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SOME FOREIGN EDUCATIONAL SURVEYS

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CONTENTS.

LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, September 10, 1915.

SIR: The large sums paid for education in the United States, the large proportion of the population enrolled in public schools of lower or higher grade, the feeling that the public welfare and private weal alike depend upon the efficiency of the schools, the demand that at least all schools supported by public taxation shall be constantly remodeled and readjusted to meet the needs of modern life, and the keener spirit of criticism produced by a more general study of the principles and methods of education, have all contributed to the interest in educational surveys of State, county, and city school systems and surveys of individual institutions of higher learning. Between 40 and 50 such surveys, more or less formal, have been made in this country within the last few years, and many others have been planned. Like everything connected with public education, the principles of the survey are universal. Wherever made, the legitimate purpose of the survey is to bring about a more economic use of money and equipment and a better adaptation of educational agencies to educational needs. Therefore, educational surveys and investigations in other countries have a vital interest for students of education and education officers in this country. For this reason I requested Mr. James Mahoney, head of the English department in the South Boston High School, Boston, Mass., and a special collaborator in this bureau, to prepare a brief account of some of the more important foreign surveys. This he has done with much care and with such thoroughness as the available material would permit, and has embodied the results in the accompanying manuscript. 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.

SOME FOREIGN EDUCATIONAL SURVEYS.

The educational surveys of which some account is given in the following pages do not by any means represent all the foreign investigations that have been made; it is believed, however, that they will serve to acquaint American students of education with certain foreign types, and at the same time throw some light on the history of surveys and of progress in education.

Foreign surveys differ from the American in point of authorization in that (*a*) practically all are made under Government auspices, (*b*) and the work is done either by (1) a royal commission, (2) a select parliamentary committee, or (3) under the direction of a minister of education. The findings of the commissions, accordingly, carry with them the weight of Government authority: In the schools they are conclusive; and by the general public they are received with deference.

The scope of the foreign survey is, in general, wider; it looks less to local conditions than the American survey. The method of the European survey is (*a*) by oral testimony of school directors, inspectors, and others who have knowledge of schools; (*b*) personal investigation of the schools by recognized experts; (*c*) by circular letters or questionnaires (1) to all persons directly concerned with the schools in question, (2) to eminent men competent to judge of educational matters; (*d*) through personal investigation of schools resembling those under investigation in all the other progressive nations.

Even a slight examination of these reports will reveal the reason for the governmental interest in surveys; namely, international industrial competition, and the disclosure of the fact that industrial progress is dependent upon education. It is interesting in this connection to note that the American survey movement, and the efforts to reorganize American schools in industrial and vocational ways, are coincident with a realization by the people of the United States of the wonderful progress made by Germany in vocational education, and her consequent advance in international industry and commerce.

The foreign surveys contain little special advocacy of the older or of the newer type of education. They show a remarkable balance of judgment. Those who have directed foreign surveys have, indeed, insisted that the children of the great masses of the people, girls

as well as boys, shall receive such training as will enable them to earn their daily bread and do their share of the nation's industrial work; but they also insist that the children be trained in those moral, social, and civic virtues which make a nation truly great, i. e., they must receive general as well as specific education; and that true culture must guide and balance vocational skill, which, reduced to its lowest terms, leads to selfish individualism, not to national greatness.

A SWISS SURVEY.

Schul-Enquête. Ph. A. Stapfer, Helvetische Minister der Künste und Wissenschaften, 1799. Bundesarchiv, Abteilung Helvetik, Bern (Bde. 1470, 1471, 1472).

This survey was made in accordance with a decree of the Helvetian Directory of May 2, 1798, which directed Minister Stapfer to reorganize the school system. In order that he might attempt this wisely, he desired to know the facts regarding the different cantonal school arrangements. The most noteworthy answer to the questionnaire sent out by Minister Stapfer referred to the need of greater appropriations for the schools.

ENGLISH SURVEYS.

The more decentralized the school administration, the more necessary is the educational survey in the American sense of that term; so England, with the most decentralized series of schools—one could hardly speak of an educational system in England, at least until recent years—should have had more surveys than any other European country. During the years 1861–1869, for example, years during which very few surveys were made elsewhere, the following English surveys were made:

I. Surveys by select committees.

(*a*) Report from the select committee appointed to inquire how the education of destitute and neglected children may be most efficiently and economically assisted by any public funds, 1861.

(*b*) Report into the constitution of the Committee of Council on Education, and the system under which the business of the office is conducted; and also into the best mode of extending the benefits of Government inspection and the parliamentary grants to schools at present unassisted by the State, 1865.

(*c*) Report by same committee for following year, 1866.

(*d*) Report from select committee on the Endowed Schools Bill, 1868–69.

(*e*) Report into the practice of the Committee of Council on Education with respect to the reports of Her Majesty's inspectors of schools, 1864.

(*f*) Report from committee into the constitution and working and into the success of the schools of art, 1864.

(*g*) Report in regard to provisions for giving instruction in theoretical and applied science to the industrial classes, 1867–68.

II. Reports of commissioners:

(a) In regard to the state of popular education, for the purpose of obtaining information as to the state and progress of education in dissenters' schools, 1861.

(b) Report in regard to state of popular education in England, 1861.

(c) Report in regard to certain colleges and schools, as to their revenues and management, the studies pursued, and the instruction given therein.

(d) Schools inquiry report (described more fully below) to inquire into the education given in schools in England, not comprised within Her Majesty's two recent commissions on popular education and on public schools, 1867–68.

The following are among the more noteworthy of the English surveys; it will be observed that England has been especially fortunate in securing the services of her ablest public men on her educational commissions and in generally having as chairman the ablest and most eminent man of the realm.

Report from the Select Committee on the Education of the Lower Orders, ordered by the House of Commons to be printed, March 17, 1818. 2 vols.; vol. 1—324 pages; vol. 2—495 pages.

Testimony was taken by the committee, with Henry Brougham in the chair; and circular letters (questionnaires) were also sent out, especially to clergymen, concerning which the committee writes:

It is impossible to bestow too much commendation upon the alacrity shown by these reverend persons in complying with this requisition and the honest zeal which they displayed to promote the great object of universal education.

The results showed that the condition of the education of the poor was very bad; new schools ought to be built for all the children, not for those belonging to the established church alone. In this survey the concern manifested is for buildings and teachers, and industrial education is not taken up. This fact is not surprising in view of the terrible drain on English resources from the long wars with Napoleon.

Report from the Select Committee on the State of Education, ordered by the House of Commons to be printed, August 7, 1834. (257 pages.)

Lord John Russell presided at the hearings of this committee. Some of the recommendations are:

Habits of labor should be encouraged among the children in the rural districts in conjunction with the study of reading and writing; the Government should provide better books; corporal punishment is permissible in cases of violation of good morals, but emulation is the best mode of instruction; system of payment by children for education is decidedly preferable to gratuitous instruction; the education clauses in the factory acts are a dead letter, because of an insufficient number of schools.

Germans coming to England are generally better educated than Englishmen of the same grade; introduction of works of industry would be in the highest degree bene-

ficial in the country and town; children learn better when employed partially in industry than when employed solely in the school; Dr. Bell's plan for uniting industry with education has great advantage; for example, in printing, rope making, gardening, etc.

Children in the manufacturing districts of Lancashire and Cheshire are better taught than those in agricultural districts. Music has value as part of popular instruction; and the Government should assist in establishing libraries.

Attention is called to the fact that these recommendations were made in 1834.

Report of the Commissioners Appointed to Inquire into the State of Popular Education in England, presented to both Houses of Parliament by Command of Her Majesty, London, 1861. 6 parts: Part 1—707 pages; part 2—634 pages; past 3—598 pages; part 4—414 pages; part 5—473 pages; part 6—613 pages.

This extensive report of the commission (presided over by the Duke of Newcastle) furnishes an account of the education of the independent poor, of pauper children, of vagrants and criminals.

Considerable attention is given to the industrial education, which was provided for the poorest classes.

Report from the Select Committee on the Education of Destitute Children, ordered by the House of Commons to be printed, July 23, 1861, pp. XVIII + 234 + Index, 38.

Consists chiefly of testimony of persons having knowledge of those schools, given before the select committee, with Sir Stafford Northcote in the chair. The following extracts will give an idea of the way the proceedings were conducted:

Mr. Lock being examined:

Q. You are the honorary secretary of the Ragged School Union?
A. Yes; I have been so since the foundation of the society, in 1844.
Q. Will you tell us shortly what the Ragged School Union is?
A. The society was formed in 1844 for the encouragement and support of ragged schools for the outcast and destitute poor of London.
Q. Is it confined to London?
A. It is confined to London.
Q. And it is confined to ragged schools?
A. To ragged schools for those who have no other means of getting any education.
Q. Does it include refugees?
A. We have 16 refugees in connection with us at present.

* * * * * * *

Q. Will you tell us for what class of children these schools are intended?
A. For a very large class of children in London who are not paupers or criminals; they are the children of costermongers who sell in the streets and at stalls, fruit, vegetables, etc., or of those who go with barrows about the street; they are the children of brickmakers, a large class about Nottinghill and elsewhere; of pig feeders, persons earning a good deal of money but altogether careless about the education of their children; the children of rag dealers and Spitalfield weavers out of employment; and many others of uncertain occupations, who are

in a dreadful state during the winter months; sometimes the children of laborers who are out of work in frost or bad weather, or who are thrown out of work at the docks frequently by ships not arriving; the children of knackers and cats' meat men; of slop tailors, who form a large number, who earn a bare subsistence, and who will not condescend to accept parochial relief; the children of washerwomen, who go out to work in the daytime, neglecting their children.

* * * * * * *

Q. Have you any kind of information as to the attendance of the children at the schools?

A. Each local committee and teacher keeps a record.

Q. What steps are taken in regard to cleanliness?

A. Most schools have washing places attached to them.

* * * * * * *

Q. Are many of those schools schools in which industrial training is given?

A. We have a considerable number of our schools with industrial classes.

Q. How many?

A. The children in the industrial classes are 3,780.

Q. Are there a considerable number of schools in which there is no industrial training at all?

A. Yes; we are anxious to have industrial classes attached to all the schools.

Q. Do you understand that it is necessary for a ragged school to educate industrially every child in it in order to entitle it to a Government grant?

A. No; I do not understand that.

* * * * * * *

Q. Then, in selecting your teachers you look rather to a man's moral qualities than to the amount of actual school training which he has had?

A. Yes.

Q. The great object which you have with those children is to educate their character, to form in them habits of order and discipline and to incite in them a love of instruction, is it not?

