to better coordination,

[1] See L. C. C. education committee. Report on eight years of technical and continuation schools (mostly evening work), 1913.

such as prevails in Manchester and Liverpool. The small, struggling schools are to be abolished entirely. The main lines of instruction are to be commercial, technical, art, domestic, women's trades, and nonvocational subjects. The schools are in future to be known as "institutes," with junior and senior branches thoroughly coordinated. Thus, there are to be junior and senior commercial institutes leading up to the most advanced work of the London School of Economics or the City of London College, which is to be reorganized. The junior technical institutes are to be linked up with the polytechnics, technical institutes, and university colleges; and the same arrangements are to be made in other departments where possible. The principals of the higher institutes are to have power to act in an advisory capacity to the junior institutes, while the coordination is to be promoted by regular conferences between those in charge of evening work in each locality. A new departure will be the appointment of full-time responsible teachers, devoting their attention only to evening work. The present system of half-time responsible teachers, working in day and evening schools, is also to be retained. Provision will continue to be made for special classes apart from the regular courses of the institutes.

If a general conclusion may be drawn respecting the present system of evening schools, it would seem that the maximum of success with the existing organization has been attained. There is a good deal of pessimism among those who are devoting themselves as teachers or organizers to the work. The greatest success is achieved with what may be called the "bread-and-butter" subjects, those subjects which help the student to obtain promotion or higher wages. This success may to some extent be due to the fact that these subjects are taught by "practical" men, but the utilitarian reason is probably nearer the truth. The failure of the purely educational or cultural subjects is due in the main to an absence of appreciation of their value, although poor and lifeless teaching may also be contributory. Further experiment with teaching methods suited to adolescents and adults is necessary if success is to be attained in the cultural subjects. In this connection the valuable contribution to this side of the subject made by the Workers' Educational Association should be mentioned. Considerable success has been attained in the courses offered by the association to workingmen by a combination of the lecture and discussion method, or what is known in American universities as the "practicum" method. At present the cost of evening schools, except in the large central schools, tends to be too expensive, since classes are continued when the numbers drop to as low as six or nine. An appeal to ratepayers and employers, from the point of view of public finance, may help to make the evening schools more popular. Informal

reforms more along the lines of vocational differentiation, as in Munich, may also serve to attract some of those who at present remain aloof. But in the end some method of compulsion will have to be introduced making it compulsory for young persons up to a certain age to attend a continuation school and for employers to permit those of their young employees who desire to do so to attend a continuation school without the difficulties which exist at present. Whether a system of day continuation schools can be introduced without considerable opposition is open to much doubt, but the success of the day language classes in Liverpool would warrant an extension of the experiment in other subjects.

The direction of legislation of the future is indicated by the Continuation Schools Bill, a private bill recently presented to Parliament. Its objects are to make attendance at day schools compulsory for all children up to the age of 14, and attendance at day continuation schools compulsory for all children between the ages of 14 and 17 who are not being educated elsewhere. A minimum attendance of eight hours a week is demanded, and employers are to be compelled to allow the attendance of employees of the prescribed ages. The continuation schools are to be free, and the work is to be organized along the lines of the Munich continuation schools. Local education authorities will be allowed to associate with them local employers to advise in the organization and administration of the system.

Chapter XVIII.

JUVENILE EMPLOYMENT.

Still another form of activity which is indicative of the broader conception of the State's duty to its children, and indirectly for its own welfare, is the national organization of agencies concerned with the finding of employment for children on leaving school. The question of juvenile employment was forced on public attention some five years ago in connection with the inquiries into the causes of the prevailing unemployment. Voluntary agencies had long existed in the larger centers with the object of advising and giving information to juveniles on matters affecting their future occupations, and some of these also gave assistance in the finding of suitable employment. More recently several local authorities had established employment agencies or committees in connection with their education departments. Of these perhaps the best known schemes were those of Birmingham and Edinburgh. When, in 1909, the establishment of national labor bureaus was discussed in Parliament, there was a general recognition of the importance of special provision for finding suitable employment for children leaving school. It was realized at the same time that the question of juvenile employment involved broader issues than the mere finding of employment, and that the juvenile labor bureaus, whatever their form might be, would have to assume duties as much educational as economic. The inquiries into unemployment had revealed the great amount of evil caused by ill-considered entry into "blind alley" occupations which was due to the absence of any agency for giving vocational guidance. From another point of view the task of juvenile labor bureaus is no less educational, for they are in an excellent position to advise attendance at evening and other continuation schools, if only from the economic standpoint. Finally, there is the duty of collecting information on local trades and industries for young people, the conditions of employment, prospects and wages, information which would offer a basis for vocational guidance. In placing the labor bureaus in intimate connection with the education authorities there is the further gain that the information of the teachers and the reports of the medical officers are at their disposal. By those who support the juvenile departments of the national labor exchanges it is argued that the more important aspects of the work are a thorough knowledge of the labor market, the prospects held out by the different trades and industries, and the modes of entering them. Further, it is held that the national system secures unity both for purposes of registration and the distribution of information.

