

UNITED STATES BUREAU OF EDUCATION
BULLETIN, 1912, NO. 11 WHOLE NUMBER 482

CURRENT EDUCATIONAL TOPICS

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WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

CURRENT EDUCATIONAL TOPICS.

I. ILLITERACY IN THE UNITED STATES AND IN EUROPE.

Illiteracy is a measure of the extent of elementary education in a nation, direct and universal in its application. For this reason special emphasis is placed upon this item in the census of the United States, which has become a model in respect to its presentation as well as in the discussion of its age and race bearings, the latter being one of fundamental importance.

The following summaries present the main results of the inquiry as set forth in the United States census of 1900 and in the returns for the census of 1910:

Population and illiteracy.

	Population	Per cent of total population.	Population 10 years of age and over.		
			Total.	Unable to read and write.	
				Number.	Per cent.
1900.					
Native whites.....	60,595,379	74.5	41,236,662	1,913,611	4.6
Foreign-born whites.....	10,213,817	13.4	10,014,256	1,287,185	12.9
Colored.....	9,185,379	12.1	6,998,906	2,979,823	44.6
Total.....	78,994,575	100.0	57,949,824	5,180,669	10.7
1910.					
Native whites.....	68,386,422	74.4	50,969,343	1,535,630	3.0
Foreign-born whites.....	13,345,206	14.5	12,944,215	1,650,519	12.8
Colored.....	10,240,638	11.1	7,646,712	2,331,659	30.5
Total.....	91,972,266	100.0	71,560,270	5,517,808	7.7

! Subject to revision.

COMPARATIVE VIEW.

The preliminary announcements of the returns under this head for the Thirteenth Census have already excited discussion and inquiry as to the relative standing of the United States, as indicated by this vital condition. The inquiry is enforced by reference to the enor-

mous expenditure of money and energy upon the work of public education.

The significance of illiteracy as a measure of popular enlightenment depends upon many conditions. Chief among these are the extent, racial character, and density of the population, since these conditions determine in great measure the success or failure of the endeavor to bring all the children of a nation under instruction. It follows, also, that the comparison of great nations with small nations, in this respect, carries little weight. For example, conditions in Denmark, with its compact population of two and a half million, in which illiteracy has been practically eliminated, may properly be compared with individual States of the Union, but signify little when the entire Republic, with its vast extent and population, is considered. For such comprehensive view the United States must be brought into relation with other nations great by reason of their populations and world influence. The significance of the comparison depends further upon the provision for public education. From this standpoint nations may be considered in two groups; the first group comprising nations having well-organized systems of public instruction; the second group, nations in which public instruction is not yet organized or has not yet passed the theoretic stage. Obviously the standard for the United States must be looked for in the first group.

The census of the United States, as already indicated, shows every 10 years the status of the country with respect to illiteracy, considering the population by age periods; and the discussion of its bearing upon the school provision is based upon the degree of illiteracy in the population above 10 years of age. This exact basis is not attainable, as a rule for other countries. In some instances the ratio of illiteracy is drawn from official marriage registers or from the record of army recruits, or from both these sources; in still other cases it is determined for age periods, not by exact count, but by statistical methods.

Within the limits defined, the United States belongs to the group of nations comprised in the following tables:

Density of population.

Nation.	Year.	Popu- lation.	Number per square mile.
France.....	1906	39,376,000	189.50
German Empire.....	1910	64,908,423	310.40
Great Britain.....	1910	41,086,401	402.30
United States.....	1910	91,973,266	30.00

According to the latest official information the status of the four nations here considered as regards illiteracy is as follows:

Illiteracy in certain countries.

Country.	Year.	Per cent of illiterates.	Basis of estimate.
France.....	1906	11.4	Population above 10 years of age.
German Empire.....	1905	.03	Army recruits.
Great Britain.....	1904	1.5	Marriage register.
United States.....	1910	7.7	Population above 10 years of age.

With reference to France it should be noted that the population above 10 years of age in 1906 included a large proportion of people who had never had the benefit of the compulsory school laws, since these were not enacted until 1882. In 1904 the records of army recruits in France, all of whom had been subject to the compulsory laws, showed only 3.5 per cent of illiterates.

The nations of the second group present the extremes of culture and distinction in the realms of science and literature, with high degrees of illiteracy. The following table shows their status in the latter respect, according to the latest census or official estimates, population above 10 years of age alone considered:

Nation.	Year.	Per cent of illiterates.
Austria.....	1900	26.2
Hungary.....	1900	40.0
Italy.....	1901	48.0
Spain.....	1900	58.7
Russia.....	1897	70.0

† Including Croatia and Slavonia.

The lowest ratio for the group, i. e., 26.2 per cent, exceeds that for the Southern States of the Union, in which the greater part of the colored population is massed. In 1900, 23 per cent of the population above 10 years of age in those States were illiterate; for the white population, alone, the ratio was only 11 per cent. The progress of the colored people in respect to education, as indicated by the preliminary summary from the returns for 1910, makes it certain that the ratio on the total population of the South was greatly reduced during the decade 1900-1910. Undoubtedly there has also been a decrease of illiteracy in the European nations of the group here considered, and especially in Hungary and Italy. Throughout this group, however, the progress of popular education is hindered by obstacles greater than are encountered in any part of the United States.