A. Quite so.

Q. Would you consider that your schools were doing their work properly if they did not teach reading, writing, and arithmetic?

A. Certainly not.

So the examination proceeded, experts being called, examined, and cross-questioned in regard to the work with which they were familiar in Liverpool, Manchester, Bristol, Aberdeen, and Edinburgh, as well as in London. Papers of recommendation in regard to points raised in the oral examinations are also given; e. g., Ralf R. W. Lingen, in a paper on Aid to Ragged Schools, writes:

The industrial training given in ragged schools, which is a most important part of their system, tends to form habits of industry rather than to teach a trade.

A letter from C. Ferguson, of Edinburgh, recommends that the ragged school—

should be thoroughly industrial in its character, and, as far as possible, trades taught that the children could follow out and earn an honest livelihood by, in after life. Poor children may receive a good moral and commercial education, but this is not sufficient to qualify them for being able to support themselves afterwards. They may receive both, and on leaving school may have only three courses open to them—to beg, to steal, or to starve. The moral and industrial training are essential.

It is noteworthy that advanced ideas of instruction were tried out first on the children of the very poor, presumably because their parents would not object.

A minute of the Committee of Council of Education is to the effect that no aid should be given to the ragged schools unless they were industrial in character.

Schools Inquiry Commission, Report of the Commissioners, presented to Parliament, London, 1869.

4 vols: Vol. 1—661 pages + 192, Appendix.
Vol. 2—842 pages.
Vol. 3—872 pages.
Vol. 4—1,034 pages.

The letters patent of Queen Victoria, authorizing this survey, were issued June 30, 1864, to a commission of 12 persons, among them Lord Stanley, Sir Henry Northcote, and Baron Lyttelton.

They were authorized to inquire into the "State of popular education in England, and to consider and report what measures, if any, were required for the extension of sound and cheap elementary instruction to all classes of the people."

After an examination of the systems of New England, upper Canada, Scotland, France, Prussia, and Switzerland, the commissioners as well as those of England report on the kinds of education that are desirable for England. The facts regarding the secondary schools are stated; the girls' schools, with their defects, noted; and then general recommendations, especially for endowed schools, are made. The method of inquiry was by oral testimony; by questionnaires addressed to the authorities of the different schools; by the personal investigations of assistant commissioners; and by questionnaires addressed to persons of eminence in education.

The occasion for the survey is clearly indicated in the following words:

> Our chairman having communicated to us a letter from Dr. Lyon Playfair, stating that the Industrial Exhibition at Paris in 1867 furnished evidence of a decline in the superiority of certain branches of English manufacture over those of other nations, and that, in his opinion, this decline was partly due to a want of technical education in England, we proceeded to ascertain whether this opinion was held by other competent observers. Finding that the opinion was general, we thought it right to report at once to Your Majesty the communications we had received on the subject, as the prosecution of an inquiry into technical education itself appeared to be beyond our province.

The German *Volkschule, Realschule, Bürgerschule,* and *Gymnasia* are highly praised, while the English schools for the lower middle and working classes are condemned.

"We think classics good, but other things indispensable; and they want the classics either to make room beside themselves or to give

way altogether," is a statement which gives a key to the underlying thought in the minds of the commissioners. This opinion is further impressed by the following words of Assistant Commissioner Fearon:

> Among the mercantile classes in London, that is to say, the tradesmen, shopkeepers, and all who live by trade, I find a great desire for less instruction in classics and more thorough teaching in modern subjects. This feeling is growing and spreading so much among the mercantile and trading classes that I have been assured by several men of business that few things would please them better than a successful attack upon classical studies.

Although the surveyors say that it must not be supposed that this opinion is universal, they mention the fact that the parents compelled most of the grammar schools of Lancashire to abandon or greatly reduce classical teaching, and cite Mr. Bryce as authority for the statement.

First Report of the Royal Commissioners on Technical Instruction, presented to both Houses of Parliament by Command of Her Majesty, London, 1882, 62 pages.

This is a preliminary report and relates chiefly to the results of the study of industrial training in France.

The commissioners are not quite prepared to advocate for England a system of apprenticeship schools till they have had a longer period of trial abroad; they advise, however, the introduction of manual work into some of the ordinary elementary schools; they praise very highly the efforts of the French to instruct their entire working population. For adult instruction they recommend courses of free public lectures.

Second Report of the Royal Commissioners on Technical Education, presented to both Houses of Parliament by command of Her Majesty, London, 1884: 2 vols: vol. 1—557 pages; vol. 2—442 pages + 92.

Having investigated conditions in regard to technical instruction in France, Switzerland, Germany, Austria, Belgium, Holland, and Italy, as well as in the various parts of the United Kingdom, the commissioners express their astonishment at the extraordinary industrial progress of France, Germany, Belgium, and Switzerland. Much of this progress, it was declared, was due to advance in organic chemistry, notably in Germany; but new kinds of electrical machinery and new methods in mining, bridge building, and in the making of yarns, fabrics, and silk goods claim attention. While of the opinion that England still maintains her lead in the world of industry, the commissioners note with concern the growth of technical education abroad; the multiplication of polytechnic schools, technical schools for

workmen, secondary technical schools in Prussia; of weaving schools, schools for miners, continuation schools (in north Germany); special schools established by manufacturers and large employers of labor; and they conclude that if England is to continue to be the industrial leader, her managers, foremen, and workmen should combine theoretical instruction with their acknowledged practical skill.

They accordingly recommend a system of thoroughgoing technical education with a scientific basis and with abundant opportunity for practical application of theoretical knowledge.

Royal Commission on Secondary Education, Published, London, 1895, 9 vols., presented in Parliament by command of Her Majesty.

The commission was presided over by James Bryce, and in it with him were many other distinguished persons, among them the following: Sir John Tomlinson Hibbert, Edward Lyttleton, Sir Henry Enfield Roscoe, Richard Claverhouse Jebb, Henry Hobhouse, Michael Ernest Sadler, Hubert Llewellyn Smith, Lucy Caroline Cavendish, and Eleanor Mildred Sidgwick.

The commissioners concerned themselves especially with the subject of organization of secondary schools, not, for example, with an account of the instruction as given, or what subjects it should cover, or by what methods.

So the task was to examine into (*a*) the various kinds of secondary schools; (*b*) what relations they bear to one another; (*c*) what authorities manage them; (*d*) what funds they receive; (*e*) to what extent they meet the needs of the different classes of the community, noting especially the (1) defects in organization and (2) what further sources of income may be available for them.

Recommendations of the commission:

I. A central State authority over secondary education should be established, viz, a department with a minister responsible to Parliament.

II. Proper local authorities should be constituted, to avoid friction, duplication, etc.

III. Arrangements should be made for the better organizing of schools, scholarships, examinations, etc.

IV. Financial provision.

V. Preparation and registration of teachers.

In regard to industrial and technical education, the report of the commission calls attention to the fact that these topics were taken up by a royal commission [1] in 1884, and that this commission secured the levying of a rate (1 penny in the pound) for such education; the

[1] See preceding page.

small funds thus secured were insufficient to accomplish much, but the Local Taxation Act of 1890 provided further funds for the same purpose, so that something was accomplished for technical education.

> The classical languages are taught more extensively than ever, but less as if they were dead, and more as if they still lived, rich in all those humanities by virtue of which they have been the supreme instruments of the higher culture. And they do not now stand alone.

The report adds that modern languages and literatures and physical science are also included, and continues—

> The idea of technical instruction as the means for the training of citizens capable of producing or distributing wealth has taken hold, though in varying degrees of intelligence and intensity, both of our old borough councils and of our new county councils, and hence has come a concern for that kind of education which we might otherwise have looked for in vain. In a word, we have two excellent things, an enlarged education and a wider and more intelligent interest in it.

The attention given by the report to the topics of science, agriculture, continuation schools, and technical institutes indicates that those topics were clearly in the minds of the commissioners in their recommendations for a reorganization of the entire school system for the sake of efficiency.

Board of Agriculture and Fisheries and Board of Education. Report of the Royal Education Conference, Henry Hobhouse, chairman, County Staffs of Instructors in Agricultural Subjects, London, 1910 (9 pages).

In answer to a question proposed by Sir Robert Morant, July 29, 1910—

> Should each county have its own staff of instructors in agriculture, horticulture, etc., or could a single staff be made available for groups of contiguous counties?

The fact is that the great majority of the counties have their own staffs; but in the cases where the counties have none, they should associate with other counties having staffs.

The minimum staff should consist of—

(*a*) An agricultural organizer and adviser who should supervise the work of the county.

(*b*) A horticultural instructor who should give courses of instruction at approved centers.

(*c*) In most counties, a dairying instructor.

This minimum staff should be supplemented by—

(*a*) Investigators and analysts.

(*b*) Farriers, poultry experts, etc.

(*c*) Foresters.

(*d*) Organizers in the economics of agriculture, e. g., cooperation and credit banks. These inspectors and experts should have a most thorough practical as well as theoretical training.

SURVEYS BY MICHAEL E. SADLER.

Of special importance in any consideration of the survey movement are the surveys by Prof. Michael E. Sadler. The following are typical examples of what in some respects may be considered the best educational survey work ever done:

Survey of the City of Sheffield, by Michael E. Sadler, published, London, 1903 (45 pages). Secondary and Higher Education.

(*a*) Aims to be kept in view.
(*b*) Strong and weak points in present system.
(*c*) Recommendations: English, classics, mathematics, science, manual training, school games, preparation for technical school at 16 years.
(*d*) Cost.

In the keen competition of modern days, industry and commerce make ever-growing demands on the scientific ability, the ready knowledge, the resourcefulness, and the foresight of men of business.

The citizens of Sheffield can provide for this need by a new system of schools, i. e., by completing, unifying, and strengthening the present system. Science has revolutionized modern life and must have its proper recognition in the schools. Besides, the teachers must have adequate training. Their classes must not be too large, and they must not have too much hack-work and routine.

The chief difficulty, according to the survey, will be found in making out the right course of study. In spite of its initial expense a liberal secondary education should be crowned with technical and professional training. Such a system is as necessary to a progressive city as a first-rate water supply, a good tramway system, electric lighting and power, municipal buildings, and the like. An effort must be made to secure for all the boys and girls in Sheffield the best possible training for their powers; it is also necessary to keep steadily in mind the industrial and commercial life of the city, without overlooking the needs of those who are to enter the professional callings.

