

SAORSTÁT ÉIREANN.

COMMISSION
ON
TECHNICAL EDUCATION.

REPORT

BAILE ATHA CLIATH
DUBLIN.

FOILLSIHE AG OIFIG AN tSOLATHAIR,
PUBLISHED BY THE STATIONERY OFFICE.

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Problem of Rural Schools and Teachers in North America. By Ethel H. Spalding. (No. 13). pp. 27-227-262.

Compulsory Continuation Schools in Germany. By H. A. Clay. (No. 18). pp. 263-304. X 2 (Y 31) 71

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The Playground Movement in America and its Relation to Public Education. By Walter Wood. (No. 27.) pp. 352-379. T 2: 55. 73

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	a.	Page
VII.—TECHNICAL EDUCATION IN RELATION TRADES AND OCCUPATIONS. ..	Page 177-240.	82
(a) Building and Allied Trades ..	178-184	
(b) Mechanical Engineering ..	185-189	
(c) Electrical Engineering ..	190-199	
(d) Motor Garage Work ..	200-202	
(e) The Printing Trade ..	204-210	
(f) Hotel and Restaurant Work ..	211-225	
(g) The Fishing Industry ..	226-232	
(h) The Mercantile Marine ..	233-236	
(i) Training for Nurses ..	237-240	
VIII.—HIGHER TECHNICAL EDUCATION. ..	241-248	106
(Diagram—Educational System showing Proposed Changes).		
IX.—LOCALISATION OF SCHEMES, LOCAL CONTROL AND RATING OBLIGATIONS. ..	249-268	109
(a) Proposed Administrative Groups and Schemes. ..	249-257	
(b) Proposed Constitution of Local Com- mittees ..	258-260	
(c) Functions of Local Executive Officer	261-262	
(d) Present and Proposed System of Rating ..	263-267	
(e) Repeal of Existing Legislation ..	268	
X.—CENTRAL CONTROL AND FINANCE. ..	269-288	120
XI.—THE GAELTACHT. ..	289-303	129
XII.—THE TRAINING OF TEACHERS REQUIRED FOR CONTINUATION AND TECHNICAL SCHOOLS. ..	304-325	135
Mechanical and Electrical Engineering and Applied Chemistry ..	311	
Rural Science ..	312	
Physical and Mechanical Science ..	313	
Commerce ..	314	
General Subjects in Continuation Classes	315	
Manual Instruction ..	316	
Motor Garage and General Workshop Practice ..	317-318	
Other Trade Subjects ..	319-320	
Domestic Economy ..	321-323	
“ Refresher ” Courses ..	324-325	
XIII.—SALARIES AND CONDITIONS OF SERVICE OF WHOLE- TIME CONTINUATION AND TECHNICAL TEACHERS. ..	326-329	143
XIV.—SUMMARY OF PRINCIPAL RECOMMENDATIONS AND CONCLUSIONS. ..		

TABLE OF CONTENTS.

	Para.	Page
TERMS OF REFERENCE AND CONSTITUTION OF COMMISSION. . . . .	.. ..	vi.
INTRODUCTORY.		vii.
I.—HISTORICAL.	1-31	1
II.—SURVEY OF EXISTING FACILITIES FOR TECHNICAL EDUCATION.	32-87	14
(i) Schemes under Local Control	32-35	
(a) Established Technical Schools	36-52	
(b) Technical Instruction under County Schemes	53-53	
(c) Day Trades Preparatory Schools	59-63	
(d) Day Commercial Classes	64-65	
(e) Day Apprentice Schools	66-72	
(f) Summary of the present position	73-76	
(ii) Institutions under the direct control of the Technical Instruction Branch of the Department of Education	77-81	
(iii) Institutions and Schools under other Management	82-87	
III.—PRIMARY EDUCATION IN RELATION TO TECHNICAL EDUCATION.	88-95	36
IV.—CONTINUATION EDUCATION.	96-116	41
(a) Rural Areas	99-105	
(b) Urban Areas	106-110	
(c) General	111-116	
V.—TECHNICAL EDUCATION IN RELATION TO EMPLOYMENT.	117-158	54
(a) Agriculture	119-124	
(b) Industrial occupations in which the skill of the worker is of importance	125-135	
(c) Occupations in which such skill as is necessary on the part of the worker is easily acquired	136-143	
(d) Craft work the value of which depends on artistic merit	144-145	
(e) Commercial Pursuits	146-152	
(f) Household, Hotel and Institution Occupations	153-158	
VI.—APPRENTICE COMMITTEES.	159-176	71

NOTES OF RESERVATION:—

	Page
STATEMENT BY MR. JOHN GOOD.	153
STATEMENT BY MR. W. DOOLIN.	155

APPENDICES.

I.—Return showing the contributions derived from rates towards the support of local schemes of technical instruction for the Academic Year 1925-26.	157
II.—Table showing for the Academic Year ended 31st July, 1925, the number of students enrolled in classes in Technical Schools.	161
III.—Extracts from the Official Programme for Technical Schools and Classes.	162
IV.—Table showing for the Academic Year ended 31st July, 1925, the number of students enrolled in classes conducted under County Schemes of Technical Instruction elsewhere than in established Technical Schools.	167
V.—Return showing the numbers and constitution of Technical Instruction Committees and attendance at meetings during the Academic Year 1925-26.	168
VI.—Rural Industries under the Département of Fisheries for the year ended 31st March, 1926.	170
VII.—Union of South Africa : Some conditions of Apprenticeship.	172
VIII.—Union of South Africa : Apprenticeship Act, 1922.	174
IX.—Memorandum on the Swedish System of Education.	187
X.—Memorandum on the Swiss System of Education.	199
XI.—List (a) of Witnesses who appeared before the Commission, (b) of Organisations and Persons who supplied Written Evidence and other Data for the use of the Commission.	204

COMMISSION ON TECHNICAL EDUCATION.

TERMS OF REFERENCE.

“To enquire into and advise upon the system of Technical Education in Saorstát Eireann in relation to the requirements of Trade and Industry.”

CONSTITUTION OF COMMISSION.

Mr. JOHN INGRAM, B.E., A.R.C.Sc.I., Senior Inspector of Technical Instruction, Department of Education. (*Chairman*).

PROFESSOR DR. A. ROHN, President of the Federal Polytechnicum, Zurich, Switzerland.

Mr. NILS FREDRIKSSON, Member of the Swedish Board of Education and of the Board of Governors of the Royal Technical High School, Stockholm, Sweden.

Mr. JOHN GOOD, T.D.

Mr. HUGH COLOHAN, T.D.

Mr. JOHN J. O'CONNOR, Headmaster, Technical School, Mallow, Co. Cork.

MISS BRIGID STAFFORD, M.A., Superintending Officer, Department of Industry and Commerce.*

Mr. WALTER DOOLIN, B.A., Principal, Department of Finance.

Mr. TIMOTHY O'CONNELL, F.R.C.Sc.I., Senior Agricultural Inspector, Department of Lands and Agriculture.

Mr. ROBERT O'CONNOR, Technical Instruction
Branch, Department of Education.
(*Secretary*).

* Appointed in the place of Miss Haire Forster, Employment Branch, Department of Industry and Commerce, who died on 6th November, 1926.

The Commission desires to place on record its appreciation of the valuable services rendered to the Commission by the late Miss Haire Forster whilst one of its members.

COMMISSION ON TECHNICAL EDUCATION.

INTRODUCTORY.

To the Minister for Education.

The Commission appointed by you to enquire into the system of Technical Education in Saorstát Eireann has now the honour to present its Report.

Its Terms of Reference were :—

“ To enquire into and advise upon the system of Technical Education in Saorstát Eireann in relation to the requirements of Trade and Industry.”

At its inaugural meeting on October 5th., 1926, the Chairman read the following letter received from you :—

An Roinn Oideachais,
Baile Atha Cliath,

30th. September, 1926.

A Chara,

The Commission of which you are Chairman has been set up to enquire into and advise upon the system of Technical Education in Saorstát Eireann in relation to the existing and probable requirements of Trade and Industry. As you are aware, the system of Technical Instruction at present in operation was established more than a quarter of a century ago at a time when the conditions and prospects of the country were very different from what they are to-day. The great changes that have taken place since then, coupled with the industrial and economic progress that may be expected to result from the Shannon Electricity Scheme and other recent or pending industrial developments, make it imperative that the Government should have the fullest information on the present and probable needs of the country in the matter of Technical Instruction, and the best and most expert advice available as to how these needs may be effectively provided for. In view of the importance of these matters I have come to the conclusion that their investigation should be entrusted to a Commission which will examine fully how far trade and industry, including our main industry of Agriculture, are being kept back through lack of technical training and will advise as to how existing needs may be most

effectively met, and probable developments assisted by an improved system of such training.

One of the chief tasks of the Technical Instruction Commission, therefore, will be to investigate this very important problem, since without such information as to the present and prospective needs of industry and commerce it will be difficult if not impossible for the Commission to discover what system of Technical Instruction can meet these needs. With this governing information at their disposal it is hoped that the Commission may be able to advise fully as to the most suitable and effective system of Technical Instruction in regard to :—

- (1) The nature and extent of the Technical Education that will be necessary to meet the needs of the community (*a*) in Urban Districts, (*b*) in Rural Districts, and (*c*) in the Irish Speaking Districts.
- (2) The method of administering and financing such a system of Education in the various types of districts.

Under this latter head will come such questions as :—

- (1) Whether Technical Education should be compulsory, and if so, within what limits in respect to the (*a*) age, (*b*) attainments, or (*c*) occupation of the pupils.
- (2) If Technical Education should be compulsory, the extent to which the State and the local authorities should assume liability for the cost inside the compulsory limits, and the extent to which those bodies should assume liability for the cost of such education outside these limits.
- (3) The manner in which provision for the cost of Technical Education should be made.
- (4) The question of the control of Technical Education.
- (5) The question of the training of Technical Teachers.

Under this head will also come the question of Scholarships and such other provision of facilities as may be considered necessary.

In investigating these questions two of the chief problems to be dealt with will be :—

- (*a*) the question whether it should be the policy of the Department of Education to provide for Technical training prior to employment or parallel with employment, or both ;
- (*b*) the connection of such training with the apprenticeship system.

Unless there is clear evidence that employers and employees consider an effective training in an apprenticeship school a satisfactory method of entrance to a trade there can be no guarantee that it will be practicable to incorporate the Schemes of Technical

Training as an essential part of the apprenticeship system. While schemes of training apprentices in Technical Schools may supply a large body of well-educated, highly skilled and efficient craftsmen, the cost of such schemes may greatly exceed their value to the nation if there is no guarantee that the craftsmen trained under them will be absorbed by the trades and industries concerned. One of the chief tasks of the Commission, therefore, will be to discover as far as possible to what extent the employers and the employees consider that a specialised training in the Technical System can and should become one of the main methods of entrance to skilled trades.