There remain in Europe several small nations in which illiteracy has been reduced to a minimum or practically eliminated. They

may justly be compared in this respect with individual States of the Union having approximately the same population. Such comparisons, however, are merely suggestive, as they are necessarily made from different standpoints. For the European nations, in each case, the basis is the record of army recruits; for the selected States, the basis is the population above 10 years of age. Within these limits the comparison between the smaller kingdoms referred to and the States nearest them in population, census of 1900, stands as follows:

Nations.	Army recruits— per cent of illiterates.	States.	Per cent of illiterates in population above 10.	
			Total.	Native whites.
Denmark	0.2	Indiana	4.6	3.6
The Netherlands	1.4	New York	5.5	1.2
Sweden3	Illinois	4.2	2.1
Switzerland5	Massachusetts	5.9	8

In the case of the foreign nations in the foregoing table, only the adult male population is represented, which possibly gives a somewhat more favorable showing than would be the case if the entire population was included, since the military system itself furnishes a motive for the elementary instruction of men which does not affect women. It should be noted, however, that in three of the foreign kingdoms elementary education has long been compulsory, and the compulsion is rigidly enforced, so that no one escapes the obligation of learning to read and write. In the Netherlands a compulsory law was not passed until 1900, but the importance attached to education has hitherto furnished parents a sufficient motive for securing the instruction of all their children; for instance, there is abundant provision of industrial and technical schools, including schools of household industry for girls, but only children who have passed examination in the elementary subjects are admitted to this order of training. Hence it may be said that the favorable view of these nations with respect to illiteracy derived from the record of army recruits is confirmed from many other sources. The condition of illiteracy in the four States selected for this comparison is presented from the same standpoints as in the previous comparisons. The lower proportion of illiterates in the native white population, as compared with the total population, emphasizes anew the fact that illiteracy in the United States is a burden imposed by the presence of large proportions of foreign born and of colored people. The decline in illiteracy for these two classes, as shown by the comparison of the census of 1900 with that of 1910, is proof of the steady progress of the Nation toward the plane of the highest as regards popular intelligence.

II. INDUSTRIAL SUPERVISORS IN GEORGIA.

The financial limitations to which county superintendents are usually subjected and the extensive territory which they must often cover render the work of rural supervision exceedingly difficult in many portions of the country. One of the most promising efforts to ameliorate the conditions is that of Mr. N. C. Nelson, of St. Louis, Mo. He is providing at his own expense for limited periods industrial supervisors as assistants to the county superintendents in a few counties in Georgia and Louisiana. The purpose, operation, and results of his efforts in this direction are thus described by Mr. Nelson:

In the summer of 1909 consent was obtained of the superintendent and school board of Putnam County, Ga., to accept an industrial teacher for the rural elementary schools of the county. The teacher came in September. She was thoroughly experienced in country teaching, familiar with cooking, sewing, and home-keeping; had managed successfully a small but, first-class farm; was modest, tactful, and industrious; but owned no diploma. She was placed under the direction of the superintendent, but with the understanding that she should manage for herself, he lending such assistance as he could. The plan was to visit the schools in succession, spending some days in each district on the first round. At the beginning she was taken around and introduced by the superintendent. She became acquainted with the teacher and the pupils, talked to the girls about sewing and cooking; to the boys about shopwork, a garden, cleaning up, and improvements to the house and the grounds. She helped with the teaching, talked clubs, library, and wherever possible arranged for some domestic science. She was invited to the homes, took a hand in the kitchen, talked crops and stock to the farmer, and chickens, vegetables, and flowers to the mother. This was repeated on following visits. Soon canning clubs and school improvement clubs were organized; meetings were held; a library fund was started; socials and suppers were given to raise money and get together; a new schoolhouse was projected; longer school term considered; and more homes were visited. There was usually a cordial response; if not on the first visit, then at the next. It was not long before she was very much in demand, freely sent for, and entertained. She was not an instructor, but a visitor, adviser, and leader.

The plan proved acceptable and has needed no changes. The superintendent and board regarded it an important addition to the schools. Cooking and sewing were started in many places, additional tax was voted, the teachers were helped. Perhaps the most important was the awakening of social interest and the intercourse with the families at home. For the second year the boys' and girls' clubs were organized to make a joint exhibit at the county fair, with a liberal prize list. In one consolidated school a full shop and kitchen were

installed, money was raised by subscription for additional room, and an industrial teacher employed. Social gatherings and public meetings became common, the schoolhouse became a social center. Doing things became fashionable. For the third year the board unanimously took over the teacher and assumed the salary, which includes the very small expenses.

Before the end of the first year applications had been received from other counties. Three additional teachers, of qualifications about similar to the first, were added. One of these was placed in Putnam County, one in Oconee, one in Douglas, and the first teacher went to Greene. The same course was followed in the new counties with the same results. The superintendents were exceedingly helpful, gracious, and approving. For the third year, Morgan, Jones, and Hancock Counties were supplied, a number of applications being still on the waiting list. The original teacher was made supervisor to visit and help the others. There have been two gatherings of all the teachers and some of the superintendents to become acquainted and compare notes. No change in the plan has been suggested. There are no rules; no statistical reports are required, but there is much correspondence. The teachers are furnished free to the counties for two years, after which the county assumes the charge.

III. NEW PHASES OF EDUCATION IN BUFFALO, N. Y.

1. DOMESTIC EDUCATION IN IMMIGRANT HOMES.

From the first report and other documents of the Buffalo committee of the North American Civic League for Immigrants, it is learned that the organization has adopted a new way of teaching immigrant women how to become good housewives. The method consists of sending "domestic educators" directly into the homes of such families as are willing to receive them. There the domestic educators show the housewife how to keep her home clean, how to cook, how to vary the diet, how to get the most for her money, how to prevent sickness, how to sew, how to take care of the children; in fact, all or nearly all phases of home making are taken up and thoroughly demonstrated. The work started September 1, 1911, in charge of Mrs. A. L. Hansen, who now has a staff of 3 paid workers and 12 volunteer assistants. The territory is divided into districts, apportioned among the paid workers, who supervise the volunteers. Of the 12 who are giving their services without monetary reward, 6 are working directly with the families, 4 are teaching classes of domestic economy for girls, 2 are waiting for special classes to be formed, and Dr. Mallory, a woman, is giving special lessons in sex hygiene in some of the classes.