Elementary school pupils who are to receive a secondary education should be transferred not later than the age of 12 to the secondary school, in the opinion of the surveyor, and there the course should vary in length and in type according to the occupation which the child expects to follow. The minimum course should extend from 12 to 16; and for the professions and the higher posts in business, to 17, 18, or 19. Power of expression should be cultivated. But the children should not attempt to take too many subjects at the same time. Smattering is mischievous. Besides, the aptitudes of children vary as greatly as the occupations. What we need is a clearing up of aims.

As for higher institutions, says the report, Sheffield is better equipped, but an effort should be made to add to the resources of these, and a wider use should be made of such institutions as the technical school of art, the school of cookery, the evening classes, the museums, art galleries, and libraries. The great "importance of the technical school consists in its close bearing on the primary industries of Sheffield, which are":

(*a*) Metallurgical—(1) Steel manufacture, (2) iron, (3) other metals, e. g., silver.

(*b*) Engineering—(1) Mechanical, (2) electrical, (3) civil, (4) mining.

(*c*) Cutlery, including silver plate.

Survey of the City of Liverpool, M. E. Sadler, 1904, London (230 pages). Secondary Education and Training of Teachers.

Considers the backward condition of the schools and the causes of it—lack of funds, lack of attention; better training for teachers; the need for better secondary schools is great; when obtained, they could supply students for the municipal schools of art; for the school of commerce; for the training school of cookery, etc.; for the evening school, continuation classes, etc.; improvement in secondary education could be brought about by (*a*) better corps of teachers, (*b*) better courses, and (*c*) better supervision.

In this survey, Dr. Sadler states what the present educational condition is, what its defects are, and where and how improvement may be brought about, with an eye to the city's needs. These needs are extraordinary, and the defects in education are so great that vigorous effort must be made to provide proper training for the youth who must carry on the business of one of the great commercial cities of the world. Especial attention is given to the Municipal School of Art; the school of commerce; the schools of domestic science; the central technical school, and the evening continuation schools and technical classes; but he insists that the business future of the city depends on raising the intellectual standard of the secondary schools.

The course of study in the secondary schools should be carefully adapted to the special needs of Liverpool. The humanities should be given an important place, but English should be efficiently taught; mathematics, general science, geography, history, French, Latin, manual instruction, and drawing should receive very careful attention; and every boy should go through a carefully graded course of physical exercise.

Survey of County Borough of Huddersfield, by Michael E. Sadler. Published, London, 1904 (127 pages).

Secondary and technical education are the general topics. "Prudent liberality" is needed, as well as "practical wisdom." A first-

rate public high school for girls should be provided. The technical college ought to do two things (*a*) further staple trade of the town, (*b*) train teachers. A system of scholarships should be established. Teachers should be given a chance for higher culture. It is necessary to reorganize the evening continuation schools and bring them into closer connection with the local industries; to establish an evening school of domestic science; to establish an evening school of commerce; to reduce size of the classes; to issue a "Directory," i. e., a yearly report, to keep the public informed.

Survey by Michael E. Sadler, County Borough of Birkenhead. Published, London, 1904 (131 pages).

This survey treats chiefly of secondary education. It points out that the deficiencies of the secondary schools are due to lack of funds. The way to improve the *quality* is to break down the barrier between elementary and secondary education by raising secondary schools to "a higher plane of intellectual efficiency"; for this there is need of *competent teachers*. Besides, provision is needed for courses of connected subjects for evening continuation classes in (*a*) liberal education, (*b*) manual training, (*c*) home occupations, (*d*) commercial instruction, (*e*) technical and industrial classes.

Survey of City and County of Newcastle-upon-Tyne, by Michael E. Sadler. Published at Newcastle-upon-Tyne, 1905 (89 pages), Secondary and Higher Education.

Yet is there not a danger lest, as has happened more than once before in our educational history, we should attach too little importance to the humanities in education and too much importance to what is material and apparently capable of yielding direct profit?

I. Sadler finds that there are eight systems of secondary schools and that they are making some progress.

II. That there are in Newcastle three types of secondary schools, namely, for those—

(*a*) leaving school when 18 or 19 years old;
(*b*) leaving school when 16 or 17 years old;
(*c*) leaving school when 15 years old.

III. Too little attention has been paid in England to pupils of the third class (*c*). (1) Two schools for such ought to be established in Newcastle. (2) The course of study for such should be general for two years (12–14), but vocational during last year of attendance. (3) The classes should not contain more than 30 pupils each. (4) More funds ought to be provided. (5) More pupil-teacher centers should be established. (6) Evening classes should be graded. (7) An industrial museum should be established. (8) A teachers'

council should be formed to help correlate elementary and secondary schools. (9) Annual reports should be published.

Survey of Administrative County of Essex, by Michael E. Sadler. Published at Chelmsford, 1906, LIV + 418 pages.

Secondary and higher education are the subjects of the investigation.

I. Fine work is being done by the education committee of the county council: (*a*) Establishing vigorous schools; (*b*) valuable experiments in coeducation; (*c*) scientific study of agriculture, (1) study of nature in elementary schools, (2) and in rural schools, (3) horticultural courses for teachers at the county garden; (*d*) county scholarship system, on the whole, good.

II. As for rural schools, (1) concentration in centers should be sought rather than the building of new schools; (2) means for transportation of pupils for daily attendance suggested, but (3) better teachers are needed; and (4) *small classes*.

Collectivism rather than extreme individualism is needed, if England is to maintain her national importance; both individual and public needs may be furthered by county organizations.

Hitherto English secondary schools have been isolated in our education. This must no longer be so. "Trained thinking power is needed throughout the community." The grammar schools, hitherto standing alone, must form part of the secondary school system, and help our youth adapt themselves to our new industrial, commercial, administrative needs.

BELGIAN SURVEYS.

État de l'Instruction moyenne en Belgique, 1842–1848. Rapport présenté aux Chambres législatives, le 20 juin 1849, par M. le Ministre de l'Intérieur, Bruxelles, 1849, E. M. Devroye et Comp^e^, pp. XLIII + 591.

Part I. Legislation and organization: Secondary education in Belgium was founded and supported by the communes and the provinces, and has, accordingly, been administered by the communes and the provinces, the Central Government having only the right of supervision, though in the case of some schools to which the General Government has granted subsidies the State exercises a certain amount of control.

Part II gives the cost of instruction in the various secondary schools, including industrial schools, but not for trade schools and schools for apprentices; the pensions for retired instructors are included also.

In the recapitulation it is explained that progress began with the decentralization of school control at the fall of the old government in 1830. Emulation has increased; supervision has become of more importance; and agricultural schools have been established. A list of 14 agricultural schools is appended.

Regarding vocational training the following statement by Mr. Trasenster, inspector of studies at the School of Arts, Manufactures, and Mines, at Liege, is presented:

What is the aim of instruction? Evidently the aim of instruction, and of education, is to prepare the child and the young man for the duties and exigencies of the position which he is to occupy in the world. The school should be the apprenticeship for practical life. The pupil, on leaving school, should take his place in the social scale with the ideas and sentiments which are proper for the place which he is called to occupy. Such, it seems to me, is the most general idea of the aim of instruction.

With regard to elementary instruction there is no difference of opinion; it should give the first notions which are essential for the simple relations of social life.

But as soon as we take up the subject of secondary education a great divergence in opinion at once arises. According to many minds secondary education is merely a preparation for university instruction. Its only care should be to make lawyers, scholars, physicians; and so the study of antiquity is, above all, important: it is almost the only study which is the source of anxiety; it furnishes the only means of making one's "humanities" exactly as in the time when Latin was the sole language of science, when the modern tongues were still in their infancy; and, finally, when instruction had and could have no aim save that of forming theologians, lawyers, and physicians.

But this organization, maintained to the exclusion of every other, in our age would constitute for three-fourths of our vocations a deplorable anachronism. Indeed, experience proves that the number of young people who enter the universities on leaving the high schools is a very small minority. Thus the average of the number of university graduates, who before 1835 numbered 170, has been reduced in our day to 85. As there are nearly 70 high schools which give training in the ancient languages, there are less than two pupils per high school who graduate from the universities. But more than that, the majority of pupils give up their studies after three years of high school.

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A similar state of affairs exists in other countries, and notably in France. This is a very noticeable fact in Belgium and has caused severe criticism of the organization of the high schools, and justly so; nevertheless, I believe that it shows a social need of which we have hitherto taken too little account. For many of the children of the lower middle class, that class so numerous in our country and of such remarkable energy, artisans, little-shop keepers and the like, primary instruction is insufficient, classical instruction is too extended, too burdensome, too dangerous even. Besides, these children must begin an apprenticeship toward the age of 14 or 15 years, and far from opposing the opinion of parents in this matter, one should encourage it as praiseworthy and respectable.

But what happens if the father, deceived by the official favor by which the classic studies are exclusively surrounded, sends his son to high school? After three years he will probably withdraw him and have him apply himself to a vocation; and all the young man has learned is a little French, the Latin and Greek declensions, a little geography and ancient history, some purely theoretical arithmetic, incapable with

all this baggage of being of any use in an office, incapable of drawing a line in geometry, and knowing no tongue which would permit him to cross the boundaries of his own country.

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Everyone realizes that these shortcomings in our education exist; everywhere efforts are made to overcome them, for example, by creating industrial and commercial sections in high schools, and also, in part, by higher elementary schools (prevocational). But because of the failure to have a clear consciousness of the end to be attained, no systematic rational plan has been followed in working out the details of school organization.

And first of all, in view of the facts explained above, we see the necessity of dividing secondary education into two well-marked divisions, the lower of which would meet the needs of the more numerous part of our middle class, and at the same time it would serve the children of those better off with a preparation for the higher division. In my thought, the lower division would have in view the same object as the higher elementary schools; but it would differ in that the instruction would be more complete than that of the actual higher elementary schools which do not lead to any instruction of a higher sort. On the contrary, pupils who because of their talent or their means should be permitted to continue their studies would find continuity of instruction in the higher division of the secondary schools. For this purpose it would be necessary to incorporate the higher elementary schools into the secondary, vocational school system of which it would form the first division.

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The higher division of secondary schools would be intended for the completion of the general and vocational training of young people who are to enter commerce, industry, etc.

The instruction in this division would have as its aim not simply to give the technical instruction necessary for certain callings, but also the general knowledge which every man should possess who is called to hold an honorable position in society and in the elective councils of the country. Here is a question of the first importance: What is the instruction which is most suitable to lead to this double end of endowing the country with men skilled in commerce, industry, farming, etc., and at the same time make sure that they are honorable men and good citizens?