In addition to these and other problems which will arise in connection with the system of Technical Instruction in the country as a whole, there are special problems connected with the provision of trade-training for youths in the Irish-speaking districts and the Commission on the Gaeltacht consider it of very great importance that as part of the general schemes for improving the economic condition of the population in these districts provision should be made (a) for giving preparatory trade training to youths, and (b) for the giving of instruction bearing on winter-employment and other seasonable part-time occupations for the small holders and manual workers. I wish, therefore, to draw the special attention of your Commission to these two matters with a view to discovering how such instruction can be best and most economically supplied.

In dealing with these and other problems of Technical Instruction I feel confident that your Commission will handle them on the fundamental principle that Technical Instruction can have and should have as profound an educational and civic value as any other form of education, and that no matter how effective a system of Technical Instruction may be in the narrower vocational sense of the word it will fail in one of its chief purposes if it does not uplift every man not merely as a member of his trade, but as a member of the community and a member of the State.

Mise,

Le fíor-mheas ort,

J. M. O'SULLIVAN.

JOHN INGRAM, Esq., B.E., A.R.C.Sc.I.,
Chairman of the Commission on Technical Education,
14 Hume Street, Dublin.

The Commission held 75 meetings, at 47 of which evidence was heard from Government Departments, members of local technical instruction committees and committees of agriculture, and their

officers, from Chambers of Commerce, from organisations representing employers, workers, teachers and other important interests and from twenty-six individual witnesses. In all, evidence was heard from one hundred and twenty-nine witnesses.

Visits were paid by members of the Commission to representative schools and classes throughout the country, and also to the important works in connection with the Shannon Power Development Schemes and to the Irish Sugar-Beet Factory, Carlow.

The Report of the Commission comprises fourteen chapters. The historical development of technical education in the Saorstát and the facilities that exist at the present time are described in Chapters I. and II. respectively. Chapters III. to VIII. as well as Chapter XI. deal with educational questions; Chapter III. the relation between primary and technical education, Chapter IV. continuation education, Chapters V., VI. and VII. the relations between technical education and the various forms of occupations and trades and also the conditions of apprenticeship, Chapter VIII. the higher forms of technical education. The special problem of preparatory trade training and of instruction bearing on winter-employment and other seasonable part-time occupations for youths in the Gaeltacht is dealt with in Chapter XI. The remaining Chapters IX., X., XII., and XIII. deal with the method of administering and financing the educational schemes in both urban and rural districts, the system of control, the training of teachers, their salaries and conditions of service.

The principal recommendations presented by the Commission are summarised in Chapter XIV.

The Report is as follows :—

CHAPTER I.

HISTORICAL.

1. In Ireland *Technical Instruction* in the sense now understood is of comparatively recent growth and may be said to have its origin in the Technical Instruction Act of 1889, which applied alike to England, Ireland and Wales. Prior to this, the grant administered by the Board of Education, South Kensington, was the only State contribution from educational resources to science and art instruction in Ireland. The regulations under which this Parliamentary Grant was given to day schools and evening schools and classes were substantially uniform for Great Britain and Ireland. The grants, given as payments on results, were availed of by day secondary schools and by occasional rural classes initiated by individual teachers under the stimulus of a personal payment. The greater part of the grants went, however, to the cities and large towns, where educational institutions had been established with the support of wealthy patrons. In 1889 there were in Ireland about 14,000 students in classes (including Secondary Schools) in connection with the Science and Art department, as compared with 150,000 students in Great Britain.

Early
Origins.

2. Educational Institutions of this type were very few, but as they formed the nucleus of many of the existing schools, now under local authorities, a brief reference to the origin of some of them may be of interest.

First
Technical
Institutions.

(a) In Dublin, technical instruction may be said to have been initiated by the Metropolitan School of Art, established by the Dublin Society in 1749. In 1815 the Society moved to Leinster House. For the first hundred years of its existence the instruction was gratuitous and included four departments for figure drawing, landscape and ornament, architecture and modelling. The school came in 1849 under the control of the Board of Trade and in 1854 under the Department of Science and Art. It was made a special Metropolitan School of Art in 1877, the instruction including drawing, painting, and modelling, and design for manufacturers.

Metropolitan
School of
Art.

Royal
College of
Science.

(b) The Royal College of Science was established in 1867 to afford a complete and thorough course of instruction in the branches of science more immediately connected with industry. Its declared object was "to supply, as far as practicable, a complete course of instruction in science applicable to the industrial arts, especially that which may be classed broadly under the heads of :— (1) mining, (2) agricultural, (3) engineering, (4) manufactures." A great proportion of the students came from England and Scotland.

Dublin.

(c) The first move towards the establishment of a technical school in the Metropolis was the outcome of an Artizans' Exhibition held at Dublin in 1885 to stimulate Irish industries. Many citizens interested in or identified with the exhibition decided that a technical school was an urgent necessity if artisans were to hold their own with foreign competitors. Premises were secured in Kevin Street for the maintenance of which substantial donations were made and annual subscriptions were guaranteed. From these donors and subscribers, the original committee of management was selected. From 1887, the Corporation made an annual grant of £500 under the Public Libraries Acts which could be legally applied only to instruction in science and art, the classes in technology being entirely supported from voluntary contributions. Prior to the establishment of Kevin Street Schools, the only instruction for artisans was given in the Mechanics Institute—now the site of the Abbey Theatre—which is commemorated in the "Mechanics Institute Scholarships" offered by the City of Dublin Technical Schools, arising out of a bequest of £500 made for the purpose by the last representative of the Institute.

Clonmel.

(d) Technical Instruction in Clonmel is associated with Thomas Bianconi of Stage-Coach fame who in 1845 built the Mechanics Institution in which a general scheme of technical education is being carried on to-day. Clonmel was at that time a thriving town of 20,000 inhabitants. An Art School was established under the control of South Kensington and the Royal Dublin Society. The work of the School, which was subsequently

extended to embrace commercial subjects, ~~was~~ intermittent in character.

- (e) In Cork, Technical Instruction dates from 1849, ^{Cork.} when a School of Design was established in the premises of the Royal Cork Institution. Classes were formed in art subjects and later in a few science subjects. The committee of management was a self-elected body, whose sources of income for some years included annual grants of £500 and £200 from the Board of Trade, London, and the local Corporation respectively. From 1855, the Corporation appointed the committee of management, conducted the school in connection with the Department of Science and Art, and contributed to its support the proceeds of a rate levied under the Public Libraries and Museums Act passed in the same year. Immediately on the passing of the Public Libraries (Ireland) Act of 1877, the Corporation appointed a general committee to manage the existing schools of Science and Art and the proposed School of Music and assigned to them an income derived from rates to the full extent permitted by legislation. In 1884 new Schools of Science and Art were built and presented to the city by Mr. W. H. Crawford, after which important developments took place on the art side.
- (f) The establishment of the Athenaeum Society for ^{Limerick.} the promotion of literature, science, art and music in 1853 may be regarded as the first step towards a scheme of technical instruction in Limerick. The Athenaeum Hall was built in 1855, and one of the earliest developments was the inauguration of a School of Art. The project which was initiated by a small group of prominent citizens met with varying success for a period of over thirty years, the Free Library and the School of Music being discontinued in the meantime from lack of funds. The work carried out by the Athenaeum Society was mainly cultural.

3. The first legislative enactment giving State recogni- ^{Ter}
tion expressly to Technical Instruction and empowering ^{In}
local authorities to formulate definite schemes of instruc- ^{Act}
tion was passed in 1889. This Act enabled local authorities
(meaning in Ireland the urban or rural sanitary authority)
to raise a rate not exceeding 1d. in the £ to supply te
or manual instruction and to appoint a commi+ "

all powers exercisable under the Act may be delegated except the power of raising a rate or of borrowing money.

Meaning of
Technical
and Manual
Instruction.

4. The Act contains these definitions :—

“ The expression ‘ technical instruction ’ shall mean instruction in the principles of science and art applicable to industries and in the application of special branches of science and art to specific industries or employments. It shall not include teaching the practice of any trade or industry or employment, but, save as aforesaid, shall include instruction in the branches of science and art with respect to which grants are for the time being made by the Department of Science and Art, and any other form of instruction (including modern languages and commercial and agricultural subjects), which may for the time being be sanctioned by that Department by a minute laid before Parliament and made on the representation of a local authority that such a form of instruction is required by the circumstances of its district. The expression ‘ manual instruction ’ shall mean instruction in the use of tools, processes of agriculture, and modelling in clay, wood, and other material.”

Amending
Act of 1891.

5. The Technical Instruction Act, 1891, which amended the law relating to technical instruction, included provisions that enabled a local authority to aid technical or manual instruction in schools or institutions outside its district and to award scholarships tenable by students at institutions not available in the district.

How
technical
instruction
1889
'891

Chronol. of

6. The provisions of the Acts of 1889 and 1891 were availed of by (a) the Corporation of Dublin which in 1891 took control of the schools in the management of which the original donors and subscribers continued to get representation ; (b) the Corporation of Cork in 1893, and to a fuller extent in 1895 ; (c) the Corporation of Limerick in 1896 when the Athenaeum Society handed over their entire premises to the Corporation in trust to administer the property for the advancement of technical education ; (d) the urban sanitary authority of Pembroke, Co. Dublin, to which was handed over in 1897 the premises at Ringsend presented by the Earl of Pembroke to the district in 1893 for use as a Fishery School.

7. The local authority under the Acts was, for Irish counties, the rural sanitary authority, i.e., the Board of Health, as County Councils were not then in existence

The area of the unions was so circumscribed that the produce of a rate of 1d. in the £, even aided by an equivalent grant from the Government, would realise a sum too small to be of any practical use. Boards of Guardians were not empowered to join together and form a comprehensive scheme and thus there was neither a policy nor an organisation to carry out a system of technical instruction in the counties.

8. Under the Local Taxation (Customs and Excise) Act, 1890, the residue grant of the beer and spirit duties, which amounted to a very large sum, was placed at the disposal of County and Borough Councils in England, for application, at their discretion, either in relief of rates or towards technical education. No portion of this grant was placed at the disposal of local authorities or made available for technical education in Ireland. Ireland's share was applied to primary and secondary education. The Intermediate Education Board received a fluctuating sum which in 1891 amounted to about £39,000, after the payment for Primary Education of a fixed annual sum of £78,000. The latter amount was subsequently transferred to the Department of Agriculture and Technical Instruction on its establishment.