The importance of domestic education for immigrants is thus summarized by the Buffalo committee:

Amelioration of the home and living conditions of immigrant families is at the center of the problem of assimilation. Better homes mean better citizens. More serious than the present overcrowding, bad air, poor food, sickness, and the rest is the underlying hygienic and domestic ignorance. Hitherto no adequate steps have been taken to replace this ignorance by intelligence. To be reached effectively for this purpose these immigrants must be reached in their homes.

Regarding the practical results achieved the most recent available report by Mrs. Hansen says, in part:

It has been found that the teaching given to the mother of a family is passed along to her neighbors and relatives, especially the teaching of food principles. It very frequently happens that a woman's neighbors and relatives are in her home when the educator arrives, and they receive the benefit of the instruction. The news seems to fly along some streets that the educator is in a certain home, and women come flocking into the house to see what is going on, many of them bringing garments to be fitted or altered.

Cereals are now used in 50 homes where a month ago they were unknown. The use of coffee in all the homes the educators are visiting is on the decrease, and cocoa is used in its stead, while fresh milk has been substituted for canned milk. Stews and nourishing soups have taken the place of boiled cabbage and fried pork. Women are baking their own bread and cookies, instead of buying a most inferior quality at the nearest bakeshop. Some families who were left as hopeless by several other philanthropic agencies have been induced to clean up their homes under the educators' instructions. There are numberless children now receiving proper hygienic care who before the educators' visits were strangers to soap and water. Prospective mothers have benefited greatly by the instruction given; several babes born this month have found carefully prepared clothing awaiting them, whereas their elder brothers and sisters found only an old shirt.

Hardly a day passes that the dispensaries are not visited by several patients sent in by the educators.

Lessons in sewing have proved very attractive to a large number of women. The educators have found that after cutting and fitting one garment for a woman, she can generally manage a second very well alone. The children are going to school with buttons on their dresses, whereas before the garments were pinned; the stockings are getting attention both as to mending and washing, whereas previously there was only neglect.

Through cooperation with the Charity Organization Society 20 women are taught how to buy economically. The Charity Organization Society committee have given the grocery order, or cash, for the family into the care of the educators. It has been found that after the aid has been discontinued the women still buy as instructed. In a number of these families regular instruction by the educator can soon be discontinued altogether.

The class work has proved far-reaching. The educators have found that the girls carry home the instructions given in class, so that for every girl in class a family is reached. The classes in sewing are taught hygiene and economy as well as sewing. The cooking classes have been given instruction in preparation of cocoa, cereals, toast, and corn-meal bread. At each lesson the food principle of the food under preparation is given and the girl shown the benefit derived from using these foods.

The classes now number 10 and the total number of pupils 116. As only 3 of these children are in families visited, 113 additional families are thus affected through classes, making a total of 190 families reached.

The families dealt with are usually referred by the Charity Organization Society, social service departments of hospitals, settlements, the District Nursing Association, clergymen, and neighbors. In these families the domestic educators confine themselves to constructive educational work. Where material relief is necessary it is supplied by the Charity Organization Society. Where sickness or ailments exist the District Nursing Association, the tuberculosis bureau of the health department, dispensaries, and hospitals are called upon. Duplication is avoided. Cooperation is the watchword.

2. BUFFALO'S SCHOOLS OF CITIZENSHIP.

According to the Buffalo committee of the North American Civic League for Immigrants, two-thirds of the population of Buffalo are either foreign born or of foreign parentage. The committee claims for Buffalo the distinction of being "the first city in the United States to take the forward step of placing citizenship education on

a clearly recognized and distinct basis." The committee outlines Buffalo's immigrant problem, in the solution of which its schools of citizenship are designed to render aid, as follows:

These immigrants in the Buffalo community are at once a liability and an asset. Most of the immigrants are poor to the point of destitution when they come here. They have been accustomed to agricultural life. They have known only undemocratic government. Their traditions and their whole point of view are foreign. They are dependent on an alien tongue.

Because of their poverty they have to find the cheapest living quarters. Because they have had only agricultural experience, in the city they are fitted only for common labor and so they get only minimum wages. Minimum wages mean that they must continue to live in the poorest quarters, which in turn means overcrowding and disease. Long, grinding toil, overcrowded homes, and the lack of wholesome recreation inevitably produce a crop of saloons, and the saloons lead to drunkenness, moral degeneration, and crime. Ignorance of democratic government retards the development of intelligent citizenship. Foreign traditions and viewpoint, and dependence on an alien tongue, result in segregation in semisolated colonies. This segregation aggravates and perpetuates the other evils. Buffalo's immigrants are in the community, but not of it. For purposes of progressive citizenship they are in large degree a dead weight. In short, they are a serious civic liability.

The single fact, however, that these immigrants provide half of the community's common and semiskilled labor shows that even under present conditions they are an asset of great value. The city's industries are largely dependent upon them. Their present value as an asset is small in comparison with their potential value. They are capable of being developed into intelligent, alert citizens, who, instead of in many ways holding the community back, will contribute actively to its advance. For the community as a whole, improvement of the conditions of the city's immigrants means a gain in community coherency, strength, and effectiveness.