Mr. Trasenter offers the following as a curriculum:

Languages.—The study of languages is of first importance, not in the way of science, but as an art. One's skill in language denotes one's psychologic development. Besides, other languages are necessary in gaining a fair mastery of one's mother tongue. But what languages should be chosen? If a student is to go on to the university in order to prepare himself for law or medicine, the classic languages are best. But if one is to enter business or industry, two modern languages should be chosen, English and German, though not to be commenced together; German, for various reasons, should be begun in the lower division of the secondary school, and English in the higher division.

Arts.—Certain arts are also indispensable, and especially the art of writing legibly, drawing, singing, at least in chorus, and gymnastics.

Religion.—Religious instruction is needed, but it should be taught better than it is at present.

Geography and *history* are also necessary, but they should be graded properly between the lower and higher division of the secondary school system. History is especially important, and especially the history of Belgium with its relation to general history is not to be overlooked.

Mathematics.—There is no need of proving the necessity of studying mathematics, necessary as it is in logic as well as in all the practical affairs of life. However, the present method of teaching it should be radically changed. The drill in its practical applications should be very thorough in the lower division of the secondary school, and its more difficult theoretical parts reserved for the higher division.

Bookkeeping should be thoroughly taught in the lower division of the secondary school, for, no matter what one's subsequent career, bookkeeping is needed.

Commercial section.—The commercial section of the high school would include in special courses the union of the various kinds of special knowledge which are of greatest practical value, such as the various commercial operations, the elements of commercial legislation, the statistics of the country, political economy, and the elements of technology appropriate to the locality. This would usefully take the place of the institution which they wished to create at Antwerp under the name of a university of commerce.

Industrial section.—In the industrial section it is impossible to specialize in the studies in such a way as to train expert mechanics. That is the aim of the special industrial schools. But it will be of great importance to the industries to give the young people the necessary preliminary knowledge, so that they will understand the work when they enter it.

Now all the industries employ, simultaneously or separately, mechanical agents and chemical agents and products of the soil as raw materials. It is thus necessary to give some elementary knowledge of the dynamic sciences, and that supposes an understanding of elementary mathematics and some knowledge of physics and chemistry as well, the use of chemical instruments and the application of this science to local industries. These courses would be followed for the other two sections, but the pupils of the industrial section would be trained to make more numerous application.

Descriptive geometry and design should form a part of the instruction of this section. I add political economy and the elements of technology, as for the pupils of the commercial section. "Such is the plan for vocational education such as I conceive to be useful, and at the same time possible, in Belgium." It would include four distinct grades of instruction: (1) Elementary schools (in all communes); (2) lower secondary schools (in all important centers); (3) the higher secondary schools (one or two, at the most, in a province); (4) special schools (military, mines, bridges, roads, etc.).

An examination should be held for each of the three higher grades and a certificate given, which, in each case, would admit to the next higher grade, or a diploma which might admit to a position in the post office, or the railroad, for example. But here comes a question which has been much discussed, and which, in Belgium, has received various answers: Ought the secondary schools (i. e., the vocational) to be completely separated from the cultural high schools?

What has been said in regard to purpose and studies proves that the two kinds of schools should be kept quite apart. This is done elsewhere, notably in Prussia, where the Gymnasia and the higher Bürgerschule are kept quite distinct.

On the basis of this course, the report gives a severely critical examination of the schools of (1) Antwerp, (2) Bruges, (3) Brussels, (4) Gand, (5) Liege, (6) Mons, (7) Tournai, (8) Verviers.

It should be noted in this connection that in March, 1849, there was established at Tirlemont, by royal authority, an agricultural school annexed to the high school, but with its administration entirely separate. Its course of study included French and Flemish

languages, elementary mathematics and geography, geometry, surveying, leveling, stereometry, linear design, mechanics, physics, meteorology, mineralogy, geology, botany, general chemistry, organic chemistry, agricultural technology, horticulture, agricultural zoology, elements of the veterinary art and hygiene, rural architecture, rural economy, agriculture.

A very elaborate course was prescribed for the school of horticulture.

Agricultural schools were also established at Oudenbourg, Chimay, Thourout, etc., with very thorough courses of study.

It is worthy of comment that the above progressive plan of instruction, with its clear-cut conceptions, was presented in Belgium in 1848.

Écoles d'Agriculture, Rapport à M. le Ministre de L'Intérieur sur la Situation de ces Écoles pendant l'année scolaire 1850–1851, Bruxelles, 1851 (135 pages).

The results of painstaking personal examination of the agricultural schools at Vilvorde, Tirlemont, Chimay, Leuze, Verviers D'Ostin, La Trapperie, Rollè, Berg-op-Zoom, Gendbuegge, and d'Ostacker are given; the courses of study, the methods of instruction, the attainments of the students, their discipline and physical welfare are stated and suggestions for improvement are made. In general, the courses contain theoretical as well as practical studies, and much work in the gardens and on the farms is required. The studies and practical work last, as a rule, from 8 a. m. to 5 p. m.

The subjects of general instruction are: Penmanship, French (sometimes Flemish also), arithmetic, accounting, drawing; the school at Tirlemont adds courses in physics, chemistry, anatomy, physiology, mineralogy, geology, geometry, with special regard to their application; the surveyor adds that the history of Belgium should also be given. He praises the work in horticulture and gardening, notes with satisfaction the attention given to fruits and vegetables, and remarks that the instruction at Vilvorde has consisted too exclusively of memory training. The school for the manufacture of agricultural tools meets with his approval; he praises the conduct of the students. The poor preparation of some students makes it impossible for some of the pupils to progress satisfactorily in the work of the schools. He mentions the fact that at Leuze there are some young men who work during the summer on their parents' farms, and attend the school only during the winter months. In that school the pupils are divided into two classes, the first taking theoretical work as well as practical; the second, practical work only. This he finds to be a good arrangement.

Rapport sur l'Enseignement Agricole présenté aux Chambres Législatives, 1860, Bruxelles, 1863 (112 pages).

A work similar to the preceding, but having less detail.

Rapport sur la Situation de l'Enseignement Industriel et Professionel en Belgique, Présenté aux Chambres Législatives, le 7 Mai, 1886, par le Ministre de l'Agriculture, de l'Industrie et des Travaux Publics, Bruxelles, 1886 (212 pages).

At that date Belgium had (*a*) 35 industrial and trade schools, (*b*) 45 apprenticeship schools, (*c*) one school of mines (at Mons), (*d*) one higher institute of commerce at Antwerp, and also certain public courses.

(*a*) The industrial schools are much appreciated by the working classes, as is shown by their rapid growth since 1879; there is doubt in regard to the trade schools; it costs a great deal to equip them. Experience alone can show their value.

(*b*) The apprenticeship schools owe their origin to the fact that machines at the end of the eighteenth century threw many people out of work. In 1817, at Gand, they were first established. They have produced skilled workmen, raised wages, and brought in new industries.

(*c*) The school of mines at Mons dates from 1837. It has been a great success; its graduates are employed not alone in the industries of Belgium, but abroad as well.

(*d*) The Higher Institute of Commerce at Antwerp was founded in 1852. A wide range of theoretical instruction is given, and its commercial bureau gives practical instruction in many branches of commerce.

(*e*) Courses in photography, at Brussels, were organized in 1870. Their object was to teach the common applications of photography to industry, science, and art. Practical as well as theoretical lessons are given.

(*f*) In addition, public courses (since 1826) at Brussels have been given; e. g., in (1) history of Belgium, (2) literature, (3) physics, (4) chemistry, (5) administration, (6) hygiene, (7) astronomy, (8) political economy, (9) botany.

A supplement gives further detailed information especially in regard to industrial schools.

Rapport sur la Situation de l'Enseignement Technique en Belgique par M. le Ministre de l'Industrie et du Travail, 1897–1901, 2 vols: Vol. I—818 pages; Vol. II—469 pages.

This is a very elaborate report giving statistics and practical details in regard to the various technical schools of Belgium; stating the courses for girls as well as for boys, and containing practical sugges-

tions for improvement. In this we see the fruit of the efforts of the earlier advocates of technical training. The number of technical schools subsidized by the Government was 579 in 1901; of these 348 were vocational, housekeeping, schools for girls, and 231 were vocational, industrial, and apprenticeship schools for boys. It is impossible in a brief notice to do much more than refer to the work itself, a storehouse of information on a modern system of industrial education.

SCOTCH SURVEYS.

Second Report of Her Majesty's Commissioners, Appointed to Inquire into Schools in Scotland, Presented to Both Houses of Parliament by Command of Her Majesty, Edinburgh, 1867, circa 1,000 pages.

This commission was presided over by the Duke of Argyle.

It describes the condition of education in the lowland parishes, in the towns, in the Hebrides and western highlands; it gives information in regard to the privy council system and the revised code, attendance at school, school building, teaching and teachers, and the cost of education.

The condition of education is found to be very poor; a more efficient system of inspection is recommended, and grants are proposed; and an extension of the Factory Acts is urged.

Third Report of Her Majesty's Commissioners Appointed to Inquire into the Schools in Scotland, Edinburgh, 1868, 2 parts: Part 1—271 pages; part 2—366 pages.

This survey appears to be a continuation of the report of 1867, and supplies information in regard to burgh and middle-class schools; but this part contains a discussion of industrial (i. e., ragged) schools in which the testimony indicates that these schools are accomplishing much for the boys, so that "honest employment could be obtained for four times as many boys as could be furnished."

IRISH SURVEYS.

Royal Commission of Inquiry into Primary Education (Ireland), Report of Commissioners, Dublin, 1870, 8 vols.: Vol. 1 972 pages; vol. 2—510 pages; vol. 3 776 pages; vols. 4 and 5 825 pages; vol. 6—306 pages; vol. 7—556 pages; vol. 8—251 pages.

The commission was presided over by the Earl of Powis. This survey contains a historical sketch of national education; gives the provisions for primary education, number of teachers, attendance of children, proficiency of children, and account of school buildings.

In regard to agricultural schools it says:

> We intend that our normal department, which we hope will be completed in January next, shall consist of two departments—one for elementary, the other for scientific

instruction; that the latter shall teach in particular those branches of science which have a practical application to husbandry and handicraft.

We also purpose having a school for industry in the immediate neighborhood of Dublin, with workrooms, and a farm of 40 to 50 acres annexed to it; and that those who attend it shall be practiced at stated times in different descriptions of manual work and in the general business of agriculture.

The report adds that in 1848 there was but one model farm, but in the following year they began to extend their agricultural system, three new farms being placed on their list during 1849. In 1856 there were 20 such farms.