The labor exchanges act, providing for the establishment of labor exchanges for adults, was passed in 1909. Early in 1910 the board

of trade, which was charged with the control of the labor exchanges, published rules regulating the relations between the labor exchanges and juvenile applicants for employment. There was thus established a system, under the administration of the board of trade, which was adopted by several local authorities. In the same year, however, the education (Choice of Employment) act was passed, which empowered county councils and county boroughs, as local education authorities—

> to make arrangements, subject to the approval of the Board of Education, for giving to boys and girls under 17 years of age assistance with respect to the choice of suitable employment, by means of the collection and the communication of information and the furnishing of advice.

Local authorities other than those mentioned above were also given power to cooperate in the scheme with county councils. The expenses for working the scheme could be raised out of the education rate. This act accordingly set up a second system under the administration of the Board of Education, and local authorities were left to decide which of the two they would adopt.

The board of trade scheme provides for the establishment, where juvenile labor exchanges are organized under its regulations, of special advisory committees. The committees include persons with a knowledge of education and young people, and representatives of employers and workpeople. A chairman is appointed by the board of trade, while the official in charge of the local labor exchange and His Majesty's inspectors are permitted to attend the meetings of the committees. The duty of these special advisory committees is to advise in the management of the juvenile exchange, and to give advice and information on the choice of employment to boys and girls and their parents. Such information is supplied on the responsibility of the committee, without attaching any to the board of trade or the labor exchange. Local authorities adopting this scheme are invited and encouraged to organize bodies of voluntary workers in connection therewith. The plan of utilizing the national labor exchanges for purposes of juvenile employment has been adopted by the London County Council. For this object the board of trade in 1910 appointed the London juvenile advisory committee, consisting of 30 members, of whom 6 were nominated by the London County Council. Besides this central committee, local advisory committees were appointed in connection with the exchanges. In addition, the children's care committees and the local associations of care committees, established by the London County Council, undertake to secure information on the qualifications of the children leaving school and their home conditions, and to carry on some supervision of the young employees. The business of the care committee is to advise and guide. The local advisory committees secure the information on employment, introduce the applicants to suitable

openings, and supervise their progress at work. As the system has only been in operation for two years, it is perhaps too early to judge of its success. And in any case London offers an area full of difficulties in the matter of juvenile employment which do not beset the problem in other and smaller towns. It is estimated that only about one-third of the children leaving elementary schools enter occupations which can be called skilled. There are, however, several organizations which are placing their experience at the service of the authorities. Among these may be mentioned the apprenticeship and skilled employment associations, whose object is the "promotion of thorough industrial training for boys and girls by apprenticeship and other methods, including arrangements for attendance at trade schools and technical classes"; the lads' employment committee, which not only aims to find suitable employment, but carries on a system of aftercare through the lads' brigades and clubs; and the Mansion House advisory committee of associations for boys, representing brigades, scouts, and clubs, which aims to popularize the labor exchanges and to encourage attendance at a continuation school, and joining one or other of the boys' associations.

The system under the education (Choice of Employment) act, 1910, is regulated by a "Memorandum with regard to cooperation between labor exchanges and local education authorities exercising their powers under the education (Choice of Employment) act, 1910," issued by the board of trade and the Board of Education. Where the board of trade has already appointed special advisory committees in connection with labor exchanges, local authorities are not to use the powers given by the above act. Otherwise local education authorities may appoint subcommittees consisting of representatives of industry and education, including teachers, and voluntary workers. The executive work is to be conducted by a specially appointed officer. Provision must be made for cooperation between the local organizations and the national labor exchanges, and, where possible, it is suggested that one central office should be opened for both. In any case, applications for employment and notices of vacancies should be available for the use of both bodies. Where differences arise, the decision is to rest with the local education authority's officer in the case of children at school and for six months after leaving, and in all other cases with the official in charge of the labor exchange. The duty of the juvenile employment committees and their executive officers includes the registration of applicants, advice to applicants, efforts to extend the period of education, to make pupils acquainted with the local education facilities, to recommend attendance at evening and continuation schools, and to secure employment suitable to the individual needs of the applicants, not necessarily offering large wages, but holding out prospects of training and permanent employment.