Provision of
additional
Funds.

9. The exclusion of Ireland from a share, in respect of technical instruction, of the produce of certain taxes on beers and spirits was taken into account when in 1892 the Department of Science and Art decided to make grants to Irish Schools in aid of technical instruction given under the Technical Instruction Act, 1889. It was laid down that "the grant in aid will be made to the school aided by the Local Authority and will be equal in amount to the sum contributed by the Local Authority out of the rates for instruction in subjects other than those for which the Department gives aid under the Science and Art Directory."

Equivalent
Grant.

10. The total contribution in respect of technical instruction from local rates and Imperial funds in 1894 was in Ireland £5,000 and £2,500 respectively. In England, on the other hand, the amount contributed from rates was only £25,000, while the amount derived from the State was about £620,000. Grants were received in addition under the Science and Art Directory amounting, in the same year, to £13,000 in the case of Ireland, as compared with £208,000 for Great Britain.

Finance of
Technical
Instruction.

11. A further development of limited application took place in 1891 with the establishment of the Congested Districts Board with a view to the advancement and improve-

Congested
Districts
Board.

ment of the backward districts of the western counties. The methods of the Board, endowed with financial resources, embraced the direct promotion, management and development of industry and the promotion of technical instruction in congested areas, where the problem was more industrial than educational. There was definite co-ordination between the actual development and the educational work.

Local
Government
(Ireland)
Act, 1898.

12. The passing of the Local Government (Ireland) Act, 1898, which authorised the establishment of County Councils, did much to remove the almost insuperable difficulties hitherto in the way of providing technical instruction in county areas.

" Recess
Committee " of 1896
results in the
Department
of Agriculture
and
Technical
Instruction.

13. The closing years of the nineteenth century witnessed an awakening of interest in educational questions in Ireland. Three important inquiries were held which influenced subsequent educational policy :—

(a) An unofficial Committee of Irishmen was set up in 1895 on the invitation of Mr. Horace Plunkett, who acted as Chairman, with Mr. T. P. Gill as Secretary. This Committee—which was known as the " Recess Committee "—made a systematic study of the methods adopted for the development of the industrial resources of other countries through the agency of the State and the active co-operation of the inhabitants. The Recess Committee issued its Report in 1896, and its principal recommendations were carried into effect in the Agriculture and Technical Instruction (Ireland) Act, 1899. The Department of Agriculture and Technical Instruction was established as the administrative machine.

Primary
Commission,
1898.

(b) The question of manual and practical instruction in Primary Schools was investigated by a Commission which reported in 1898. In the Report the conclusion was expressed that National School children " were not fit to enter a Technical School even if they had such a school at their doors." The Commissioners of National Education took steps, accordingly, to prepare a new programme with the object of fitting pupils to receive the benefits of further stages of practical education.

Intermediate
Education,
1898.

(c) In 1898 also, serious defects were stated by the members of the Intermediate Education Board to exist in the system and a Commission was

appointed to investigate the matter. In addition to making other recommendations, the Commission reported in 1899 in favour of the establishment of a modern course in which Science would play an important part.

14. Instruction in Science and Art in Ireland had fallen to a very low ebb in 1900. In a period of ten years the grants had dwindled from £8,481 to £3,840. The amount contributed from the Imperial Exchequer under the Technical Instruction Acts 1889 and 1891 was only £3,044, and this at a time when the Reformatory and Industrial Schools, in both of which types of schools technical instruction was given, were costing £108,000. Outside Dublin, Cork and Limerick, there were no facilities for the study of applied subjects. Such was the position and extent of Science and Art and Technical Instruction in the final year of the administration of the Board of Education, London. The system was a comparative failure. The science and art grants paid to local authorities were very inadequate and sufficient aid was not supplied from the Exchequer to encourage local effort in respect of technical instruction. Moreover, instruction was not practical and modifications, which experience had proved advisable, were not introduced in the absence of a definite policy for the country.

Position of
Technical
Instruction
in 1900.

15. The Department of Agriculture and Technical Instruction, set up under the Agriculture and Technical Instruction (Ireland) Act, 1899, was entrusted with the powers and duties, so far as technical education was concerned, of the Department of Science and Art in relation to the administration in Ireland of the science and art grant, the grant in aid of technical instruction and the two central institutions. By Section 16 of the Act an Endowment of £55,000 was provided for purposes of technical instruction. The appointment of statutory committees, as the local agencies of technical education, was an important development of the system of representative local government established by the legislation of 1898.

The
Department
of
Agriculture
and
Technical
Instruction.

16. Three separate branches of government therefore were entrusted with educational duties. Primary education was under the Commissioners of National Education, Secondary Education was administered by the Intermediate Education Board, while the new Department was responsible for Technical Instruction.

Educational
Authorities.

17. The Department, as one of its first acts, safeguarded the science and art grants for Day Secondary Schools by the issue of new regulations, more directly applicable to

Link with
Secondary
Schools.

Irish conditions, involving a scheme of payments based mainly on the results of inspection, the first regular inspection of such schools. The Intermediate Education Board adopted the proposals and made them part of their own curriculum as from the academic year 1901/2. Difficulties, due to lack of proper apparatus and a dearth of qualified teachers, were met by equipment grants and by local and short summer courses of instruction. The funds for these purposes were provided and administered by the Department, and similar obstacles were dealt with in like manner as they occurred.

Link with
Primary
Schools.

18. In regard to primary education the Department had no direct function. Arrangements were, however, made with the Commissioners of National Education, whereby the Department provided facilities for Primary School teachers to become qualified in special subjects such as elementary science, drawing and domestic economy, to which rural science (including school gardening) was added at a later date. A further development was the teaching of domestic economy to primary school girls in technical schools by trained instructresses during primary school hours. The results in both cases were disappointing.

Definition of
Technical
Instruction
under the
Act of 1899.

19. The Act of 1899 defined technical instruction in the following terms:—

“The expression ‘technical instruction’ means instruction in the principles of science and art applicable to industries, and in the application of special branches of science and art to specific industries or employments. It shall not include instruction given in elementary schools or teaching the practice of any trade or industry or employment, but save as aforesaid shall include instruction in the branches of science and art with respect to which grants are for the time being made by the Department, and any other form of instruction (including modern languages and commercial subjects) which may for the time being be sanctioned by the Department, by a minute laid before Parliament and made on the representation of a county or urban district council that such form of instruction is required by the circumstances of its district, and shall also include instruction in the use of tools, and modelling in clay, wood or other material.”

This definition of Technical Instruction differed from that contained in the Act of 1889 in so far as it excluded instruction given in elementary schools, and in the processes of agriculture.

20. The Endowment of £55,000 for technical instruction was, in accordance with statutory requirements, divided into two portions. The first triennial allocation, with the concurrence of the Board of Technical Instruction, set aside £25,000 for distribution among the County Boroughs in proportion to their respective populations, and £30,000 for distribution elsewhere than in County Boroughs and for other purposes mentioned in the Act. These funds were distributed by the Department on the advice of the Board of Technical Instruction.

Allocation of
Endowment
Grant.

21. The Board of Technical Instruction, the members of which held office for three years, was constituted under Section 7 of the Act. The duties of the members were to "advise the Department with respect to all matters and questions submitted to them by the Department in connexion with technical instruction." The Board consisted of twenty-three members of whom twenty-one were appointed under Section 10 of the Act as follows:—

Board of
Technical
Instruction.

- "(a) Three persons to be appointed by the county council of each of the county boroughs of Dublin and Belfast ;
- "(b) One person to be appointed by a joint committee of the councils of the several urban county districts in the county of Dublin ; such committee to consist of one member chosen out of their body by the council of each such district ;
- "(c) One person to be appointed by the council of each county borough not above mentioned ;
- "(d) One person to be appointed by the provincial committee of each province ;
- "(e) One person to be appointed by the Commissioners of National Education ;
- "(f) One person to be appointed by the Intermediate Education Board ; and
- "(g) Four persons to be appointed by the Department."

Under the provisions of Section 24 (2) of the Act, the President and Vice-President of the Department were *ex-officio* members of the Board.

The Board had no control of that portion of the Department's income provided by annual Parliamentary Grants and when the triennial division of the Endowment Fund had been effected with its concurrence, the Board had no further function as regards the funds allotted to County

Boroughs. The Board had, however, a power of veto over the Endowment appropriation allocated for the promotion of technical education elsewhere than in County Boroughs, and the concurrence of the Board was, in consequence, necessary for all other local schemes of technical instruction submitted annually to the Department for revision.

Financial powers of Local Authorities.

22. Local bodies were entirely free to adopt, or to take no part, in schemes of technical education. They were also empowered to borrow money for purposes of approved schemes and raise a rate, in addition to rating powers, conferred by previous Acts. The Department, for its part, was precluded from assisting local schemes in respect of which aid was not given by local authorities.

Successful response to Act of 1899.

23. There was a general acceptance of the Act of 1899, and within a few years, rating authorities in almost every instance had in operation schemes of technical instruction under the management of local statutory committees. These committees were set up by councils of county boroughs, urban districts and counties and consisted partly of the members of the councils and partly of other persons selected by them.

Nature of Local Schemes.

24. The schemes of technical education in the large municipal centres were concentrated in organised technical schools offering systematic courses of instruction. In the counties, while technical schools were frequently established in the smaller urban districts and other centres of population, the instruction was provided in the beginning mainly by itinerant teachers of woodwork and domestic economy. Commerce in many instances and farriery to a minor extent were introduced at a later stage. Home industries classes have also been a feature of some county schemes.

Training of Teachers.

25. It is evident that the success of this new form of education was largely dependent upon a supply of trained teachers. As these naturally were not available, steps had to be taken to select individuals for training. For this purpose special courses and scholarships for advanced education in science, art, commerce, and woodwork were provided. Teachers of domestic economy were trained at the residential School of training at Kilmacud, Co. Dublin. The Royal College of Science and the Metropolitan School of Art were also utilised for purposes of higher scientific and technical education. Training for industry and commerce was mainly effected through the medium of scholarships tenable outside Ireland.