One need not be astonished at the remarkable success of Sir Horace Plunkett in the twentieth century, when such a good start had been made toward the middle of the nineteenth century.

Vice Regal Committee of Inquiry into Primary Education in Ireland London, 1914, Second Report (571 pages).

Vice Regal Committee of Inquiry into Primary Education in Ireland, Final Report presented to parliament, London, 1914 (52 pages).

Duties of inspectors, rating, promotion, and salaries of teachers are topics that receive special treatment; attention is also given to studies and courses; and, under this heading, the fact appears that boys from the national schools are not well prepared for the courses of the technical institutes, of which there are a dozen or more in Ireland.

The recommendations of the board of national education are stated; these include a system of kindergarten schools, the idea of which is essential for all grades and for all teachers; hand and eye training; woodwork, sloyd, drawing; elementary science, with both object lessons and experimental courses; agricultural education, which should not be bookish, but should be built up on experimental science, viz, physics, chemistry; and biology; cookery, laundry work, and domestic science; needlework; singing, and physical training.

GERMAN AND AUSTRIAN SURVEYS.[1]

Verhandlungen der Gymnasial-Enquête Commission, published by the Austrian Royal Minister of Education in Vienna, 1871 (344 pages).

Fifty of the leading directors of gymnasiums, rural school inspectors, and professors of education representative of the various dominions and nationalities of the Empire, were summoned by the minister of education in the autumn of 1870, and the following problems were presented to them:

1. How far do the preparatory classes for the gymnasia meet the needs for which they were established?

[1] While educators of other nations have repeatedly made reports on German and Austrian schools, there are few reports made by Germans on German schools that are of the same type as the investigations and surveys recorded for other countries in this bulletin. Such reports as the following are, however, more than *studies;* they are *official surveys,* and possibly of the best type.

2. Under what conditions would the introduction of freehand drawing into the curriculum of the Untergymnasium be desirable?
3. To what degree should natural science be taught in the lower classes?
4. In what way should general nature study be made a part of the course for the upper classes, and how should it be regarded in the final examination?
5. In what way can the modern languages form a part of the required course of study without overwork on the part of the pupils?
6. What can be done to bring religious instruction in the upper classes into harmony with the present laws in various provinces of the Empire?
7. How may the final examination be made to correspond to its original purpose as a means of obtaining data for a formal certificate of the total cultural training of the graduate, without becoming a mere form, and how may the excessive duties of rural school inspectors be met?
8. How may the relationship of the lower and upper classes, after the carrying out of the indicated reforms, be established and manifested?

Definite, practical problems of reform are thus clearly stated to educational experts, and definite rational solutions are required, having in view, of course, school conditions as reported on the spot by the school authorities present in person.

It is worth our while to see how the commission handled these problems, for in them are involved the topics of modern reforms in education, the breaking away from the classic bonds, and the introduction of science and modern languages.

The commission was divided into three sections—the first to deal with questions 1, 7, and 8; the second section to discuss and report on questions 2, 5, and 6; and the third section to treat similarly questions 3 and 4.

In its session on the 30th of September, 1870, a hot discussion of question No. 1, brought out the statement from a Galician representative that the *Volksschule* should not be regarded as preparatory for the *Gymnasia*, that these schools had their own aim, to train the children of the people for their life work, and they ought not be hampered by their connection with the classical schools (the gymnasia). His view was opposed, and yet a modification of it was adopted by the assembly, namely, that preparatory classes connected with the gymnasia should be established where need for them should appear.

Perfect freedom was granted all members to express their views. Full advantage was taken of this freedom in the debate concerning the introduction of the modern languages into the curriculum of the gymnasium—one of the keenest, most spirited debates on record. The section committee admitted the value of the modern languages, but urged that they should be *elective* for especially talented pupils, but not required of any.

The more radical members contended that, while the classic training was still valuable, modern developments in the means of communication, etc., had made a knowledge of the modern languages

indispensable. This need not entail an overburdening of the students, they declared, for the strain upon the students was caused by too many subjects. They proposed more thorough training and few subjects. Group courses might be introduced, they said.

The assembly voted that the modern languages should be, in general, elective, though, in special cases, they might be required. So the thin edge of the modern program was forced into the old uniform required system.

The question of the introduction of drawing into the curriculum of the gymnasium was next taken up. After a lively discussion of the relative merits of freehand versus mechanical drawing, the meeting voted to introduce freehand drawing as a required subject for a maximum of three or a minimum of two hours per week.

The subject of religious instruction in the gymnasium was discussed with the greatest earnestness. The topic was approached from various angles. Should religion be taught in the gymnasium at all? Would it not be better to confine it to the home? Since at 14, the youth, according to law, is entitled to choose for himself in religion, ought not instruction in that to be confined to the classes in which the pupils are under 14 years of age? But in that case, will there not be a failure on the part of the school to do its duty in training in character which the State requires of all schools? Ought, then, the training in religion to be anything more than training in Christian morals? In that case, is not one hour of instruction sufficient in the upper classes? But is not that equivalent to putting a slur upon religion, especially since the subject of religion is not noted in the final examination? If religion is to be taught at all, is it not necessary to teach it, in every instance, in a sectarian way, i. e., Catholics, Protestants, and Jews, each in their own way according to their own beliefs?

The commission voted that religious instruction should be given in the upper, as well as in the lower classes, of the gymnasium; that in the upper classes one hour per week should be given to such instruction.

The commission also voted to extend the study of history up to the most recent events, and to extend considerably the scope of the geography instruction.

Natural sciences afforded the sharpest discussion. There was a real tug of war between the strict classicists and the realists. Both groups agreed that the classic languages were the basis of the gymnasium, and that general culture (*Algemeine Bildung*) was the aim toward which all study should be directed. The classicists admitted that natural science was in itself a most important subject, but they contended that the gymnasium was not just the place for it; that experience showed that students who had a thorough classic training could, when later it became necessary, take up the sciences and their

applications with greater ease and ability than those students who prematurely undertook to master those topics. Their opponents pointed to the necessity for an educated man to know the developments in physical science, and to have some training in laboratory methods; they pointed to the success with which science was being taught in foreign secondary schools, and that such study was the more necessary in Austria as there were, relatively, so few industrial schools where science would naturally form part of the program.

A Galician rural-school inspector (Mr. Czerkawski), who had evidently made a special study of pedagogy, quoted Herbart and Pestalozzi to prove that a topic should not be introduced into the curriculum merely because it was useful in itself; it must be of greatest service in the attainment of the object for which the gymnasia were established. They must bear in mind, he said, that there were three, not two, stages of growth and development to be provided for, namely, first, childhood; second, period of puberty; and, third, youth. Hofrath Ficker, director of the imperial bureau of statistics, declared that the organization of the schools was not to be like a metal garb which should remain the same forever, but it should form part of the life of the institution and grow and change with it.

Another speaker declared that some time the impregnable classic structure of the gymnasium might tumble down; for ideas of what culture is, change from age to age.

In the end after the longest and hardest debate of all, the realists won and the commission voted to extend the time for scientific study in all classes of the gymnasium.

In this great struggle one reads between the lines that the conservative force was that of the gymnasial faculties and that progress was largely due to governmental encouragement.

A FRENCH SURVEY.

Enquête sur l'Enseignement Secondaire, Rapport Général (Chambres des Députés), Paris, 1899 (6 vols.). With a general introduction by M. Ribot, chairman of the commission.

The survey discusses the subjects of administration of secondary schools (lycées and collèges), physical education, hygiene, training of teachers, courses of study, modern languages, drawing, final examinations, supervision, national appropriations.

"Less uniformity, less bureaucracy, a little liberty," is the general demand that is emphasized in this report, which is very critical of prevailing conditions. There is no life in the secondary schools because they lack real autonomy; the system suffers from overcentralized administration. The head masters have responsibility, but no initiative; the junior masters (tutors répétiteurs) are not

respected; Latin has received too much attention. France has no lack of learned men, but it does lack engineers and men of affairs. It is outclassed by Germany in this respect; not that the classical course should be suppressed, but it should not be the exclusive kind of education; it should not prevent young people who have talent for practical affairs from receiving suitable instruction. Attendance at the lycées and the collèges does not increase. The increase in cost of attending them has had something to do with this. Religious causes have also been at work. The State should respect the right of the individual to choose the instruction that he wishes for his children, but it must use all legitimate means of influence to get such instruction to conform to certain standards.

The course of study suffers from uniformity. The modern world has an entirely different social and economic basis from that of the ancient world, and yet the dead languages continue to be the substance of our education. In this there is injury as well as danger, individual and national. Science has become of vast importance, and history and modern languages demand a place. Of course, we can not dispense with Latin, for it is the mother of French; and Roman life has contributed much to modern French life; and yet it is necessary to prepare for modern conditions.

It is not necessary to overburden the pupils with too many new topics at the same time; a more rational method of teaching must be adopted; a better arrangement of subjects, according to the age and attainment of the pupils, and a proper utilization of their time. Besides, there are too many changes of teachers. The same teacher continued two or three years, with one set of pupils, can accomplish much more than is at present the case.

Statistics prove that most of our graduates are headed for governmental positions. This is a grave danger. It is necessary to avoid it by preparing our young people for the other necessary occupations.

A SURVEY OF NEW SOUTH WALES.

Commission on Primary, Secondary, Technical, and Other Branches of Education, Legislative Assembly, New South Wales, Sydney, 1904 (378 pages).

This survey treats mainly of secondary education.

I. Great public importance of secondary education; not adequately recognized in New South Wales as it is, for example, in Europe and in America.

II. It is necessary to consider first the relation of secondary education to the rest of the educational system, and especially to primary education; and in this regard we must remember that in New South Wales, as in England, there is no educational unity.

Primary education, very poor: (*a*) No kindergartens, (*b*) poor preparation of teachers, (*c*) unsatisfactory curriculum, (*d*) bad system of building schools, (*e*) poor hygienic arrangements.

A good system of secondary education is needed to furnish (*a*) teachers for primary instruction and (*b*) leaders in the industrial and commercial progress of New South Wales—i. e., in competition especially with graduates of American secondary schools. (1) The first thing needed is coordination with primary and with higher schools. (2) A guiding program is also requisite. (3) Trained teachers much needed, as well as (4) scientific equipment.

The surveyors conclude that, in general, the trend away from the mere classical training and toward scientific education is a thing to be encouraged, but first of all it is necessary to understand the defects of the New South Wales system and then set up an ideal and try to follow it.

A SWEDISH SURVEY.