The Liverpool education committee has established a juvenile employment exchange under this act. The exchange is under the management of a committee consisting of the following members: Eight members of the Liverpool education committee, six teachers elected by the head teachers of all senior departments of the elementary schools and the principals of mixed schools, the director of education, the clerk for elementary education, the senior inspector and inspectress, the superintendent of attendance officers, two representatives of employers and two of trades unions, three managers of schools nominated by the education committee, two persons with special knowledge and experience of the subject, and the officer in charge of the local labor exchanges or his representative. The H. M. inspector of schools of the district may attend the meetings of the committee. Rooms for the administration of the exchange have been provided in the education offices. The work is under the charge of an official appointed by the education committee. It was intended that an officer of the local labor exchange should be associated with him, but this scheme for cooperation has, up to the present, not proved successful. But it is open to this officer to be present at interviews between applicants and the committee's officer and to consult the registers kept at the juvenile employment exchange. Each elementary school serves as a suboffice for the purposes of the scheme, and the care committees also undertake to place the parents and children in touch with the exchange. An advisory committee of employers representing 30 associations, trades, and professions has been formed and assists in collecting information. The officer in charge of the exchange is assisted by a male and female visitor and a clerk. The head teachers and their assistants are associated in this work both for purposes of registration and securing employment. About six weeks before the date of leaving, the head teachers invite the parents of their pupils to meet them at the school for the purpose of an interview, at which, if possible, the parents are induced to retain their children longer at school, or the future of the children is discussed. The accompanying letter is given to the boys and a similar one with the necessary modifications to girls:

LETTER TO BOYS.

CITY OF LIVERPOOL.

EDUCATION OFFICES,
14 Sir Thomas Street, Liverpool.

JUVENILE EMPLOYMENT COMMITTEE.

1. The Juvenile Employment Committee learn that you will shortly be leaving school. They hope that, with your parents' help and approval, you have found, or will find, some suitable employment to go to. *The choice of this is very important for you.* It is not difficult for you to find a situation, but if it is one which will only employ you for two or three years, without any prospects of improving your position

afterwards, you should not take it until you have your teacher's advice about it. Your teacher may be able to assist you, or will perhaps advise you to come to the Committee's Offices (at the address you will see at the top of this letter) and get advice there, which will be gladly given you. *Do not decide in a hurry;* very many boys and girls have done that and regretted it all their lives afterwards. You are not old enough, and you have not experience enough, to decide for yourself; so talk over what you will do, first with your parents, then with your teacher, and then, if you like, at the Committee's Office. The Committee often hear of situations vacant. Of these they keep a list, and perhaps one of them might suit you if employment is not found for you in any other way.

2. Important considerations for you to bear in mind are these: You have to *think of the future and not merely of the present;* the man who knows a trade has always a better chance of success than one who is entirely unskilled, and often a better chance than a clerk in an office.

3. Remember, too, that *the boy who works cheerfully and with industry has the best chance* of getting on. Always be ready to do a little more than you are asked.

4. *Do not give up one situation until you have got a better one.* If you are in a difficulty your former teacher, or the Committee's Officer at Sir Thomas Street, will be willing to advise and help you.

5. The Committee want you to look upon them as your friends, for they are anxious to help you. There is one point to which they would wish your attention to be specially drawn. *You ought not, on leaving your day school, to think that your education is completed,* but should seek to join a suitable Evening Continuation School in your neighborhood. About this your teacher will advise you.

Finally, remember that whatever others do for you, *you must put your own shoulder to the wheel.*

JAMES G. LEGGE, *Director of Education.*

Cards, of which copies are given (pp. 157, 158), are filled in with information which will assist the officer of the exchange, whether the parents already have some employment in view or whether they desire the assistance of the exchange. At the interview emphasis is placed on the importance of securing employment which holds out prospects for the future rather than high wages in the immediate present. The establishment of the exchange is not intended to do away with the cooperation between teachers and employers which formerly existed in many instances, but a card must be filed at the exchange giving information about every child leaving school. Where neither the parents nor the teachers know of suitable openings, the parents are advised to call at the exchange with their children, taking the nomination cards, medical report cards, and testimonials from the head teacher. At the exchange the officer endeavors to discover whether the applicants have the qualifications for the employment selected by them, and explains the conditions, wages, prospects, etc., attaching thereto, and if suitable vacancies exist, the applicants are sent to interview the employers.