26. At an early stage, inadequate funds retarded the progress of technical instruction. The two main sources of support from the State, namely, the Endowment Grant and the science and art grant administered under the old regulations of the English Board of Education, did not place sufficient funds at the disposal of the local authorities. To help towards a solution of the difficulty the Department issued in 1906 a new programme for technical schools and classes, in substitution for the old regulations of 1901. This with some modifications has continued in operation. Attendance grants became payable on co-ordinated courses of instruction and resulted in a more liberal distribution of funds for the development of technical schools. County schemes of technical instruction were not, however, able to reap the full benefits of the change because, on the whole, instruction was given in isolated subjects, such as woodwork or domestic economy. The regulations were accordingly extended in 1911, and the payment of the attendance grants on "single" subjects lessened, to some extent, the financial difficulties experienced by committees engaged in the promotion of rural schemes of technical education. The final departure from the system of the English Board of Education was completed in 1913, when the Department instituted its own scheme of technical school examinations.

Payment of
Attendance
Grants, 1906.

27. The rapid rise in prices in consequence of the European War created further financial difficulties for local authorities administering technical instruction schemes. In many cases there was a danger that the schemes could not be continued unless the equitable claims of technical teachers for increased remuneration could be met. In 1918 the British Treasury placed at the disposal of the Department funds which were utilised to pay war bonuses to whole-time employees of technical instruction committees, a concession which at a later date was extended to part-time teachers.

War Bonus,
1918.

28. The revenue of the technical instruction committees is derived at present from two sources mainly (a) the local authorities, (b) the State. The contribution from the local authority takes the form of a rate and falls under two heads:—

Existing
Sources of
Income of
Technical
Instruction
Committees,

- (1) Under the Acts of 1889 and 1899, a total rate not exceeding 2d. in the £, of which generally not more than one-third is allocated to technical instruction in County areas. (See Appendix I.)
- (2) A special rate, not exceeding 1d. in the £ for the

(a) Local
Sources.

provision of instruction in the Irish Language, under the Local Government (Temporary Provisions) Act, 1923. (See Appendix I.)

Other additions to the income of Committees accrue in respect of students' fees, sale of class produce, and donations for scholarships and prizes.

(b) the State. The State contributions fall under the following heads:—

- (1) A fixed Normal Grant (formerly the Endowment Grant)
- (2) Attendance Grants.
- (3) Cost of Living Bonus (formerly the war bonus).
- (4) A small equipment grant.

For the academic year, 1st August, 1925, to 31st July, 1926, the revenue to technical instruction committees in the Saorstát from the above two main sources was:—

(a) Local rate (1) Technical		
Instruction	£30,831	
(2) Irish	£28,095	

Total local contribution (less minor receipts)		£58,926
Minor Receipts		£16,108

(b) The State:—		
(1)	£36,789	
(2)	£58,669	
(3)	£63,028	
(4)	£2,956	

Total State contribution		£161,442
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Total income of Technical Instruction Committees		£236,476
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Co-ordina-
tion of
Educational
Authorities.

29. The Government of Ireland Act, 1920, reduced considerably the powers of the Department of Agriculture and Technical Instruction in reference to technical education as the Government of Northern Ireland received control of technical instruction within its area. At this date, the Endowment fund amounted to £62,000, consisting of the original grant of £55,000 and a contribution of £7,000 from the Agricultural Board, for the purposes of instruction in domestic economy and Manual Work in rural areas. A division of this fund became necessary and the Department's share was £39,356, of which £32,180 is the amount available for local schemes of technical instruction. As a consequence of the Government of Ireland Act, the Board of Technical Instruction ceased to function. The Depart

ment continued to control technical instruction under the Free State Government, established as the result of the Treaty of 1921. The Endowment Fund was, however, wound up and it was provided that expenses of the service of technical instruction should, as from the 2nd June, 1924, be paid out of monies voted by the Oireachtas. One of the earliest Acts of the new Saorstát Government was to render possible the long-needed co-ordination between the different authorities dealing with primary, secondary, and technical education. This was effected through the Ministers and Secretaries Act, 1924, which transferred to the Department of Education which had been previously established by the Provisional Government, control of technical education in addition to the control of primary and secondary education which it already had. Under the same Act, the Department of Education took over control of the Metropolitan School of Art and the Royal College of Science, the latter being subsequently transferred to University College, Dublin. This was also the Act which divided the work of the old Congested Districts Board amongst other Departments, the provision of instruction in domestic economy being assigned to the Technical Instruction Branch of the Department of Education.

30. A no less important co-ordination remains to be achieved. The current tendency in all modern industrial countries is to make the technical school fulfil a more definite function in the training for industry. With the establishment of the Department of Industry and Commerce under the Ministers and Secretaries Act, 1924, there is an opportunity for close association between it and the Technical Instruction Branch of the Department of Education to secure that no industry, actual or potential, is likely to suffer from lack of a supply of trained workers.

Co-ordination between technical education and industry.

31. Part IV. of the Local Government Act, 1925, has an important bearing on technical education in so far as it renders local authorities liable for the pensions of whole-time technical teachers under certain well-defined conditions. Under this Act technical teachers are given security of tenure, so long as they continue to render satisfactory service. The Act has been instrumental in translating a voluntary system of technical education into a quasi-integral part of local administration. It may be pointed out, however, that though the State contributes to the payment of teachers, there is no State grant for pension purposes.

Pensions for Technical Teachers.

CHAPTER II.

SURVEY OF EXISTING FACILITIES FOR TECHNICAL EDUCATION.

- (i) SCHEMES UNDER LOCAL CONTROL.
 - (a) Established Technical Schools.
 - (b) Technical Instruction under County Schemes.
 - (c) Day Trades Preparatory Schools.
 - (d) Day Commercial Classes.
 - (e) Day Apprentice Schools.
 - (f) Summary of the present position.

- (ii) INSTITUTIONS UNDER THE DIRECT CONTROL OF THE TECHNICAL
INSTRUCTION BRANCH OF THE DEPARTMENT OF EDUCATION.

- (iii) INSTITUTIONS AND SCHOOLS UNDER OTHER MANAGEMENT.

(i) SCHEMES UNDER LOCAL CONTROL.

32. For the practical purpose of a general survey it may be taken that the bulk of the work of Technical Education in Saorstát Eireann is administered through local schemes, carried out by public bodies which are representative of the districts concerned. These bodies are of three kinds:—

Local
Management
of Schemes.

- (1) County Borough or Urban District Technical Instruction Committees appointed under Section 1 (2) of the Technical Instruction Act of 1889 or Section 14 (1) of the Act of 1899 ;
- (2) County Committees of Agriculture and Technical Instruction appointed under Section 14 (1) of the Act of 1899 by the County Councils only, and
- (3) County Joint Technical Instruction Committees appointed under Section 14 (2) of the same Act by the County Council and one or more Urban Councils in the County.

There are at present 22 committees of the first kind, 7 of the second, and 20 of the third. A list of the Committees with their respective administrative areas is shown in Appendix I. (column 1). It will be observed that while some large counties have only one committee, others have two, three or more. County Wexford, for instance, has a County Committee of Agriculture and Technical Instruction as well as separate Technical Instruction Committees for each of its three urban districts.

33. The secretarial and organising duties of a Scheme are carried out by an Executive Officer, appointed by the Committee. In the early days of the Department of Agriculture and Technical Instruction, it was difficult to find persons with the requisite technical qualifications, and posts were frequently filled by those holding secretarial attainments only. This was rapidly changed in the case of separate urban schemes, and the possession of suitable technical qualifications and experience has been for many years an essential condition of appointment of the Executive Officer. The position is not so satisfactory in the case of many of the county committees, where an officer is employed to carry out the duties of an agricultural scheme as well as those of a scheme of technical instruction. The function of this officer in respect of the latter is of a secretarial character only. In a few counties additional officers with technical experience are employed, under the direction of the Secretary, to act as

Local
Direction.

Principals of schools and to foster the development of the scheme, but in others this is not the case and the work of the committee is carried on with insufficient technical advice and guidance.

Schemes.

34. Every committee must submit its scheme annually to the Department of Education for approval before it can be put into effect. This approval is an essential condition for the payment of grants from State funds in support of the scheme. The scheme submitted by a committee sets out the educational provisions proposed for the year, the staff required to carry them out, and the income of the committee to meet the estimated expenditure. Generally schemes have tended to become standardised and little change has taken place in recent years in the proposals submitted annually. In many cases, however, it is difficult for committees with the limited funds at their disposal to provide the staff and the school accommodation required for developing their schemes, no matter how desirable such development may be.

Location of
Classes.

35. The instruction provided by a County Borough or Urban Technical Committee is in general carried on in a building, specially equipped and furnished for the purpose of technical education. The larger cities of Dublin and Cork, however, have four buildings each, Dublin having two for trades instruction, one for commerce and domestic economy, and one for music, and Cork having one large institute used for trades instruction and domestic economy, with three separate schools for commerce, art and music. The work of a county committee, in addition to instruction carried on in permanent schools in the large towns of the county, comprises instruction in the smaller towns and villages and "itinerant" instruction in purely rural districts. The problem of securing accommodation for classes both in urban and rural areas has caused committees much concern since the inception of technical instruction schemes. Many committees have been forced, through lack of funds, to accommodate their classes in buildings and rooms of a makeshift character. All sorts of buildings have been used for the purpose—disused hospitals, prisons, chapels, work-houses, private houses and such like.

(a) *Established Technical Schools.*

Number and
Size of
Schools.

36. During the academic year ended 31st July, 1925, there were in operation 65 technical schools, 22 conducted by county borough and urban committees, and 43 forming

portion of the schemes conducted by county committees. The schools varied in size from those in the county boroughs of Dublin and Cork with 3,993 and 2,453 students to the small county school like Ballinasloe with an enrolment of about 100. Apart from Dublin and Cork, which are exceptional, the average enrolment per school is 240.

37. The main work of the schools is carried on in evening classes, attendance at which is voluntary. The school programme is designed as a rule to secure the attendance of the students for either two or three evenings per week, each evening's work occupying two hours. It has been found from experience that students engaged in the workshop or businesshouse during the day-time cannot without unduly sacrificing their efficiency devote more than three evenings per week to the technical school, and only the most earnest and persevering are prepared to attempt as much. It is remarkable that so many do attend voluntarily in the circumstances. There is no definite link between the workshop, factory or business house on the one hand and the technical school on the other, and attendance is mostly the consequence of the personal ambition of the young worker. Occasionally he is encouraged by a prize awarded by an employers' or trades' body or by some emolument or concession in his work, but it cannot be said that there has been in the past a general appreciation in trade and industry of the possible value of technical education or any broad movement amongst industrialists to develop that systematic technical training which is recognised in other countries as an important factor of industrial success. On the other hand the large mass of evidence submitted to the Commission by representative employers and trades bodies indicates an awakened interest in technical education and a desire to co-operate heartily in securing a close connection between education and industry.