Underdånigt Utlåtande och Förslag till Den Lägre Tekniska Undervisningens Ornande, 4 Oktober, 1907, Länstidningens Tryckeri, Örebro. 3 vols; vol. 1—447 pages; vol. 2—521 pages; vol. 3—424 pages.

Report and Recommendations of the Committee Appointed by the King to Investigate the Status of Technical Instruction in Sweden.

With the reforms of 1870, the lower technical instruction in Sweden received in the main its present form. Unlike Sweden, foreign countries have devoted much time and effort to the development of the lower technical instruction during the past few decades. The State aid for lower technical instruction in Baden amounts to 385 crowns per 1,000 inhabitants, in Austria 283 crowns, in Prussia 252 crowns, in the Netherlands 206 crowns, in Denmark 200 crowns, in Finland 149 crowns, in Norway 143 crowns, and in Sweden only 88 crowns per 1,000 inhabitants each year. The vocational instruction in the city of Munich, with a population of 560,000, costs each year about the same as the entire lower technical instruction in Sweden.

In formulating the plan for the necessary changes and rearrangement of the lower technical instruction, the committee considered it important that the instruction should be arranged in such a way that there would be possibilities of development, and that the majority of those who are engaged in the trades would be given an opportunity to receive a technical education.

According to the recommendations of the committee, the lower technical instruction in Sweden should comprise the following:

Apprentice schools; trade schools; technical vocational schools; the Technical School in Stockholm (an institution giving instruction in handwork); the State Normal School for Vocational Instruction; the education board for the technical schools in the Kingdom.

In order that the representatives of the trades and the industries might exert a greater influence on the development of the lower technical schools, and therewith on the entire technical instruction, the committee urged that the lower technical institutions should continue to be under the management and care of local boards. The committee also recommended that the industries should have a stronger representation in these local boards than they have had hitherto.

A NEW ZEALAND SURVEY.

Report of the Commission on Education in New Zealand, to the Governor of New Zealand, Wellington, 1912 (744 pages).

This is an inquiry into the following topics: Cost of State education in primary, manual, technical, and secondary schools in its relation to efficiency; administration of central department, powers and rights of education boards, etc.; cost of manual and technical instruction; local responsibility to provide a part of it; consolidation of local governing boards; overlapping and duplication; finance of education boards; agricultural instruction and rural courses; vocational education; scholarships; general needs for progress, e. g., in administration, and coordination.

The commission recommends a revision of the entire school system, primary, secondary, and technical, which should insure a maximum of local interest and, at the same time, continuity of general administration.

Among the weaknesses of the school system which should be overcome are: Lack of satisfactory administration and of proper aims and methods; lack of fairness in promotion of teachers; lack of suitable courses of study, of playgrounds, of rural training, and of proper coordination between primary, secondary, and higher education.

The commission advises the appointment of a council to be composed of the minister of education, the director of education, the supervisor of technical education, two representatives of the producing industries of the Dominion, and 10 others, one of whom should be chosen by the staff of inspectors, one by each of the five education boards, two by the certificated teachers of primary schools, one by the certificated teachers of secondary schools, and one by the senate of the University of New Zealand.

The commission further says that the number of teachers should be increased; better salaries offered to secure such increase; the consequent lowering of number of pupils per teacher; efficient teachers insured fairer opportunities of promotion; compulsory con-

tinuation classes in technical schools; overlapping should be entirely avoided; agricultural education should be greatly strengthened; continuation classes in agriculture and dairy work in connection with district high schools should be encouraged; and the prospect of establishing an agricultural high school should be considered, and two agriculutral colleges ought to be established; the course of study should be enriched and the importance of oral and mental work emphasized; history, hitherto neglected, should receive proper attention, drawing should be simplified; the quality of supervising improved; physical instruction should have special attention; moral instruction should be given; nature study should be fostered; and boards of education should insist on medical and dental attention where needed.

An opportunity should be given teachers to become original members of the superannuation fund. Parents who fail to send children to school should be liable to a fine; children should be kept from street trades, which interfere with their education and endanger their morals; and children should be prevented from loitering about the streets at night, and especially in the neighborhood of the theaters, picture shows, etc., when they should be at home and in bed.

A CANADIAN SURVEY.

Royal Commission (of Canada) on Industrial Training and Technical Education, Published, Ottawa, 1913, 4 vols.; Vol. I—437 pages; Vol. II, to page 1011; Vol. III, to page 1633; Vol. IV, to page 2354.

It treats of industrial training and technical education in relation to—

I. Elementary education.
II. Secondary and higher education.
III. Manual training, household science, etc.
IV. National problems.
V. Needs, duties, and rights of individuals.
VI. Organization and administration.
VII. Dominion development policy.
VIII. Apprentices, foremen, and leaders.
IX. Rural communities.
X. Schools for housekeeping.
XI. Industrial research.
XII. Vocational guidance.
XIII. Wider use of school plant.
XIV. Continuation classes.

The commission also gives information on the same topics in regard to England, Scotland, Ireland, Denmark, France, Germany, Switzerland, and the United States.

This is a very thorough and well-balanced survey of the topics of which it treats. It is of especial interest in the United States because of the fact that the relation of the Dominion Government in regard to education in the various Provinces is very like that of our National Government in regard to education in the different States. The cordial good will with which all the Provinces indorsed this project of the Dominion reveals their judgment of the importance of industrial training to Canadian prosperity, as is indeed stated in a memorandum of the Dominion Minister of Labor:

> Industrial efficiency is all-important to the development of the Dominion, and to the promotion of the home and foreign trade of Canada in competition with other nations and can be best promoted by the adoption in Canada of the most advanced systems and methods of industrial training and technical education.

The commissioners conceived it to be their duty—

I. To ascertain the present equipment and also the needs of industrial training and technical education in Canada.

II. To study the systems and methods of instruction in those topics in other countries.

III. To formulate and express opinions in regard to the information thus acquired; and likewise to make definite recommendations to the Government.

In the fulfillment of this duty they made, accordingly, a survey of Canadian industries and an educational survey of the schools.

With a view to the former they made a survey of the needs of workers in—

1. Manufacturing and other industries, e. g., of building construction, boots and shoes, carriages and wagons, chemicals, clothing, electrical plants, foodstuffs, furniture, leather and rubber, metals, rolling mills, foundries, machine shops, printing and publishing, textiles and clothing, wood and wooden wares, other industries and trades.

2. Agriculture, live stock, dairying, fruit culture, fisheries, mining (including quarries), forestry.

3. Commerce and transportation.

4. Home-making and housekeeping, including house sanitation, domestic servants, care of children.

It is clear then that the survey is of broad scope and practical nature. And not only is the scope of the work broad, but the various business topics are developed with a practical grasp of business development and at the same time with a strong hold of educational principles.

Hence the commission considered (*a*) the growth of the different kinds of business, (*b*) where raw materials are obtained, (*c*) where products are marketed, (*d*) the supply of labor, skilled, unskilled, and apprentices, (*e*) child labor.

Regard was given also to the hygienic conditions of the homes of workers, as well as factory conditions, for it is clear that those matters have a bearing on industrial efficiency.

The educational survey considered industrial training and technical education in (1) universities and colleges; (2) technical schools; (3) trade schools; (4) agricultural and extension work; (5) normal schools; (6) high schools, academies, etc., (*a*) elementary science, (*b*) rural science, (*c*) manual training, (*d*) domestic science; (7) elementary schools, (*a*) manual training, (*b*) domestic science, (*c*) rural science, including school gardens and nature study; (8) evening schools, (*a*) elementary, (*b*) technical; (9) correspondence courses; (10) apprentice schools; (11) organized play and playground; (12) physical culture and drill.

Research work, the need of it and provision for it, also received attention.

The commissioners express their delight at the interest in education that they found everywhere; at the greatly increased expenditures that are made in behalf of education, and, particularly, at the effort focused on boys and girls between the ages of 14 and 18; and they note with especial pleasure that a general feature of school work in all progressive countries to-day is the provision for continuation classes, technical classes, and art classes for the pupils who leave the day schools at 14 years of age. The classes provided for this purpose in Germany and Switzerland they find especially worthy of praise; yet nowhere, least of all in the most advanced countries, is there any tendency to brag of what has been accomplished, or a tendency to rest satisfied with progress already made.

I. The surveyors noted the fact that school authorities in other countries were much more apt than was the case in Canada to show to the visitors first of all the work of the elementary classes. This brought to attention the defects in the elementary classes in Canada, and the following recommendations were made:

1. All children up to the age of 14 should receive a good elementary education.

2. The experiences of the school should tend more directly toward the inculcation and conservation of a love of productive, constructive, and conserving labor.

3. After 12 years of age, for the children whose parents expect them or desire them to follow manual occupations, the school work should have a vocational bearing.

4. From this prevocational work, the commission believes, there would result (*a*) an awakened interest in manual occupations, (*b*) the aptitudes of pupils would be discovered, (*c*) the pupils would thus be guided into their life work.

5. The children would thus wish to keep in touch with the schools.

6. And the commission is of the opinion that the time and attention devoted to prevocational or trade-preparatory work in no way detracts from or hinders progress in general education of a cultural sort. They further maintain that the health of pupils must be carefully looked out for; that the harmonious growth of all their powers of body, mind, and spirit should be fostered; that they should learn to work as well as

play with enjoyment, intelligence, skill, and energy; that they should be trained to habits of obedience, courtesy, and diligence; and that high ideals of conduct and character should be maintained.

The belief is expressed that these new topics need not burden the time table, if studies are properly arranged and taught.

The following conclusions are drawn from the study of foreign schools:

That manual training should have a recognized place in the course of study from the kindergarten until the eleventh or twelfth year of age for cultural or self-realization purposes. In the later years this training is of special value in discovering the pupils' aptitudes and in developing skill.

The amount of time that should be devoted to this topic it is difficult to estimate, but in general one might say it ought to be one-fourth of the school time from kindergarten up to the age of 12.

Manual training, as well as industrial training, is of value in that it tends to a fuller recognition of motive in school work; and manual training, besides, is valuable in training the faculties to meet the things and forces of the outer world.

To meet the extra expense that would be incurred by conforming to these recommendations, the commission urged that a parliamentary grant should provide the sum of $350,000 a year for 10 years, to be distributed among the Provinces in proportion to the population of each in aid of elementary education.