Independently of the economic problem involved, the civic condition of the immigrant is susceptible of improvement through education, and this angle of attack, among others, has been adopted by the Buffalo committee by the establishment of a specialized school, which it describes as follows:

Under present conditions the proportion of immigrants who become naturalized citizens is very small. The proportion of those naturalized who have an adequate understanding of the meaning and obligations of citizenship is still smaller.

The New York-New Jersey committee has for some time been working on a plan for establishing schools of citizenship to deal with this situation.

The Buffalo committee proposed to the department of public instruction last spring that it try some citizenship classes in the evening schools. The department agreed to be responsible for supervision if the committee would bear all expenses except the cost of heat and light. The experiment was made on this basis, with the cooperation of the Young Men's Christian Association, which provided part of the teachers. The classes were held in May and June. Approxi-

mately 250 Polish and Italian young men were given instruction in naturalization and citizenship, combined with English.

Though the difficulties involved in the entire newness of the undertaking were many, the experiment was regarded as on the whole so successful—thanks chiefly to the fact that Principals John J. Walsh and Charles L. Ryan were constantly at the helm—that the department decided to make citizenship instruction a permanent and regular part of the evening school system. Last fall classes of this sort were organized in the majority of public evening schools in immigrant districts.

Buffalo is the first city in the United States to take the forward step of placing citizenship education on this clearly recognized and distinct basis.

Inasmuch as this departure is closely connected with the evening school and extension work of the department of public instruction, and as this work as a whole is such a vital factor in the Americanization of the city's immigrant population, the committee has made the following recommendations, with a view to getting the largest profits from this part of Buffalo's educational machinery:

1. Perfecting the organization of the instruction in citizenship.
2. Extending the teaching of English as far as possible and raising it to the maximum of efficiency.
3. Lengthening the evening school season to the degree that the attendance warrants.
4. Making use of school buildings every week-day evening by organizing two-evening and three-evening groups of classes and holding on Saturday evenings neighborhood gatherings on the social-center plan.
5. The appointment of a director of evening, vacation, and other extension work, to give all his time to these matters.

Supt. Emerson has expressed his approval of these suggestions, and his intention of putting them into effect as soon as possible. The department's budget for the ensuing year provides for requisite appropriations.

IV. JUVENILE LABOR BUREAUS AND VOCATIONAL GUIDANCE IN GREAT BRITAIN.

In Great Britain the problem of juvenile labor has reached the same stage as in the United States, hence special interest attaches at this time to measures adopted by British authorities to conserve and direct the future working force of the nation. These measures have been excited by the alarming increase in the number of the unemployed.

Repeated investigations have proved that the idle army is constantly recruited from the ranks of the young who are not fitted for skilled labor of any kind. As regards the children of the poor and the shiftless, education and labor present, in fact, two aspects of the same problem. This relation is now clearly recognized in Great Britain, and legal measures have been taken to use this relation for the benefit of juvenile workers.

By the labor exchange act of 1909, authority was given to the board of trade to establish and maintain labor exchanges; to assist exchanges established by public bodies or by private agencies; to make general regulations for the management of labor exchanges established or assisted by the board; and also to establish and support advisory committees in connection with the management of labor exchanges. The education (choice of employment) act for England which went into effect November 28, 1910, authorized the 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."

As a result of the two measures the board of trade was brought into direct contact with the educational authorities, which in many places had already set up a system of labor exchange in connection with the public schools. After much deliberation, a joint memorandum was issued on the part of the two central authorities, the board of education and the board of trade, determining their relations in respect to juvenile employment. The memorandum provided that the right of directing pupils, boys and girls, in regard to employment, for 6 months after the close of their school life, should be reserved to the education authorities.

This agreement not only saved the employment agencies already established by the school authorities, but recognized their preeminent fitness for organizing the vocational guidance of the young. The Scotch education act of 1909 had previously empowered local education authorities to take measures for the industrial guidance of children.

In accordance with this official action juvenile labor bureaus are being established in all the large cities of Great Britain, either directly by the education authorities or by other bodies with which the former cooperate. The general conduct of the bureaus, which varies but little in different cities, will be best understood by reference to typical examples.

THE MOVEMENT IN BIRMINGHAM.

Birmingham, a great manufacturing center, numbering more than 570,000 inhabitants, was one of the first cities to take action in respect to the vocational guidance of the young. Widespread attention was called to the subject by public meetings and by a circular letter emanating from church dignitaries, members of Parliament, labor leaders, and employers. One result of this action was the appointment of a subcommittee of the Birmingham education authorities to devise measures for assisting pupils in the choice of employment. Before the committee had completed its work, the labor exchange act was passed, and the recommendations were carried out in agreement with the board of trade. The juvenile employment bureau was organized by the education committee as part of the British Board of Trade national employment system. The bureau and its officials are under the supervision of a central committee. Local exchange centers are established to record and fill local vacancies, acting always in advice with the central committee. There is a "Central Care Committee" organized as a subcommittee of the education authority, and including six representatives of that body, four social workers, four teachers, four employers, and four trade unionists, together with the superintendent of the Birmingham Labor Exchange, and the medical inspector of schools.

The British Board of Trade meets all expenses incurred in connection with the employment bureau, the head of which is appointed by that body after consultation with the local education authorities. The work of teachers in finding situations for boys and girls is encouraged, while employers are urged to notify vacancies to the employment bureau, so that they can be filled by exchange officials.

At the time the system was adopted it was estimated that in Birmingham 8,500 children leave the schools annually, of whom 4,500 are boys; that there were in Birmingham 85,900 children less than

17 years of age who had left school, of whom 800 were less than 14, 11,500 between 14 and 15, 11,600 between 15 and 16, and 12,000 between 16 and 17. These all belonged to the laboring classes; and while the number who were in need of responsible guidance was not exactly known, experience showed that they must form a very large proportion of the total number.