Attendance.

38. The table in Appendix II. is taken from the Report of the Department of Education for 1924-25, and shows the number of students enrolled in classes in technical schools. The table reveals a distribution of the work of the schools

Nature of
work in the
Schools.

Group.	Number of Students.	Percentage.
Introductory	1,757	8%
Commerce and Languages	8,811	40%
Science (pure and applied)*	3,757	18%
Handicraft ..	1,009	5%
Domestic Economy	5,354	24%
Art	916	4%
Other Subjects ..	204	1%
Total	21,808	100%

* Mainly Applied Science, including instruction in many trades subjects.

Small
Enrolment
in
Technologi-
cal Classes.

39. The most striking figures in this summary are those for Science (pure and applied) and Handicraft, the sum of which—4,766—represents the total enrolment in classes of a trade or technological character. It is a matter of grave concern that these two groups, which ought to form the mainstay of technical education, represent only 23 per cent. of the activities of the schools. Moreover, it will be observed in Appendix II. that of the 4,766 students, 2,379 or 50 per cent. were in attendance at the county borough schools of Dublin and Cork alone, and this number had increased to 2,488 for the session 1926-27. In these centres, as would naturally be expected, the more important work is being done in these two groups and it is stated they count for over 33 per cent. in Cork and over 50 per cent. in Dublin of the total enrolment. We are, however, left with the disquieting result that the large majority of the schools in the Saorstát are concerned with commerce and domestic economy and rarely with technology, art and craftwork. It might, of course, be contended that the work of the schools is but a reflection of employment in the country and that the figures are only those to be expected in a country which from an industrial point of view is not highly developed. Undoubtedly some of the schools are situated in districts which require little in the way of training for skilled trades and crafts, but it is clear that the work of the schools in more important districts bears too little relation to the local requirements of trade and industry and that a general change of outlook is required.

40. One of the greatest difficulties, which has to be contended with in the evening technical schools is irregular attendance. In practice it is almost impossible to have a session of more than eight months ; students are unwilling, as a rule, to attend the school during the summer months when the evenings are long and fine. Yet in a restricted session of eight months much good work could be accomplished if the attendance were regular. This is far from being the case. Though the instruction may be good, some of the students enrolled in a class leave after a lesson or two and others find that in two or three months they are unable to maintain progress. The following table compiled for a recent session indicates that the average attendance of students is generally in the neighbourhood of 50 per cent. of those enrolled :—

Introductory Course	..	..	49%
Commerce	..	..	55%
Science (pure and applied)	..	..	51%
Handicraft	..	..	59%
Domestic Science	..	..	53%
Art	..	..	48%

It can be understood how difficult it is to make technical education effective under conditions such as these, and it is important to realise that any system of technical education which is based entirely on voluntary attendance at evening classes has a very heavy handicap imposed on it.

41. Much of the instruction given in technical schools is organised on a "course" system. A student attends classes in two or more subjects of an approved course, one of the subjects being a main one. The course is arranged to cover four years of study and the main subject has to be maintained throughout. Special grants are paid by the Department for attendance at approved courses, the grants being at much higher rates than those paid for attendance at a single subject. (See Appendix III.)

42. Despite the encouragement given by means of high grants to the continuance of attendance over the full course, the numbers in the higher years are always very small. The number of students on whom grants were paid at second, third and fourth year rates for each hundred at first year are as follows :—

Irregular
Attendance.

The
"Course"
System.

Sessions.	1st. Year.	2nd. Year.	3rd. Year.	4th. Year.
1913-14	100	28	8	5
1916-17	100	29	9	2
1920-21	100	27	8	3
1924-25	100	34	11	4

These figures relate to course students only, but it is not to be assumed that all who attend technical schools are course students. Many enrol deliberately for one subject and do not join classes in ancillary subjects. Sometimes a school organises part of its programme on a single-subject plan and instruction in the ancillary subjects is not available. It is clear, however, that the course system has failed to achieve the purpose of securing continued attendance over a number of sessions at a course of progressive study. Such students, as have attended a secondary or trades preparatory or whole-time commercial school between the ages of 14 and 16, can maintain the requisite rate of progress, but those who enter the evening classes with only a primary school preparation find great difficulty in grasping a trade subject and the subjects kindred to it, in the limited period of 4 or 5 hours weekly.

Commerce.

43. Instruction in commerce represents 40 per cent. of the activities of the local schemes. Provision is made for instruction in a course extending over four or five years, but only the county borough schools and the Rathmines School of Commerce attempt the specialised work of the fourth and fifth years, which includes accounting and auditing, banking, insurance, economics, economic history and geography and commercial law. The large majority of the schools do not attempt work beyond a second year standard.

44. With regard to instruction in commerce the Department's Report for 1924-25 states that "in addition to students who joined commercial classes because it is their serious intention to follow business careers, there are many others who enrol in the classes with a view to the improvement of their qualifications in English and arithmetic and with an ill-defined intention of embracing commercial careers. In the absence of adequate continuation education the latter students have no alternative, but they tend to swamp the activities of the smaller schools and to divert

them from the functions of technical schools." Many of the statements furnished to the Commission indicate that the attendance at evening commercial classes of immature students, not yet in employment, militates seriously against the general success of technical schools, and that the needs of such students should be supplied by the provision of suitable continuation education of a whole-time character.

45. Generally students in the trades and science courses attend two or three evenings per week for classes of two hours' duration. Theory is taught on one evening, practical work on another, and important subsidiary subjects, such as mechanics, mathematics, geometry, are taught on a third. Difficulty is experienced frequently in securing for the subsidiary subjects teachers who are sufficiently qualified and are able to give to their instruction the trade "atmosphere" that appeals more particularly to the apprentice student. The classes in most of the trades subjects are limited to 20 students, but the subsidiary subjects are mostly theoretical, and classes of 40 are permitted.

Science
(pure and
applied) and
Handicraft.

46. In Dublin, Cork, Limerick, and Waterford a wide variety of courses is offered. Among them are courses in mechanical, electrical and motor engineering (with the special branches thereof such as boilerwork, locomotive work, metal plate work, smithwork, electric wiring) building and architecture (with special branches), printing and bookbinding. Outside these centres mechanical engineering and building trades form the main portion of the courses. There are occasional courses in general science usually for pharmaceutical chemists. The handicraft classes mentioned separately on the table in Appendix II. are generally classes in woodwork.

47. From the table referred to in paragraphs 38 and 40 it will be observed that there is a good enrolment at classes in domestic science but that the attendance averages only 53 per cent. Students generally join two classes, cookery and needlework or cookery and dressmaking. As a matter of fact, in the smaller towns there is no further choice. The committee can frequently afford to employ only one instructress, and her five evenings per week are taken up with a first and second year class in cookery, a first and second year class in needlework or dressmaking, and an introductory class.

Domestic
Science.

48. Afternoon as well as evening classes are conducted by the domestic economy instructresses. The afternoon classes are attended mainly by people who are not engaged

in business or trade ; the evening classes contain such students as shop-girls, typists, clerks. Few attend from the homes of the workers. The courses adopted do not vary much from school to school—generally cookery, needlework, dressmaking, and exceptionally laundrywork, hygiene or first-aid. The schools in the five or six large centres provide a wider programme of subjects.

Art.

49. The county boroughs of Cork, Limerick, and Waterford conduct Schools of Art at which instruction is given in fine art and applied art or art crafts. The instruction in fine art ranges from elementary studies to drawing from life and the antique and painting, modelling and design. The instruction in applied art includes such subjects as lace, crochet and embroidery, leatherwork, lettering, stencilling, woodcarving, enamelling. Art classes form part of the work of a limited number of technical schools, but they are of a restricted character. Very few tradesmen, who require a knowledge of art applicable to their special trade, take advantage of the instruction provided in these classes, which consequently have contributed little to the technical development of the trade.

Introductory
Courses.

50. Great difficulty has been experienced in technical schools as a result of the low standard of elementary education of many of the applicants for admission to classes. To meet the difficulty, schools were allowed to organise introductory courses so that students would be fitted in time to follow specialised courses of technical instruction. An introductory course comprises mathematics, Irish, English, and some practical subjects such as woodwork or domestic economy or drawing. The original purpose of the introductory course was apparently a limited one, viz., to assist the would-be technical student who was "rusty" in his groundwork or who had been unable to complete the top standards of the primary school. This limited purpose was maintained in very few of the schools in which introductory courses were put into operation. The courses developed into general continuation classes for pupils of varying degrees of defective elementary education down to those who had reached only third standard. Schools were naturally unwilling to turn intending students from their doors and though, strictly speaking, the introductory courses were open only to those entitled to be placed in the sixth standard, very few were refused admission.

51. Generally there is no similarity of type in the composition of an introductory class ; in the same group can

be found trades' apprentices, boy messengers and labourers, boys and girls just left the primary school. The task set to the teacher of such a group is a trying one and it is not surprising that the results were frequently disappointing. The following averages for the six sessions 1917-18 to 1922-23 are of value to indicate the scope of introductory courses and the results they have achieved* :—

Number of Schools conducting Courses ..	49
Number of Students enrolled	2,095
Average attendance	1,050
Number on whom grants were paid ..	916

Although 916—the number in respect of whom grants were paid—followed the course satisfactorily, it is doubtful if the restricted preparation afforded by the courses was sufficient to render many of them effective technical students. On the other hand it can be assumed with safety that 1,179—the remainder in respect of whom grants were not paid—were, on the whole, useless for technical instruction purposes.

52. As has already been observed in the case of the junior commercial classes, the introductory course furnishes evidence of the existence in technical schools of a large mass of work which is entirely foreign to the character of a technical school. Possibly with the advent and operation of the School Attendance Act, 1926, and the enforcement of attendance at primary schools up to 14 years of age, there should not be the same necessity for organising introductory courses, but in any case it is clear that an adequate scheme of continuation education would relieve the technical schools of work which is detrimental to their standards and outside their function.

(b) *Technical Instruction under County Schemes.*

53. As already indicated, there are 43 Technical Schools established under county schemes. These have been grouped for the purpose of analysis with the county borough and urban schools. The remainder of the work of the county schemes is composed of classes in single subjects given in the smaller towns and villages and classes conducted by itinerant instructors in rural areas. The table given in Appendix IV. is taken from the Report of the

Enrolment
in Rural
Areas.

* Returns for 1924-25 shew that introductory courses were conducted in only 32 schools and that grants were paid on 742 students out of a total enrolment of 1,757.