II. Secondary schools in Canada have been much criticized. It has been said that their training is of use only for those who go to college; that they give their pupils a disinclination to manual labor; that they fail to interest the large number of students who have no taste for book-learning, but have ability in subjects that call for observation and original constructive talent, and that these pupils consequently leave school as soon as they can; that no provision is made for them in the way of part-time schooling or continuation classes, as is done elsewhere; and that for those students who go from the secondary schools to technical colleges no adequate preparation has been provided, so that as a result they lose much time, although the laboratory method of teaching science that is now being introduced into the high schools has helped somewhat.

The schools of applied science in Canada have the reputation of teaching their topics thoroughly.

The commission concludes (1) that secondary vocational education should be provided for pupils who are to follow manual occupations, e. g., agriculture, housekeeping, or business. (2) The opportunities given such pupils should be as favorable as are furnished in the regular secondary schools for those who are to enter the learned professions. (3) Suitable part-time or continuation education should be provided for those who have gone to work. (4) Technical education for the preparation of technical engineers and teachers and principals of technical schools should be given, and some financial support should be provided, so that the fees for such students may not be prohibitive.

III. Manual Training, Nature Study, School Gardening, Household Science, Vocational Education.

The term "manual training" is general and includes such terms as "educational handwork," "constructive work," "hand and eye training," "manual arts," and "sloyd." Its value lies in the fact that it develops and coordinates all the powers through the accurate use of tools. Muscles, brain, and will grow strong together.

Nature study, which is often taken to include school gardening, elementary agriculture, agricultural education, and rural education, aims rather to make the pupils acquainted with the phenomena of nature by observation and reasoning than to train them in productive management, and by its aid they may more easily pass to true agricultural vocational education.

Household science covers the terms "domestic science," "domestic occupations," "household arts," "housekeeping," and "home economics." It is closely connected with nature study and manual training, and up to the eleventh year the term should mean practically nothing else. A vocational motive may then appear.

Vocational education "indicates the form of education which provides definite training and definite knowledge expected to be useful in enabling an individual to carry on his vocation in a way most advantageous to the community and satisfactory to himself." It includes six headings: (1) Professional, (2) industrial, (3) agricultural, (4) commercial, (5) marine, (6) housekeeping. Industrial training and technical education include all the six classes except a part of No. 1, namely, training for lawyers, doctors, clergymen, etc.

Some persons would limit the terms "industrial training and technical education" to such training as looks especially to knowledge of and control of tools, machines, etc.; but in all countries visited by the commission a broader conception was in vogue. The towns visited by the commission included under the head of industrial education training in languages, arithmetic, science, history, literature, usually physical culture and civics, and often singing.

The terms "technical education" and "industrial training" shade into each other in meaning, but it may be said that when emphasis is laid on the handling of tools, materials, etc., the term to use is "industrial"; but when, on a knowledge of principles and their application, the word should be "technical."

In the development of these types of education, the Macdonald funds have been of great benefit.

IV. National Problems.

Canada, larger in area than all Europe, is great in natural resources of the farm, of the mine, of the sea; its possibilities are vast. But Canada's inheritance of good government and honorable life are more important than what nature has supplied. Education, then, is

needed to develop the resources both for the community and for the individual. The education must be practical, must develop a love for work and the habit of work; it must not overlook "culture," but—

culture is the residuum in character—in body, in mind, and in spirit—after every completed cycle of an educational experience.

It must not be forgotten that invigorating toil, invigorating bodily toil, is the only known road to health, strength, and happiness. Agri-culture, industrial culture, technical culture, liberal culture, have no origin in idleness, indolence, or sloth, which make for the corrosion of all the vigors of the physical, mental, and moral nature.

The steps in an educational experience are: Observing, reflecting on ideas, planning toward expression, feeling and managing into some form of expression.

The nation depends on the individual, and his development can be secured by a proper system of technical education and industrial training.

V. The Needs, Duties, and Rights of Individuals.

In the struggle of modern industry to produce goods cheaply in order to make profits, three elements are of importance—raw materials, labor-saving machinery, and organization. So much attention has been given to these that their effect on the individual worker is apt to be overlooked. But it is necessary to keep in mind the value of the individual, for he is the most important asset of the State.

The hope of civilization consists in (1) planning and working for the benefit and happiness of the home and individual, (2) increasing wealth and control of natural forces, (3) increasing friendship, (4) enlarging all the powers of individuals, (5) giving more opportunities for right living, (6) the forming of good habits and character, (7) the protection of children, (8) minimizing ignorance, disease, vice, etc. Modern industrial conditions have in many ways militated against all of these requirements. Even women and girls are absorbed in the factory system. More service from the school is needed to offset these tendencies.

VI. Organization and Administration of Industrial Training and Technical Education.

The commission recommends that those subjects should (1) be put under provincial control; (2) they should receive financial support from individuals, local communities, the Provinces and from the Dominion; (3) individuals who represent local industries, etc., should participate in the management; (4) opportunity for such education for those who have gone to work should be given; (5) equality in opportunity for all should be maintained; (6) cordial cooperation with existing systems of education must be kept up.

The aims of technical education and industrial training are:

1. The preservation of health and vigor.
2. Formation of good habits.
3. The development of the sense of responsibility and duty.

4. The preparation of the body, mind, and spirit for following some useful occupation.

5. The cultivation of the mental powers, the acquisition of knowledge and the development of the scientific spirit, with direct reference to the occupation.

6. The promotion of good will and the desire and ability to cooperate with others.

7. The maintenance of standards and ideals.

8. As all-inclusive and ultimate, the perfecting of the human spirit, the improvement of the quality of life itself, and the betterment of the conditions of labor, leisure, and living.

The means by which these ends are to be obtained are:

1. The discipline which comes from interest in work and from cooperation with others in educational classes till at least 17 years of age.

2. The conservation of the love of work and the satisfaction of doing it well.

3. The acquisition of technical scientific knowledge.

4. The preservation and strengthening of a spirit of willingness to accept and fill one's place in organized society which implies relative positions and relative degrees of authority.

But it must be borne in mind that to bring these results about, the classes and courses must be made attractive to young people, and must be related to the daily life and occupations of the pupils; and, furthermore, they must meet individual, industrial, and national needs.

VII. A Dominion Development Policy.

It will be needful to formulate and develop plans (*a*) for those who are to continue at school in urban communities; (*b*) for those who have gone to work in urban communities; and similar provisions for rural communities.

For those who are to continue at school in urban communities, the commissioners recommended:

1. Intermediate industrial schools.
2. Coordinated technical classes.
3. Technical high schools.
4. Apprentice schools.
5. Industrial and technical institutes.
6. Technical schools for home economics and college for fine arts.

While for those who have gone to work in urban communities, the following system is advised:

1. Continuation classes.
2. Coordinated technical schools.
3. Middle technical schools.
4. Apprentice classes in workshops.
5. Industrial and technical institutes.
6. Extension lectures and correspondence courses.

For rural districts these schools are proposed:

1. Intermediate rural schools.
2. Rural high schools.
3. Continuation agricultural classes.

4. Continuation housekeeping classes.
5. County or district agricultural schools.
6. Young people's social service schools.
7. Schools for agricultural apprentices.
8. Colleges for agricultural study and home economics.
9. Correspondence courses.

This plan should be worked out and applied in such a way as to receive public confidence, public interest, and cooperation, and at the same time provincial control, local initiative, and local responsibility be maintained and developed. And for these purposes the Canadian Parliament should make a grant of $3,000,000 each year for 10 years, and this fund should be distributed equitably among the Provinces.

VIII. Apprentices, Foremen, and Leaders.

In Germany, France, England, Scotland, Ireland, and elsewhere the avowed aim of industrial training and technical education is not only to increase the working or productive efficiency of the pupil, but to develop all his powers, to prepare him for citizenship, to improve the industries, and to render the conditions of living more satisfactory. The interests of the pupils, parents, employers, the community, and the State are all considered. Even when compulsory attendance at continuation schools is exacted, there is a definite purpose of using the schools as a means to raise the whole community to a higher level of intelligence, ability, and good will.

The tendency of manufacturers is to call for the service of machine tenders instead of all-round mechanics; in other words, the tendency is to make workmen the adjuncts of machines. To offset this tendency, the school must supplement the work of the shop; in supplying the means of greater efficiency it should thereby increase the pupil's pride in his work, and so his pride in citizenship would be stimulated. Here lies the opportunity to make plain to him his relation to other workmen, and to the community and State as well. For this work the teacher needs special preparation, for industrial training alone may merely promote the greedy side of man's nature; and refining influences and sympathies, such as may be stimulated by good literature, for example, are needed, and a deep mastery of the principles of civics is essential. Such cooperation between the school and shop must be established as will help to develop the leaders, foremen, superintendents, and the like.

IX. Education for Rural Communities.

This is essential, for (1) country life contributes to the virility of the race; (2) agriculture is a means of creating wealth; (3) it furnishes a basis for manufacturing and other forms of business; (4) it will offset the increased cost of living.

Therefore it is highly desirable to teach children to love nature and to take an intelligent interest in rural pursuits. So lessons should be given in regard to cattle, sheep, farm machinery, poultry, soils, fertilizers, gardens, crops, foods, trees, flowers, and birds, and the English language should be cultivated as a means to develop this interest.

The consolidation of rural schools, as in parts of the United States, is a practical means for betterment. But as far as farming is concerned, it must be remembered that the proper place to learn farming is a farm, managed as a business concern to provide a living and competence for the owner or worker. For this purpose, farm schools which realize farm conditions as nearly as possible are advantageous.

X. Good homes furnish the support of community, State, and civilization. Therefore girls should receive opportunity to develop vocational ability for housekeeping and home-making.

Lectures, demonstrations, institutes prove valuable, for example, in teaching the subjects of foodstuffs and their preparation, nursing, domestic science, and industry. Domestic service might be established on a self-respecting basis.

XI. Industrial Research.

To-day manufacturers need experts, especially chemists, to show them how to eliminate waste and increase efficiency. A study of what Dr. Robert K. Duncan has accomplished in the Universities of Pittsburgh and Kansas is very suggestive. The plan provides for the creation and maintenance of industrial fellowships at those universities. The plan is briefly this:

1. The university provides the laboratory accommodations and selects the investigators.
2. The manufacturer indicates the topic to be investigated and supplies the funds.
3. Any discoveries made become the property of the manufacturer, subject to certain conditions.

XII. Vocational Guidance.

This does not mean helping boys and girls to get jobs; it does not mean choosing vocations for them; it does mean the bringing to bear of organized information and organized common sense on the choice of a vocation. Without it, there is untold loss to the individual, to the community, and to the State, because of maladjustment of talents to work. So, much cooperation is necessary. The methods in use in Scotland, in New York, and in Boston give much in the way of suggestion.