EDUCATIONAL INFORMATION AND EMPLOYMENT BUREAU, EDINBURGH.

The school board of Edinburgh, like the council of Birmingham, established a system of labor exchanges in the interests of juvenile employees before there was any legislation on the subject. The work was started by the school board; employers, organized trades and crafts, religious, social, and other welfare agencies joined in its support. Their efforts at first were directed to promoting attendance at continuation schools. In 1908 the board took measures to utilize the understanding and cooperation thus brought about for the establishment of an educational information and employment bureau.

After the passage of the labor-exchange act, this bureau became a branch of the labor exchange, but housed in the school-board offices, and managed in connection with the education system of the city. All matters pertaining to the employment of persons between the ages of 14 and 17 were transferred to the juvenile department at the school-board offices. The advisory committee formed originally by the school board continues to maintain oversight of the employment, the continuation education, and the general welfare of children and youth.

This advisory council, which is an invaluable feature of the system, comprises the members of the school board (two of whom are women), a representative of the board of trade, and representatives of the town council, chamber of commerce, trade associations, local trade unions and educational trusts, and head teachers of day and continuation schools.

During the four school years (1906-7 to 1909) covered by the latest report of this work in Edinburgh, the enrollment of pupils at the continuation schools increased by 136 per cent; that is, from 3,722 (in 1905-6) to 8,789 in the last year. The school board, supported by the labor bureau and by the advisory council, has been pushing energetically in the direction of enrolling the 7,000 or more additional young people, between the ages of 14 and 17, who are receiving no instruction either in subjects of general education or in the technical principles of their daily occupations.

The report shows also steady progress in the difficult undertaking of placing young workers in suitable employment. This requires the confidence and support of employers on the one side, and on the

other a willingness to be guided on the part of the parents and the children needing the services of the bureau.

In the summer of 1909, or 14 months after the present organization was effected, 4,270 pupils were reported as leaving the ordinary day schools. Of this number 3,074 stated their intention of enrolling in continuation classes. A third of these (1,129) made application for employment, and of this number 740 were placed, through the agency of the bureau, in suitable employment. The positions included 60 different trades, also office work and miscellaneous business.

MAGNITUDE OF THE PROBLEM IN LONDON.

The problem of juvenile labor in London presents special difficulties by reason of its magnitude and racial complications. The London county council, the education authority for the "inner ring" of the metropolis, through its special committee deals with a population of 4,750,000. The entire school population, in round numbers 887,000 children, is scheduled and under the supervision of school attendance officers. Consequently the status of each child as regards school attendance and living conditions is known.

The need of juvenile labor exchanges has long been recognized in the metropolis, and several private agencies have undertaken the service within limited areas of the city. But the most successful of these, the "lads' employment committee," reaches every year only a few hundred poor boys of the better sort. It is estimated that 40,000 boys come to the school-leaving age, 14 years, annually; they represent the juvenile labor problem of the metropolis in its full magnitude and its blackest aspects.

Within the past few months the London council has developed plans for the new service on the basis laid down by the board of trade. Already 20 advisory committees, representing employers, workmen, and the education authorities have been formed to cooperate in this work with the 21 metropolitan labor exchanges pertaining to the system under the board of trade. The teachers send to the committees of their respective districts particulars concerning the children who are about to leave school. The committees, through their relation with the labor exchange, are posted as to employers and vacancies; and thus, it is hoped, the work and the young worker may be brought together.

In London, as in Boston and New York, experience has shown the need of special training for the work of vocational guidance. To meet this need the board of trade and the London council have drawn up a tentative program for professional instruction, and made provision for classes under the conduct of competent and experienced teachers.

THE GRAVER ASPECTS OF THE PROBLEM.

The graver aspects of this social problem were considered in a recent meeting of the North of England Conference, an organization that has led public action in many reform measures. The conference declared emphatically for an extension of the compulsory school period. "This is essential," said a leader of industry, "if the youth of the country is to obtain the minimum standard which a modern state requires * * * and our industrial and commercial system demands."

At present "compulsory education" in England beyond the age of 14 years is secured in a measure by the action of certain private firms which send the young people in their employment to evening classes up to the age of 18 or 19, and pay the fees. This form of "friendly compulsion" is not to be hoped for in the great centers of industry. In them, the only remedy for the evil of premature labor, with its aftermath of incapable and idle men, is legislation that shall raise the age of entry into trade or business to 16 years, with compulsory school attendance up to that age. Makeshift employments for the young would thus be ended; but every effort for such legislation is baffled by the pressure of human necessity, the need of food and shelter, which is the chief cause of the labor of children.

In London, where poverty exists in its greatest extent and complications, the public school is rapidly becoming the chief center of the movement for social and industrial reform. Its agents in this activity are the juvenile labor exchanges, the advisory committees, and the children's care committees. The last-named committees were formed originally to look after necessitous children attending the public schools. In the development of the juvenile employment system, they have been authorized to maintain friendly oversight over boys and girls securing positions through the labor exchanges, up to the age of 18 years.

Already 450 elementary schools are referring children to the labor exchanges through the medium of the advisory committees, and every week the number increases.

V. THE EDUCATIONAL MUSEUM OF THE ST. LOUIS PUBLIC SCHOOLS.

The effectiveness of many elementary school courses may be increased by the liberal use of photographs and other objective material, to the end that the child may be brought into a more nearly immediate contact with reality than can be given him by books. "Objects must always underlie books as the guarantee of knowledge which concerns the material world."—(B. R. Andrews). This is the ground upon which the school museum was introduced into the instructional scheme of the elementary schools of St. Louis.