Department for 1924-25 and indicates generally the nature of the instruction given. The numbers of students in attendance at rural technical classes may be summarised as follows:—

Subject.	No. of centres.	No. of students.	
Manual Instruction	107	2,460	(24%)
Domestic Economy	147	4,631	(45%)
Home Spinning ..	30	605	(6%)
Lace and Sprigging	16	363	(3%)
Commerce ..	24	884	(9%)
Other Subjects ..	47	1,352	(13%)
Total ..	371	10,295	(100%)

54. While these numbers give the impression that a large amount of instruction is being given in rural areas, it should be remembered that the courses given are frequently of only six to eight weeks' duration. In reality the whole scheme of instruction for rural areas is on too small a scale to produce effective results. This can be seen from the following return:—

Subject.	Number of students per county.	
	Maximum.	Average.
Manual Instruction	426	95
Domestic Economy	409	178
Home Spinning	156	23
Lace and Sprigging	226	14
Commerce	293	24
Other Subjects	588	52

The average population of a county is 100,000 (excluding the urban population served by established technical schools) and, when it is considered that only 95 of this population get instruction annually in woodwork and 178 in domestic economy, it will be realised how inadequately the existing schemes supply the requirements of rural Ireland. One witness in evidence before the Commission stated that she was the only domestic economy instructress

employed under her committee for nine years, and that she had not gone through all the districts in the county, though the duration of the courses she gave was only six weeks. This means that any one district only receives instruction in this subject on an average once every ten years. She emphasised at the same time the tremendous demand for instruction among the rural population and the general earnestness and desire to learn. Figures such as the above indicate the great need for a more generous educational service in rural areas and for a wider extension of the provisions made under county schemes.

55. An analysis of the occupations of students attending classes in rural areas shows that the manual instruction classes are attended by farmers and labourers, with country carpenters and blacksmiths; domestic economy, home spinning, etc., by farmers' wives and daughters.

Occupations
of Students.

56. The nature of the instruction given in the rural areas requires some comment. It is mainly instruction that centres round the life of the farm. The young farmers and farm boys are taught to make appliances that are serviceable on the farm as well as simple articles of furniture that are suited to the homestead; the girls are taught the practice of cookery, needlework and housewifery. To only a slight extent is the instruction "technical" in the strict narrow sense of being applied to the technique of a skilled trade, but it would be unfair to apply the term strictly to the occupation of farming, which involves knowledge and skill in a variety of simple trade processes that, in the town, form the work of individual tradesmen. It would appear indeed that woodwork and domestic economy should not exhaust the possibilities of a county scheme, for there is a demand for instruction in farriery, the repairs of agricultural machinery, the care of motor engines, the use of concrete in construction, all of which are at present unprovided for in the schemes for rural areas. Instruction in agriculture including horticulture, butter-making, poultry-rearing and bee-keeping is given by instructors employed under the committees of agriculture and in the Congested Districts by agricultural overseers employed by the Department of Lands and Agriculture.

Nature
of the
Instruction.

57. The scope of the instruction given in Rural Industries classes—home spinning, lacemaking, crochet-work and sprigging—is very limited and of doubtful value. Home spinning became a subject of instruction in county schemes in recent years only, and there are indications that it is

unlikely to maintain its place permanently. Lace and sprigging classes have been in operation for many years with the dual purpose of training young workers and of marketing the output of adult trained workers. The classes have failed to keep in touch with any market that exists. The teachers have not a sufficient knowledge of design to make the work of their classes outstanding in merit, with the result that the articles manufactured cannot compete in the open market with the machine-made product.

Instruction
in Irish.

58. It will be observed in Appendix IV. that instruction in the Irish language forms a large, in fact the largest, portion of the work done in the county schemes. Over 23,000 students were enrolled in Irish classes at 712 centres in 1924/25, i.e., almost 900 per county, but many of these are national school children. The organisation of the large bulk of Irish classes dates from 1923 when the Local Government (Temporary Provisions) Act was put into force. This Act empowered councils to strike a rate not exceeding a 1d. in the £ of rateable valuation for the purpose of instruction in Irish, the administration being placed in the hands of the committees of technical instruction. Most county councils took advantage of their powers under the Act and in general the full rate of 1d. was struck (see Appendix I., columns 6 and 7). The total produce of rates levied specially for instruction in Irish in 1925/26 was £28,095 and the total amount of grants paid from State funds in respect of such instruction for the same period was estimated at £23,042.

(c) *Day Trades Preparatory Schools.*

Purpose.

59. The facilities in the Saorstát for special education in preparation for employment are extremely limited, and such as do exist are not sufficiently recognised. In preparation for employment in trades, there are ten trades preparatory schools located in the larger towns in the State. Pupils are admitted to the schools at 12-13 years of age after they have reached the higher standards of the primary school, and are prepared for employment in skilled trades. The schools might reasonably be classified as "specialised continuation schools," were it understood in the use of the term "continuation" that there was no implication of defective general education.

60. There is no definite link between the trades preparatory school and apprenticeship, except in a few isolated cases where employers give preference to boys who are trained thereat. There is no certainty that a boy after training will enter a trade. It would be difficult to obtain precise information as to the proportion of pupils that have entered trades in the past, but a fair estimate would be about 50 to 70 per cent. Pupils of a good type who spend two years in a trades preparatory school are well fitted to be apprenticed to any trade or to be employed in an industrial occupation of a technical or non-technical character.

The Schools
and
Employment

61. Prior to the Treaty, there were fifteen trades preparatory schools in Ireland, the most important being the two in Belfast. There are now ten in the Saorstát which, with the exception of the school conducted by the Christian Brothers in Cork, are organised as integral parts of local schemes of technical instruction. Incidentally, the establishment of the schools in the early days enabled some technical instruction committees to appoint qualified whole-time instructors who could also be employed in evening work. It is noteworthy that Dublin, the capital of the country and the place most representative of skilled trades has never had a trades preparatory school.*

Number of
Schools.

62. The average time-table of a trades preparatory school is designed for a school week of 28 hours and instruction is given in the various branches of science, drawing, woodwork and metalwork, mathematics, Irish, English, and geography. The general education of a pupil is continued and emphasis is laid on the practical applications of such subjects as mathematics, science and drawing. The schools may adjust the syllabus to meet local requirements, but there is not much departure from the syllabus suggested by the Department.

Nature of
Instruction.

63. Though much of the instruction provided in the schools is of a high standard, the schools do not attract large numbers of pupils. The average total attendance at the ten schools in five recent sessions was 449. Cork, Cobh and Ringsend were highest with enrolments of 120, 61 and 55 pupils respectively. Three of the others had comparatively small enrolments of 26, 24 and 18. The course of instruction at the schools extends over three years, but it is rare to find a boy pursuing his studies beyond the second year. Boys are only too anxious to secure employment

Attendance.

* In 1917 there was organised in Dublin a school for apprentices which is referred to later.

and it is difficult, when employment is available, to retain them for more than two years. The schools, therefore, with an average enrolment of 45 do not train more than 20 boys per year. The consequence of this is that in towns with populations over the 10,000 mark such as Waterford, Tralee, Dundalk, or Sligo, in each of which there is a trades preparatory school, the local manufacturing and other trades must recruit the majority of their apprentices from primary schools, and it indicates that the value of special practical education prior to employment is not generally recognised.

(d) *Day Commercial Classes.*

64. The day commercial classes are organised under local schemes of technical instruction. They provide a training for positions of minor character in business houses and act as a link between the primary school and the evening technical school. Some years ago, after the introduction of commercial instruction into technical schools, where all subjects were taught in evening classes only, it was discovered that there was a pronounced difference of outlook between two types of students in attendance, viz., the business student and the "left-school" pupil. Many of the business students had allowed an interval to elapse after leaving the primary school, and were less alert in responding to instruction than the pupil fresh from the primary school. The result was that the business student often became discouraged, and attended irregularly or ceased to attend. This gave rise to a policy of dealing with the "left-school" type by means of separate day classes and such classes are now fairly widespread in technical schools.

65. The day commercial classes in recent years have developed into whole-time schools as a preparation for employment, but frequently without the breadth of training of the trades preparatory schools. The classes are not officially recognised as whole-time schools and there are financial difficulties in providing instruction of a sufficiently wide character. Since the system of grants precludes in practice the teaching of anything but commerce or subjects closely akin to commerce, it is not possible usually for local technical instruction authorities to provide the wide training required by pupils preparing for a business life. The day classes generally operate on a two years' basis, with pupils between 14 and 17 years of age, but very often

pupils obtain employment at the end of their first year and leave the classes before they have received full benefit from the course. According to the Report of the Department for 1924/25, classes were conducted in some 40 technical schools and attended by, approximately, 2,000 students in all. Although the development of these classes is of recent date, it is strong and the attendance is increasing annually. The rapid growth of the classes is of importance inasmuch as it indicates a widespread desire for post-primary education in preparation for employment.

(e) *Day Apprentice Schools.*

66. The only established day apprentice school in the country is that conducted at Bolton Street by the City of Dublin Technical Instruction Committee. The School provides for a two years' intensive course which takes the place of the first and second years of apprenticeship. During training the pupil is virtually an apprentice, and on entering the trade he is paid at third year rates. Dublin
Apprentice
School.

67. Apprentice scholarships in specified trades are awarded on the result of an entrance examination to boys of not less than 14 years of age. The scholarships entitle the holders to a free training for two years, together with a payment of 6/- per week for the first year and 8/- per week for the second. Scholarships.

68. The course of instruction covers 30 hours weekly for approximately 40 weeks in each year. It has a more distinctly practical tendency than the course followed in a trades preparatory school. One-third of the time in the first year and two-thirds in the second year are devoted to the theory and practice of the trade for which the boy is preparing.

69. The main trades in which training has hitherto been provided are mechanical engineering, electrical engineering carpentry, cabinet-making, printing, and plumbing. The numbers of apprentice scholars in the Dublin school in October, 1926, were:—

Carpentry and Joinery	..	10
Cabinet Making	..	10
Electrical Engineering	..	10
Painting and Decorating	..	8
Motor Car Engineering	..	30
Plumbing	..	10
Printing	..	10
Sheet Metal Work	..	10
Quantity Surveying	..	8

Total .. 106

70. Efforts are made with the Employers' and Trades' Associations to admit to the school only such numbers as can be easily absorbed into the trades when training is complete. This is not an easy matter to arrange and difficulty has been experienced from time to time since the inception of the scheme in placing pupils in employment in their respective trades. The rules governing the award of scholarships provide that "each pupil will be allowed on the termination of a probationary period to select as far as possible the trade which he desires to follow, and shall be allocated to an Employer through the Association within three months after entering the school as an apprentice. The Employers' Association and the Union in that trade will be notified for the purposes of registration."