If there are no suitable openings at the moment, notice is sent when they occur. The exchange keeps in touch with young persons in employment up to the age of 17, and with their employers, and endeavors with their cooperation to secure the attendance of the

employees at continuation schools or technical classes, on which information is given by the head teachers as children leave school. Through the employers' advisory committee and voluntary agencies, the exchange has so far been successful in obtaining information of vacancies as they occur. To facilitate the work of giving vocational guidance, an inquiry has been conducted into the nature of the openings for juvenile labor in Liverpool. On the basis of this inquiry it is hoped to issue a handbook for the use of teachers and others who have to advise young persons on the selection of occupations, similar to the well-known "Trades for London Boys," and "Trades for London Girls."

About 40 local education authorities, including Manchester recently, have up to the present adopted schemes similar to that of Liverpool under the education (choice of employment) act. This system has the advantage over that operated under the board of trade in being thoroughly coordinated with the educational systems. It does not involve a sudden breach with the influences under which the children have been brought up and secures after-care by the same authorities, at any rate where care committees have been established, as have supervised their social welfare during their school career. It possesses the further advantage of being in the hands of those who can impress the young persons with the value of further education. And, lastly, since the employment exchanges under this act and the school medical service are parts of the same educational system, the medical reports, especially of the results of the inspection of leavers, which are otherwise of a confidential nature, can be made accessible to the officer in charge of the exchange. With this object in view the board of education (see An. Rep. of Chief Med. Of., 1911, pp. 245–267) has laid special stress on the medical examination of children about to leave school and has suggested that their particular needs should be borne in mind by the school medical officer. The juvenile employment exchange can thus endeavor to provide occupations for which applicants are not only educationally, but also physically, fitted. The difficulty of transferring the records of the juvenile employment exchanges to the national labor exchanges, when boys and girls reach the age of 17, is not so insuperable as to justify the sacrifice of the advantages of this system. One difficulty, however, does remain, and that is the finding of suitable employment for the boy and girl, who, through no fault of their own, are so poorly clothed that they hesitate to approach the exchanges or can not, when they have applied, be presented for suitable employment. But here again the system under the local authorities for education is superior, in that it secures the cooperation of teachers, school managers, and care committees, who deal with such cases in all the poorer schools.

Record to be used where employment has been arranged. Boys.

LIVERPOOL EDUCATION COMMITTEE.

EMPLOYMENT OF SCHOLARS LEAVING SCHOOL.

Name of pupil.....Address.....

Date of birth.....When leaving school.....

Standard or class.....Character and conduct*.....

Physique*.....Hearing*.....Sight*.....Regularity*.....Punctuality*.....

Occupation of father, mother, or guardian †.....

Occupation obtained by parent or guardian for child.....

Evening school which pupil will attend.....

Brief report of head teacher as to capacity and suitability of scholar for the occupation selected and opinion of the head teacher as to the kind of employment, if any, at which he would be likely to succeed.

.....

.....

Signed .....Head Teacher.

.....School.....Dept.

Date.....

* E. excellent. V. G. very good. G. good. F. fair.

† Strike out whichever does not apply.

Remarks (to be filled up at the Education Office).

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JUVENILE EMPLOYMENT.

157

Nomination form to be used where employment has not been found. Boys.

LIVERPOOL EDUCATION COMMITTEE.

EMPLOYMENT OF SCHOLARS LEAVING SCHOOL.

Name of pupil.....Address.....

Date of birth.....When leaving school.....

Standard or class.....Character and conduct*.....

Physique*.....Hearing*.....Sight*.....Regularity*.....Punctuality*.....

Occupation of father, mother, or guardian †.....

Occupation preferred by parent or guardian for child.....

Evening school which pupil will attend.....

Brief report of head teacher as to capacity and suitability of scholar for the occupation selected and opinion of the head teacher as to the kind of employment, if any, at which he would be likely to succeed.

.....

.....

Signed.....Head Teacher.

.....School.....Dept.

Date.....

* E. excellent. V. G. very good. G. good. F. fair.

† Strike out whichever does not apply.

Remarks (to be filled up at the Education Office).

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