The collection was begun as an experiment in 1905, at the close of the St. Louis World's Fair, when the board of education acquired from the exhibitors, principally by gift, large quantities of material, the educational value of which did not cease with the termination of the fair itself. Valuable additions have since been made through the courtesy of some of the great museums of the country, of the Jamestown Exposition officials, and of commercial firms, both domestic and foreign. The museum now contains about 6,700 collections of educational material, so classified as to reinforce and accord with the course of study. The subjects in the teaching of which the education museum provides especially useful aids are history, reading, art, geography, nature study, and other elementary sciences. Of the collections on hand, 1,742 are separate entries, the rest being duplicates.

In the collation and presentation of the museum material, a twofold purpose is constantly kept in view: By showing pictures to transport the child, as it were, to the place illustrated, and by showing objects to transport the place to the child. Thus, when the class comes to a study of the cotton States the museum furnishes specimens of the cotton plant in all its various stages, together with pictures showing the manner in which it is gathered, and the products into which it is transformed. A stalk of cotton is passed around the class at the same time the child is looking upon a picture of the white-flecked field. As he handles the cotton boll he is shown pictures of the pickers at work. So the lesson proceeds, description being reinforced by the exhibition of the object described, and this in turn

by pictures showing how the crop is raised and how manufactured. An extract from the museum's carefully annotated catalogue, issued for the guidance of teachers, shows the completeness of this teaching process. The following is quoted verbatim, including the parenthetical remarks of explanation:

MATERIAL FOR CLOTHING.

Reference Books: CHISHOLM—Commercial Geography; HANAN—Textile Fibers of Commerce; LYDE—Man and His Markets; TOOTHAKER—Commercial Raw Materials.

Collection 100: Cotton of the United States.

Fibrous portion of fruit or cotton plant. Cotton most extensively used is that cultivated in the southern part of the United States, from Virginia to Texas.

1. Cotton bolls, Louisiana.
2. Cotton, unglined, Texas.
3. Cotton, ginned, Arkansas and Mexico.
4. Cotton seeds.
5. Cottonseed linters.
6. Miniature cotton bale.

Collection 101: Cotton of other countries.

1. Sea Island cotton, West Indies.
2. Peruvian or kidney cotton, Peru.
3. Silk cotton obtained from the cotton tree, Honduras and Venezuela.
4. Pods of cotton tree, Philippine Islands.

Collection 102: Cotton products.

1. Cottonseed oil. Substitute for olive oil; also used for burning in lamps, soap making, and lubricating.
2. Cotton oil cake. Used as cattle food and fertilizer.
3. Cottonseed meal. Ground cottonseed cake.
4. Cottonseed meal. Cattle food.
5. Cottonseed oil soap and soap powder.
6. Cottolene. Cooking fat obtained from cottonseed oil.
7. Varieties of paper made from cotton stalks, carded and heckled, and changed into pulp, from which paper is made.

Collection 113: Manufacture of cotton.

Glass case showing the various stages of manufacture of cotton goods.

Illustrating cotton and cotton industry collections.

104. Stereoscopic views: Cotton industry of various countries.
105. Cotton industry: Fifteen copies of one view—"Cotton pickers in the field."
106. Cotton industry: Fifteen copies of one view—"Cotton on the levee, New Orleans."

For purposes of quick review, as well as for further exposition, this series of collections could be supplemented by the following magic-lantern lesson. Again the quotation is from the museum's catalogue, including the brief descriptions:

COTTON.

1. Map of United States, showing cotton area.
2. Among the cotton negroes in field, Louisiana.
3. Topsy in the cotton, Louisiana. Little colored girl.
4. Home of a cotton picker, Mississippi. One-story cabin.
5. Bringing in the cotton. Storing it in log-house, Louisiana.
6. A cotton gin. Exterior of rude house. Boiler under shed.
7. Cotton-press yard. Cotton packed in bales. New Orleans, La.
8. Cotton at railroad station. Packed in bales.
9. Cotton levee. Ready for shipment. Ocean steamer. Mississippi River. New Orleans, La.
10. Cotton factory, Fall River, Mass. Iron mills: steam power.
11. Cotton factory; cotton house, Fall River, Mass.
12. Cotton factory; rear; covered bridge connecting buildings. Fall River, Mass.
13. Cotton factory; carding room (English cards), Fall River, Mass.
14. Cotton factory; carding room, Fall River, Mass.
15. Cotton factory; spinning room, Fall River, Mass.
16. Cotton factory; weaving room, Fall River, Mass.
17. Cotton ready for sale; interior wholesale house, St. Louis, Mo.

If it were considered desirable to use the cotton industry as a point of departure for further lessons in geography, it would be readily possible to continue with lantern lessons on the Southern States; on Egypt, Japan, and other foreign countries where the cotton is raised, as well as on New England, Great Britain, and other manufacturing centers where it is turned into cloth.

The classification scheme of the museum is as follows:

Food Products: Comprising the cereals in the plant and grain and their products. Coffee, tea, sugar, cacao, the coconut, the various spices, nuts and fruits, waxes, oils.

Materials for Clothing: The various animal and vegetable fibers of the world and the fabrics made of them.

Other Natural Products: Foreign and domestic woods, rubber, gutta-percha, camphor, cork, coal, etc., their various stages of development and their use; materials for dyeing and tanning; medicinal plants, etc.

Industrial Products: Showing the various processes in the manufacture of industrial products; as paper, ink, pen and pencil, glass, leather, etc.