Trade
Dressmaking.

71. This Committee has also in operation a day trade dressmaking course for girls of 14 to 16 years of age to fit them for employment in the trade houses. The instruction extends over 30 hours weekly and includes drawing, pattern and fashion design, and a weekly practical lesson in home cookery. Hitherto the course covered a period of two years, but it is proposed to limit it to one. An agreement has been reached with the chief firms in the city to take apprentices for dressmaking and tailoring through the technical school.

Shirtmaking
and Clothing
Manufacture.

72. Girls from 14 to 16 years of age are trained in the Dublin schools and in a few other centres for shirtmaking and clothing manufacture, and the employers in these industries have agreed to take those who complete the courses. Effective equipment has been installed. The course of instruction extends over a period of three months and as many as 96 girls have been trained in the Dublin technical schools during a year.

(f) Summary of the Present Position.

73. The present position of technical training for the youth of the country in schemes under local authorities may be summarised under the following headings:—

- (a) Whole-time instruction prior to employment,
- (b) Evening instruction in technical schools,
- (c) Classes in rural areas.

74. With regard to (a) there is on the industrial side an annual output of about 200 pupils from the trades preparatory schools with an attendance of 500 and an annual output of 50 boys and 50 girls from the apprentice school

and apprentice classes in Dublin ; on the commercial side an annual output of possibly 1,200 derived from 40 centres with an attendance of 2,000. No one who is interested in Technical Education can regard the figures for the industrial side with a sense of satisfaction. Only 250–300 young people are prepared annually in day vocational or semi-vocational schools for employment in industrial life, and this in a country of 3,000,000 inhabitants.

75. With regard to (b) there are approximately 22,000 students in attendance at evening classes. Though the courses designed for them are of four years' duration many do not proceed beyond the first year and very few continue to the third or fourth. Much of the instruction is non-technical in character and the existence of low-grade instruction, such as that needed for the introductory courses, tends to diminish the value of the work as a whole. The technical school is not sufficiently in touch with industry and is not fulfilling its main function of providing specialised training for those already in employment.

76. With regard to (c) 10,000 students attend classes in rural areas, but many of the classes are only for six to eight weeks, or 60 to 80 hours' instruction in all. The short duration of the itinerant courses, the limited nature of the courses offered and in some cases the lack of connection with Agriculture, the main industry of the country, constitute grave defects. Generally speaking, the conclusion reached is that though the instruction given in county schemes has been of service in the improvement of home conditions on the farm, the main problem of continuation and technical education in rural areas has yet to be faced.

(ii) INSTITUTIONS UNDER THE DIRECT CONTROL OF THE TECHNICAL INSTRUCTION BRANCH OF THE DEPARTMENT OF EDUCATION.

77. Three educational institutions are under the direct control of the Department and are wholly maintained out of its funds :—The Metropolitan School of Art, the Irish Training School of Domestic Economy at Kilmacud, Co. Dublin, and the Killarney School of Housewifery.

78. The work of the Metropolitan School of Art comprises three main groups of Painting and Drawing, Sculpture, and Design and Crafts, but these are not separate and distinct from one another, and students specialising in one group have facilities for appropriate instruction in others.

The instruction in Architecture is confined to evening classes. The school, which is under the direction of a Headmaster, contains three other full-time teachers, two half-time assistant teachers, and part-time teachers for the separate sections of sculpture, architecture, stained glass, illustration and embroidery. In the academic year 1925-26 there were 470 students of whom 240 were males. This constituted a record enrolment for the last twenty years. Between 1903 and 1925 there were 33 students in attendance holding scholarships as teachers-in-training. Of these 25 are actually engaged in teaching, nine of whom are teaching in the Saorstát.

The Irish
Training
School of
Domestic
Economy.

79. The Irish Training School of Domestic Economy is maintained by the Department for the training of teachers of Domestic Economy. The school can accommodate thirty students and this number is usually in attendance. A fee of £20 is charged for board, residence and tuition. Approximately twelve students are selected annually as the result of competitive examination in July. Those who pass the examination at the end of the first year are permitted to proceed to the second year of training, and this is regarded as the first year of the teachership course which extends over two years. On completion of training an examination is held as the result of which successful candidates receive a teaching diploma. The output of trained instructresses is about 10 per annum, and they usually secure employment under the technical instruction committees.

The
Killarney
School of
Housewifery.

80. The Killarney School of Housewifery is a residential school which trains specially for domestic service. It has accommodation for twenty-two girls. The fee is £17, but in the case of scholars nominated by local statutory committees of technical instruction, a payment of £8 by the committee together with the payment of £1 by the parent or guardian of the scholar is accepted. For many years the majority of the pupils entered the school on full scholarships awarded by the late Congested Districts Board, and six on scholarships of £8 each from County Kerry Technical Instruction Committee. There are also fee-paying students. The scholarships hitherto given by the Congested Districts Board are now offered by the Technical Instruction Branch of the Department of Education. At the end of the session the girls, as a rule, find employment as higher-paid domestic servants.

The Royal
College of
Science.

81. From the year 1900 to 1924 the Royal College of Science was under the control of the Department of Agri-

culture and Technical Instruction and until its transfer to University College, Dublin, in 1926, under the control of the Department of Education. When the College was taken over by the Department of Agriculture and Technical instruction in 1900, a departmental committee was appointed, *inter alia*, to consider the future position and functions of the College with reference to technical instruction as related to industries and agriculture. The Report stated " that the object of the College should be to give advanced education in Applied Science of a character higher than that given in an ordinary technical or intermediate school without aiming at competition with existing University Colleges. Its main functions would be to train teachers for technical schools and for secondary and intermediate schools in which science will be taught ; to supply a complete course of instruction in Science as applied to Agriculture and the Industrial Arts for general students, and by means of summer courses to give instruction in Elementary Science on a scheme designed primarily for teachers in elementary schools." With the opening of the new laboratories in 1911 the College reached its highest stage of development, and the courses which hitherto lasted for three years were extended in all faculties to four years, thus bringing the College into line with other progressive Applied Science institutions on the Continent and in the United States. Arrangements for the recognition of the College courses in Applied Science had been made with all the Irish Universities and facilities were given to University students who had pursued approved preliminary courses to attend the professional courses of the third and fourth years. The Department had at its disposal the advice and assistance of the professional staff of the College in the framing of syllabuses and the working out of numerous technical problems of an industrial character. The Department can no longer command this valuable assistance, nor has it any direct means for the training of science teachers, and it has no facilities whatsoever for the scientific investigation of any industrial problem.

(iii) INSTITUTIONS AND SCHOOLS UNDER OTHER
MANAGEMENT.

82. Whilst it has been the policy of the Department to carry on the work of technical education through local committees, the regulations under which grants were paid could be availed of by schools and institutions outside the scope of local schemes.

Residential
Schools of
Domestic
Economy.

83. There are six residential schools of domestic economy, managed by religious orders which receive grants on the courses of instruction given to the students. Four of the schools rely greatly for their pupils on the award of scholarships by county committees of technical instruction. The following table shows the numbers in attendance at these schools and the grants paid in the year 1924-25 :—

	Numbers.	Grants.
		£
Carrick-on-Suir Convent	17	287
Dundrum Convent ..	31	518
Drishane Convent ..	41	458
Dunmanway Convent ..	39	540
Moate Convent ..	16	201
Stradbally Convent ..	20	285
Total ..	164	£2,289

The majority of the students are farmers' daughters, varying in age from 16 to 25 years. The instruction provided in these schools is mainly Domestic Economy, but in some cases a limited amount of instruction is also given in one or more of the following : dairywork, poultry rearing, bee-keeping, cottage gardening. The training is for one session of less than twelve months.

Other
Institutions.

84. Amongst other institutions in receipt of grants are the Christian Brothers, Cork, in respect of their Day Trades Preparatory School; Alexandra College, Dublin, for its Housecraft and Secretarial classes; the Dominican Convent, Blackrock, County Dublin, for its Higher School of Domestic Economy. Three professional institutions, Trinity College in respect of its School of Physic, the Royal College of Surgeons in respect of its Schools of Surgery, and the Dublin Dental Hospital are aided in like manner. In the year 1924-25 the grants paid to these three institutions respectively were £1,380, £491, and £898. Grants are also paid to the Metropolitan School for Nurses, to the Women's National Health Association and on drawing and manual instruction, conducted in certain primary schools not in receipt of any other grant from the State. Assistance was afforded, too, in connection with the training of apprentices by the Dun Emer Guild.

Grants for
Teachers'
Courses.

85. The training of primary 'candidate-teachers is assisted out of the funds provided for technical education

in respect of instruction in mathematics, experimental science and drawing. For the year 1924-25, grants were paid as follows :—

	£
Christian Brothers, Marino, Dublin ..	74
Church of Ireland Training College, Dublin ..	135
De La Salle College, Waterford ..	368
St. Patrick's College, Drumcondra ..	474
	<hr/>
Total ..	£1,051

86. Further grants in respect of teachers, actually employed in primary and secondary schools, are paid to Colleges of Irish. In 1924-25, twenty Colleges received a total grant of £2,270.

87. A recent addition is the Irish Nautical College and Training School, Dublin, which is in receipt of State aid in respect of training for the Mercantile Marine.

Colleges of
Irish.

Dublin
School of
Navigation.

CHAPTER III.

PRIMARY EDUCATION IN RELATION TO TECHNICAL EDUCATION.

88. From a general consideration of the result of the system of technical education that has been in operation for over quarter of a century it would appear that a better foundation of primary education is essential to the success of any scheme of technical training. The evidence presented to the Commission strongly confirms this view and emphasises the need for a general improvement in the educational attainment of school-leaving pupils. Constant reference was made by representatives of Educational Associations and Committees of Technical Instruction to the difficulties experienced in the technical school with students whose primary education was defective, and the evidence of employers was emphatic on the existence of similar difficulties in the workshop and business house.

School
Attendance.

89. It was frequently stated by witnesses that school attendance was irregular and that many children left school at a very early age. The facts are clear and indicate that many left school at an age when they could barely read and write. We were informed that, for a long period of years, the average age at which children left school in Ireland was the lowest in English-speaking countries, and this was noticeably so in the larger urban areas, where the school-leaving age was often as low as $10\frac{1}{2}$ years. The representative of the Irish National Teachers' Organisation, Mr. W. P. Ward, who has experience in teaching in evening technical classes, stated that many candidates for the technical school were drawn from the ranks of the irregular attenders and of those who leave the primary school in third and fourth standards, and that, up to a year or two ago, the average age at which children left the primary school was between $11\frac{1}{2}$ and 12 years. Fortunately steps have been taken already to remedy this deplorable condition of affairs and the provisions of the School Attendance Act, 1926, which came into operation this year, should suffice to produce the needed change, though it is unlikely that the full effects of the measure will be felt for some years. In exacting the attendance of children at primary schools until they have obtained a sound general educa-

tion, the Act is ensuring the first essential towards successful technical education.