XIII. Wider Use of School Plant.

The movement to make wider use of the school plant has been especially marked in Buffalo, N. Y.; New York City; Rochester, N. Y.; and at Ottawa, Ontario. Evening schools, continuation classes, vocation schools, free lecture courses, social-center work, recreation clubs, moving-picture shows, all furnish valuable means for public education.

XIV. Compulsory Attendance at Continuation Classes after the Age of 14.

The hearty cooperation of State and individual are requisite to make continuation schools a success, as they have been in Germany, England, Scotland, and in some States of the United States.

BULLETIN OF THE BUREAU OF EDUCATION.

[NOTE.—With the exceptions indicated, the documents named below will be sent free of charge upon application to the Commissioner of Education, Washington, D. C. Those marked with an asterisk (*) are no longer available for free distribution, but may be had of the Superintendent of Documents, Government Printing Office, Washington, D. C., upon payment of the price stated. Remittances should be made in coin, currency, or money order. Stamps are not accepted. Numbers omitted are out of print.]

1906.

*No. 3. State school systems: Legislation and judicial decisions relating to public education, Oct. 1, 1904, to Oct. 1, 1906. Edward C. Elliott. 15 cts.

1908.

*No. 5. Education in Formosa. Julean H. Arnold. 10 cts.
*No. 6. The apprenticeship system in its relation to industrial education. Carroll D. Wright. 15 cts.
No. 8. Statistics of State universities and other institutions of higher education partially supported by the State, 1907–8.

1909.

*No. 1. Facilities for study and research in the offices of the United States Government in Washington. Arthur T. Hadley. 10 cts.
No. 2. Admission of Chinese students to American colleges. John Fryer.
*No. 3. Daily meals of school children. Caroline L. Hunt. 10 cts.
No. 5. Statistics of public, society, and school libraries in 1908.
*No. 6. Instruction in the fine and manual arts in the United States. A statistical monograph. Henry T. Bailey. 15 cts.
No. 7. Index to the Reports of the Commissioner of Education, 1867–1907.
*No. 8. A teacher's professional library. Classified list of 100 titles. 5 cts.
*No. 9. Bibliography of education for 1908–9. 10 cts.
No. 10. Education for efficiency in railroad service. J. Shirley Eaton.
*No. 11. Statistics of State universities and other institutions of higher education partially supported by the State, 1908–9. 5 cts.

1910.

*No. 1. The movement for reform in the teaching of religion in the public schools of Saxony. Arley B. Show. 5 cts.
No. 2. State school systems: III. Legislation and judicial decisions relating to public education, Oct. 1, 1908, to Oct. 1, 1909. Edward C. Elliott.
*No. 5. American schoolhouses. Fletcher B. Dresslar. 75 cts.

1911.

*No. 1. Bibliography of science teaching. 5 cts.
*No. 2. Opportunities for graduate study in agriculture in the United States. A. C. Monahan. 5 cts.
*No. 3. Agencies for the improvement of teachers in service. William C. Ruediger. 15 cts.
*No. 4. Report of the commission appointed to study the system of education in the public schools of Baltimore. 10 cts.
*No. 5. Age and grade census of schools and colleges. George D. Strayer. 10 cts.
*No. 6. Graduate work in mathematics in universities and in other institutions of like grade in the United States. 5 cts.
No. 7. Undergraduate work in mathematics in colleges and universities.
No. 9. Mathematics in the technological schools of collegiate grade in the United States.
*No. 13. Mathematics in the elementary schools of the United States. 15 cts.
*No. 14. Provision for exceptional children in the public schools. J. H. Van Sickle, Lightner Witmer, and Leonard P. Ayres. 10 cts.
*No. 15. Educational system of China as recently reconstructed. Harry E. King. 10 cts.
No. 19. Statistics of State universities and other institutions of higher education partially supported by the State, 1910–11.

1912.

*No. 1. A course of study for the preparation of rural-school teachers. F. Mutchler and W. J. Craig. 5 cts.
*No. 3. Report of committee on uniform records and reports. 5 cts.
*No. 4. Mathematics in technical secondary schools in the United States. 5 cts.
*No. 5. A study of expenses of city school systems. Harlan Updegraff. 10 cts.

*No. 6. Agricultural education in secondary schools. 10 cts.
*No. 7. Educational status of nursing. M. Adelaide Nutting. 10 cts.
*No. 8. Peace day. Fannie Fern Andrews. 5 cts. [Later publication, 1913, No. 12.]
*No. 9. Country schools for city boys. William S. Myers. 10 cts.
No. 11. Current educational topics, No. 1.
*No. 13. Influences tending to improve the work of the teacher of mathematics. 5 cts.
*No. 14. Report of the American commissioners of the international commission on the teaching of mathematics. 10 cts.
*No. 17. The Montessori system of education. Anna T. Smith. 5 cts.
*No. 18. Teaching language through agriculture and domestic science. M. A. Leiper. 5 cts.
*No. 19. Professional distribution of college and university graduates. Bailey B. Burritt. 10 cts.
No. 22. Public and private high schools.
*No. 23. Special collections in libraries in the United States. W. D. Johnston and I. G. Mudge. 10 cts.
No. 26. Bibliography of child study for the years 1910-11.
No. 27. History of public-school education in Arkansas. Stephen B. Weeks.
*No. 28. Cultivating school grounds in Wake County, N. C. Zebulon Judd. 5 cts.
No. 29. Bibliography of the teaching of mathematics, 1900-1912. D. E. Smith and C. Goldziher.
No. 30. Latin-American universities and special schools. Edgar E. Brandon.

1913.

No. 1. Monthly record of current educational publications, January, 1913.
*No. 2. Training courses for rural teachers. A. C. Monahan and R. H. Wright. 5 cts.
*No. 3. The teaching of modern languages in the United States. Charles H. Handschin. 15 cts.
*No. 4. Present standards of higher education in the United States. George E. MacLean. 20 cts.
No. 5. Monthly record of current educational publications, February, 1913.
*No. 6. Agricultural instruction in high schools. C. H. Robison and F. B. Jenks. 10 cts.
*No. 7. College entrance requirements. Clarence D. Kingsley. 15 cts.
*No. 8. The status of rural education in the United States. A. C. Monahan. 15 cts.
No. 11. Monthly record of current educational publications, April, 1913.
*No. 12. The promotion of peace. Fannie Fern Andrews. 10 cts.
*No. 13. Standards and tests for measuring the efficiency of schools or systems of schools. 5 cts.
No. 15. Monthly record of current educational publications, May, 1913.
*No. 16. Bibliography of medical inspection and health supervision. 15 cts.
*No. 18. The fifteenth international congress on hygiene and demography. Fletcher B. Bresslar. 10 cts.
*No. 19. German industrial education and its lessons for the United States. Holmes Beckwith.
*No. 20. Illiteracy in the United States. 10 cts.
No. 21. Monthly record of current educational publications, June, 1913.
*No. 22. Bibliography of industrial, vocational, and trade education. 10 cts.
*No. 23. The Georgia club at the State Normal School, Athens, Ga., for the study of rural sociology. E. C. Branson. 10 cts.
*No. 24. A comparison of public education in Germany and in the United States. Georg Kerschensteiner. 5 cts.
*No. 25. Industrial education in Columbus, Ga. Roland B. Daniel. 5 cts.
*No. 26. Good roads arbor day. Susan B. Sipe. 10 cts.
*No. 28. Expressions on education by American statesmen and publicists. 5 cts.
*No. 29. Accredited secondary schools in the United States. Kendric C. Babcock. 10 cts.
*No. 30. Education in the South. 10 cts.
*No. 31. Special features in city school systems. 10 cts.
No. 32. Educational survey of Montgomery County, Md.
*No. 34. Pension systems in Great Britain. Raymond W. Sies. 10 cts.
*No. 35. A list of books suited to a high-school library. 15 cts.
*No. 36. Report on the work of the Bureau of Education for the natives of Alaska, 1911-12. 10 cts.
No. 37. Monthly record of current educational publications, October, 1913.
*No. 38. Economy of time in education. 10 cts.
No. 39. Elementary industrial school of Cleveland, Ohio. W. N. Hallmann.
*No. 40. The reorganized school playground. Henry S. Curtis. 10 cts.
*No. 41. The reorganization of secondary education. 10 cts.
No. 42. An experimental rural school at Winthrop College. H. S. Browne.
*No. 43. Agriculture and rural-life day; material for its observance. Eugene C. Brooks. 10 cts.
*No. 44. Organized health work in schools. E. B. Hoag. 10 cts.
No. 45. Monthly record of current educational publications, November, 1913.
*No. 46. Educational directory, 1913. 15 cts.
*No. 47. Teaching material in Government publications. F. K. Noyes. 10 cts.
*No. 48. School hygiene. W. Carson Ryan, jr. 15 cts.
No. 49. The Farragut School, a Tennessee country-life high school. A. C. Monahan and Adams Phillips.
*No. 50. The Fitchburg plan of cooperative industrial education. M. R. McCann. 10 cts.
*No. 51. Education of the immigrant. 10 cts.

*No. 52. Sanitary schoolhouses. Legal requirements in Indiana and Ohio. 5 cts.
No. 53. Monthly record of current educational publications, December, 1913.
No. 54. Consular reports on industrial education in Germany.
No. 55. Legislation and judicial decisions relating to education, October 1, 1909, to October 1, 1912. James C. Boykin and William R. Hood.
No. 58. Educational system of rural Denmark. Harold W. Foght.
No. 59. Bibliography of education for 1910-11.
No. 60. Statistics of State universities and other institutions of higher education partially supported by the State, 1912-13.

1914.

*No. 1. Monthly record of current educational publications, January, 1914. 5 cts.
No. 2. Compulsory school attendance.
*No. 3. Monthly record of current educational publications, February, 1914. 5 cts.
No. 4. The school and the start in life. Meyer Bloomfield.
No. 5. The folk high schools of Denmark. L. L. Friend.
No. 6. Kindergartens in the United States.
No. 7. Monthly record of current educational publications, March, 1914.
*No. 8. The Massachusetts home-project plan of vocational agricultural education. R. W. Stimson. 15 cts.
No. 9. Monthly record of current educational publications, April, 1914.
No. 10. Physical growth and school progress. B. T. Baldwin.
*No. 11. Monthly record of current educational publications, May, 1914. 5 cts.
*No. 12. Rural schoolhouses and grounds. F. B. Dressler. 50 cts.
No. 13. Present status of drawing and art in the elementary and secondary schools of the United States. Royal B. Farnum.
No. 14. Vocational guidance.
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