Animals: Mammals, birds, fishes, reptiles, insects, etc., mounted or in alcohol, together with pictures and charts of specimens.

Plants: Models and colored representations.

Minerals, Rocks, and Ores.

Exhibits: Views, charts, and articles illustrating life and history of other nations.

Apparatus for the Illustration of Physical Geography.

Apparatus for the Illustration of Elementary Physics.

Charts and Photographs for the Illustration of History and Architecture.
 Charts Illustrating Astronomy.
 Charts Illustrating Physiology.
 Classified Collections of Stereoscopic Views and Lantern Slides for the illustration of geography, history, botany, zoology, art, and reading.

A few representative collections, as described in the catalogue, follow:

BIRDS.

Domestic Birds: Thrushes.

Our finest songsters. Inhabit woodlands. Migratory. Great destroyers of insects. Feed mostly on the ground.

Collections of mounted specimens.

479. Wood Thrush. Eastern United States. Winters in Central America. In maples and elms about human dwellings. Nest built in sapling near ground.

480. Hermit Thrush. Eastern North America. Winters in Middle and Southern States. Smallest of thrushes. In dense woods. One of the finest singers.

481. Varied Thrush. Western parts of North America. Food and habits much like those of robin.

482. Robin. Eastern North America to Rocky Mountains. Winters chiefly in Southern States. Best known of thrushes. Feeds on worms and fruits, particularly cherries.

483. Bluebird. United States. Winters in Southern States. Builds about our homes. Decreasing because of persecution by English sparrow.

Foreign birds: Thrushes—Collections of mounted specimens.

575. Black Thrush. (*Merula Mandrina*.) Europe and Asia. Frequents hedges, thickets, and gardens. Feeds on larvæ, snails, worms, insects, and fruits. Imitates notes of other birds.

576. Rufous-tailed Thrush. (*Merula Pallida*.) Male and female. Eastern Asia. Good singer.

577. Ground Thrush. (*Geocichla Sibirica*.) Eastern Asia. Terrestrial. Insectivorous.

578. Rock Thrush. (*Rhyacornis Fulgurosa*.) Eastern Asia. Builds nests in crevices of rocks. High mountains in summer, lower slopes in winter. Feeds on insects and fruits.

579. White-headed Thrush. (*Chimmarhornis Leucocephala*.) Eastern Asia.

580. Song Thrush. (*Stachyrodops Rubiceps*.) Europe and Asia. Woods and meadows, near streams. Excellent singer.

581. Bushcat. (*Pratincola Maura*.) China and India. Very noisy and active. Inhabits pine forests. Feeds on snails, slugs, and insects.

582. Fruit Thrush. (*Pycnonotus Sinensis*.) Male and female. Easily tamed.

Foreign Birds: Bulbuls.

Bulbuls, a branch of the thrush family, belong chiefly to India, although some are found in Africa. Inhabit woods, jungles, and gardens. Feed on fruits and seeds, occasionally on insects. Good singers.

Collections.

583. Crested Bulbul. (*Otocorpsa Emerica*.)
 584. White-headed Bulbul. (*Hypsipetes Leucocephalus*.) China and India.
 585. Short-winged Bulbul. (*Hemixus Ornensis and Campensis*.) China and India.

VOLCANIC ACTION.

Collection 1029: Lava.

Hard, tough, and dark-colored rock formed of masses issued by eruptions from volcanoes. Articles used by jewelers as lava is a cement of volcanic ash and water. The material which covers Pompeii is largely of this nature. Diabase is underground lava.

All lavas are finely crystalline, due to rapid cooling. (1) Obsidian or volcanic glass; (2) volcanic ash; (3) basalt; (4) anorthite, Mount Vesuvius; (5) pumice, used as polishing material; (6) dendritic lava, so called from tree-like formations on surface; (7) mandurite.

Collection 1030: Coarsely crystalline igneous rocks.

Found underground. Crystals are coarse because of slow cooling. (1) Pyroxene; (2) diabase; (3) sahlite, the Tyrol; (4) diorite.

Illustrations of volcanoes--Collections.

1031. Various stereoscopic views illustrating volcanic action.
 1032. Volcanic action: Fifteen copies of one stereoscopic view—"Mallibon, Strange River of Fire, St. Vincent, British West Indies."
 1033. Volcanic action: Fifteen copies of one stereoscopic view—"Mammoth Crater, St. Vincent, British West Indies."
 1034. Volcanic action: Fifteen copies of one stereoscopic view—"Crumbling Ash Deposits, St. Vincent, British West Indies."

Collection 1564: Advanced geography--Volcanic explosions.

Apparatus: Test tube, test tube holder, Bunsen burner or alcohol lamp, cork for test tube. Fill test tube three-quarters full of water. Hold over flame cautiously. (Do this over a newspaper laid on desk and point tube away from pupils.) Note how bubbles form at bottom and water is then thrown out. Then fill test tube half full of water, cork gently, and repeat heating, taking care that the tube does not point toward pupils. Note how cork is at last thrown out with great violence—an explosion, in fact. Can pupils explain volcanic explosions? Can they explain the earthquakes that accompany volcanic explosions?

NOTE.—Great care on the part of the teacher is necessary in this experiment.

Thirty pictures on volcanoes, earthquakes, and geysers are also given as a lantern-slide lesson.

STEREOSCOPIC VIEWS—MODES OF TRANSPORTATION.

From 6 to 10 views in each collection.

Collection 1467: Transportation on land. Transportation of people; primitive and modern methods.

Collection 1468: Transportation on land. Transportation of freight; primitive and modern methods.

Collection 1469: Transportation by water; primitive and modern methods.
Collection 1470: Transportation, aerial. Methods of aerial transportation.

Twenty-four pictures of modes of travel on land, on water, and in air are also given as a lantern-slide lesson.

A SPECIMEN EXPERIMENT IN PHYSICS.

Collection 1518: How heat is distributed in liquids.

Apparatus: Tubular rectangle of glass, filled with water, a few drops of ink put into opening at top, an alcohol lamp or Bunsen burner. Heat cautiously at one corner over lamp. Notice how ink travels down farther side. How is heat transferred? Why do we heat water at the bottom? How is water heated in the kitchen hot-water tank?

A valuable feature of the school museum is a collection of 174 lantern-slide lessons, 2 of which have been indicated above. Some of the topics with which these deal are descriptive and physical geography, industry, science, history, art, literature, and the ancient world. Regarding these lantern-slide lessons the museum's catalogue says:

Method of picture recitation.

A brief recitation or explanation should accompany each slide shown on the screen. This explanation should be given by the children themselves, so far as it is in any way feasible; it should be very brief, not more than could be written in 3 or 4 lines. A fuller explanation should be deferred. The lantern-slide lesson should not be protracted by lengthy recitations. The time of 20 to 30 minutes should, under no circumstances, be exceeded. Where it seems advisable for a full understanding of the picture on the screen, the teacher of the room or the principal may add a very brief word of further explanation. It is suggested that such questions be asked by the teacher at all points of the lesson as will invite the attention of the children to close observation of the picture before them. It would be a total departure from the intention and purpose of these lessons if they were given in the form of lectures or lengthy explanations. Each lantern-slide lesson should be a series of very brief recitations and the children should be actively engaged in speaking and answering questions while the pictures are shown. They should not be merely passive spectators. The various topics should be assigned beforehand, and a brief explanation, not exceeding 30 words, prepared by each child to whom a topic is assigned. Each recitation should be strictly in reference to the picture on the screen, and not be a rambling talk on some subject which is but indirectly connected with the picture.

In history lessons special care should be taken in this respect. The entire period covered by the lesson is supposed to have been already studied in class, and might be reviewed the day previous to the lantern lesson. When the pictures are before the class the chief attention of teacher and pupils should be directed to the particular incident illustrated and not to the series of events that led up to or followed it.

One room in each school building has been fitted up for these lessons, and the classes go to this room in rotation.

All the material in the museum has solid educational value. There are no objects to arouse mere fickle curiosity; no pictures to incite

surface interest. Every entry is designed to convey information, to arouse the children to thought, to awaken their powers of induction. The stimulus afforded the child's mental self-activity, the almost unlimited possibilities of coordination, the aid to the visualization of knowledge—these three factors in the instructional scheme of the St. Louis schools receive large and peculiar contributions from the school museum.

In addition to the teaching material specifically designed for the inspection of school children, the St. Louis School Museum contains the following collections:

- (a) The Study Exhibit for Teachers, consisting of the current teaching material, arranged for personal inspection.
- (b) An Educational Exhibit from Foreign Countries, which includes work of pupils in other lands, from the kindergarten through high and normal schools, as well as textbooks, courses of study, reports, photographs, plans and models of school buildings, etc.
- (c) A Teachers' Library, of some 7,000 volumes. Each teacher is supplied with a catalogue, which is issued independently of the school museum's catalogue.

PROBLEMS OF ADMINISTRATION.

In the administration of school museums, the very small number of American cities which maintain them find serious difficulties. If every single school is to be supplied with an individual museum, including physical apparatus, scientific specimens, and full geographical collections, the cost would be prohibitive, even for an inadequate equipment.

On the other hand, objections were found, equally serious in degree, to the maintenance of a central museum to which the children may be brought on special trips of inspection. In the first place, it has been the experience of the teachers that children can not be taken anywhere out of the schoolroom without their regarding the affair more or less as a pleasure trip, with consequent detrimental effects upon discipline and class work. Moreover, once the children are in the museum, it is found that their attention can not be concentrated upon the collection which it is the teacher's main purpose to show, but on the contrary the great variety of material about them dissipates their attention with the result that their impressions become surfeited and confused. This was demonstrated in the St. Louis schools some time ago, when the children were taken on trips of inspection to the museum, and the next day were called upon for themes upon their experiences. Some remarkable reminiscences developed.

St. Louis has overcome the objections which its school authorities found in both the decentralized and the centralized systems of management. It utilizes the strength and economy of cooperation by

establishing a museum in which all the schools have a common interest; and, by sending needed material direct to the teacher requesting it, the difficulties incident to personal visits by the children are obviated. Each week the teachers make requisition for the museum material which they need; that material, and no more, is delivered at their schoolroom door, and taken away again when it has been used. The teachers may learn of the contents of the museum, either from a personal visit to the display room or from the voluminous catalogue issued by the authorities.

Two wagons are kept busy delivering collections. For the expedition of this branch of the museum's work, the city is laid off into five sections, equaling the number of days in the school week, and the schools of each section have a delivery once a week.

The popularity of the school museum may be judged by the fact that some 30,000 of the collections were delivered to 100 of the St. Louis schools last year, in addition to 5,000 reference books. During the first half of the present school year more than 20,000 collections and more than 5,000 reference books have been sent out.

The entire expense of the St. Louis School Museum, including the salaries of 7 persons, wagon hire, buying collection material and books, building display cases—in short, every expense incurred during the 7 years of its existence—has been carried by an appropriation from the school board averaging \$7,600 annually. This is an average annual outlay of 9½ cents per pupil enrolled in the St. Louis public schools. The appropriation this year is \$10,500.

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