90. It is important, however, to secure in primary education not only regularity of attendance but also a good standard of proficiency. We have had evidence that the attainments of pupils, who had attended regularly up to the age of 14, varied greatly even in the case of those who had completed the Sixth Standard, and that no definite value could be attached in existing circumstances to the term "sixth standard." We realise the difficulty of securing a uniform proficiency in schools, as long as the conditions of accommodation and equipment vary to the extent they do. It is noted, however, that the Programme for Primary Schools presented in 1926 to the Minister by the National Programme Conference makes allowance for the difficulty of these conditions and is devised for the bulk of the schools (71 per cent. of the total), in which two teachers have to deal with children ranging from infants to those of 14 years of age. With such a programme, it should be possible to fix fairly definitely the proficiency that is to be expected from the average pupil on the completion of his primary course, and the fixing of a standard of proficiency is of importance in the matter of post-primary education and entry into employment. We are of opinion that all sixth standard pupils should be tested in an examination, which should be supervised and authorised by the Department, and that success in this examination should entitle the candidate to the award of a school-leaving certificate. It is important from our point of view that this examination should not be competitive and should not be designed to bring out the candidates of exceptional merit only. The tests should relate to essential subjects, and should be of such a character as can be accomplished readily by a pupil of average ability who has followed the sixth standard course.

Standard of Proficiency.

Recommendation I.

91. We are of opinion that the work of the primary school should relate to the environment of the students, and we note with regret that sufficient attention has not yet been paid to the Circular, issued by the Department to managers and teachers of primary schools in April, 1922, which contains the following pertinent extracts:—

School Programme in relation to Environment.

" Our primary education, as well as being Irish in outlook, should also be such as to turn the minds and efforts of the bulk of the pupils in rural schools towards the land of Ireland and the great agricultural industry

on which for generations to come, the economic life of the nation will be based. In selecting literature for reading in the schools, books which tend to develop the pupils' interest in the land, in the pleasures of country life, in the production of crops, in the rearing of herds, should, where available, be given an important place."

"In the case of schools in cities and large towns, the pupils' attention should be directed towards the industries that exist; they should be stimulated by talks relating to Irish craftsmanship in the past, by visits to factories, workshops, industrial exhibitions and museums, to take a lively interest in the industrial life around them, and to recognise that this is the life to the building of which the majority of them will naturally be called."

We observe that the National Programme Conference with a view to making the children in rural areas favourably disposed towards agriculture, the natural vocation of a large proportion of them, recommended the inclusion of Rural Science as an obligatory subject of the Programme. This recommendation is very largely supported by the evidence of many witnesses before the Commission. It is understood, however, that Rural Science is compulsory at present in certain schools only and under certain conditions. We recommend that steps should be taken to ensure that there is no dearth of teachers qualified in Rural Science and that future appointments to schools in rural areas should be limited to teachers so qualified. We are of opinion that a course of instruction in Nature Study might indeed be included in all primary schools of the Saorstát, urban as well as rural.

Recommendation 2.

Drawing.

92. While we are in agreement with the finding of the National Programme Conference that the Primary Schools should concentrate as much as possible on an essential minimum of subjects, we do not agree with the decision to exclude Drawing from the obligatory portion of the curriculum. Drawing, apart from its general educative value, is virtually the language of the skilled tradesman and craftsman and, if the fundamental elements of this language are not acquired in the primary school, no post-primary or technical training can repair the loss. We are informed that the removal in 1922 of Drawing from the obligatory to the optional list of subjects practically meant its extinction in the schools. Out of 646 schools in County

Cork in the year 1925/26, Drawing was taught in only 31 to pupils in fourth standard and over. Similar figures for County Kerry were 334 and 19, and for County Limerick 235 and 6. The extinction of Drawing in the Primary Schools is looked upon with much concern by those interested in technical education, and we would urge the reinstatement of Drawing as portion of the obligatory curriculum for all pupils up to sixth standard.

Recommendation 3.

93. We have had many representations that Domestic Science and Manual Instruction should be constituted obligatory subjects for pupils of fifth and sixth standards, but we believe that the present circumstances of the schools do not warrant us in recommending that this should be done. All primary school teachers who are qualified to hold classes in Domestic Science or Manual Instruction are free under the new programme to do so, but it is doubtful if many of them have adequate facilities in their schools for the purpose. We would recommend, however, that arrangements should be made in urban areas to send groups of the more mature pupils to local technical schools where expert instruction is available, and that the technical schools should be authorised to conduct special domestic or manual classes to meet their requirements. These classes should be organised outside primary school hours, if they cannot be fitted into the normal school-day.

Domestic Science and Manual Instruction.

Recommendation 4.

94. The importance of maintaining a high standard of mathematical teaching in the primary schools can scarcely be over-emphasised. It was stated in evidence that the standard of mathematics has deteriorated. It is of vital importance to technical education that a better standard should be maintained. We recommend that additional time should be assigned to the subject in the higher classes of the primary programme.

Mathematics

Recommendation 5.

95. The suggestions made above could not be effected without lengthening the school-day for senior pupils. As far as our information goes, the official school-week in Ireland is 20 hours, but nearly every school has an extra half-hour at least either before or after the official attendance, so that a 20 hour week is comparatively rare. The school attendance in other countries is stated to us to be :—

France	..	30 hours per week.
Belgium	..	24-26 hours „
Germany	...	5 hours per day for six days.
Italy	..	25 hours per week—Classes I to VI.

Sweden	..	24-30 hours per week
Switzerland	..	27-30 hours ,,
Holland	..	legal minimum 22 hours, usually 27.
Denmark	..	6 hours daily Classes V and VI.

The suggestion was also made by certain witnesses that; if the school-day was lengthened, there should be a break of $1\frac{1}{2}$ or 2 hours to enable pupils to return to their homes for the mid-day meal. This suggestion finds favour with us in so far as urban centres are concerned, but it should be left for consideration according to local conditions.

CHAPTER IV.

CONTINUATION EDUCATION.

(a) RURAL AREAS.

(b) URBAN AREAS.

1,2

(c) GENERAL.

**Existing
Conditions.**

96. There is no settled policy with regard to continuation education in the Saorstát. It has been indicated that technical schools and classes are recruited mainly from the primary schools. Comparatively few pass to technical schools and classes through the ranks of the secondary schools or other post-primary institutions such as the Trades Preparatory or Day Commercial Schools. Some students join the technical school (evening classes) at 14-15 years of age, before they have obtained employment or have formed clear ideas of the nature of the employment they are likely to obtain ; others wait a year or two without attending classes until they are employed. Outside the urban centres, in which there are established technical schools, there are in general no facilities for filling the gap that exists between the primary school-leaving age and the time when the student, as an adult, joins an itinerant technical or winter agricultural course. It can readily be appreciated that there are grave objections, from an educational standpoint, to a period of idleness or of indefinite educational purpose in the life of young people from 14 years upwards, and there is a consensus of opinion that the existing serious gap should not be allowed to continue.

**Need for
Continuation
Education.**

97. Witnesses before the Commission were almost unanimous in the view that formal technical or agricultural education should not begin before the age of 16, and should not be based on primary education solely, no matter how efficient the system of primary education might be. We understand that it is the policy of most progressive countries to provide a sufficient basis for technical or agricultural education by the establishment of a connecting link for the critical period between 14 and 16. Primary school pupils at 14 are not mature enough to appreciate the realities of employment and the special forms of instruction that relate thereto ; they require to be brought through an intermediate stage where they can obtain an education with sufficient practical bias to help to correct the dislike for industrial work, which is a characteristic common to the youth of to-day leaving the primary and indeed the secondary schools. For this intermediate stage the State should provide facilities for the establishment of schools and classes of a character suited to both rural and urban requirements.

Recommendation 6.**Alternative
forms of
Continuation
Education.**

98. The problem of education to provide for young people between 14 and 16 years would be simplified, if it were possible to secure their attendance at whole-time

schools for the period. However advantageous such attendance would be from an educational standpoint, we do not think that the country could afford in its present economic position to postpone to 16 years the age of employment for all, and we know of no country in which this serious step has been taken. It is necessary, therefore, in our opinion, to provide facilities for both whole-time and part-time education. These facilities should be effected through a new programme of Continuation Schools and Classes. This programme should be distinct from the programme of technical schools and classes, and should be set out in two main groups for rural and urban areas. The programme should state, *inter alia*, the conditions of admission of students, courses of study, and hours of attendance.

Recommendation 7.

(a) RURAL AREAS.

99. The realisation of the need for continuation education in rural areas is general. It is the opinion of experts that formal instruction in Agriculture cannot be given with effect to pupils whose age is less than 16 years, and that the best results of such instruction are not obtained before the students have settled down to farming as their life's business. We have had convincing evidence that instructors in winter agricultural classes have to sacrifice to preparatory teaching much of the restricted time available for professional instruction. They are constantly asking that steps should be taken to ensure that the students entering their classes should not require preliminary coaching in simple arithmetic, composition and note-taking. It is clear that two factors are essential to the success of agricultural training, (a) that the young farmer's preliminary education should be continued and extended during the period between leaving school and joining winter agricultural classes, and (b) that, in this period, a foundation should be laid to enable instruction in agriculture to be followed subsequently with full advantage. A really constructive policy of education is required to make work on the land efficient, and this cannot be effected in the absence of a continuation system of education.

Need for Continuation Education in Rural Areas.

100. Whilst there was unanimity as to the need, there was a considerable variation of opinion among witnesses as to the method of organising continuation education in rural areas. Several schemes were proposed which may be classified in three groups:—

Various Schemes.

(a) full-day instruction for one year or two years :

- (b) half-day instruction for two years, or full-day instruction at periods to suit rural occupations ;
 (c) afternoon or evening classes for 4, 6 or 8 hours weekly.

All of these schemes are backed by strong arguments in their favour, and the choice of a scheme must be governed by local conditions. Schemes of a part-time character find most favour with us, for the pupils are ordinarily needed for work at home for some hours daily and cannot be spared for whole-day instruction. If, however, a particular locality desires a scheme of the latter character and is in a position to make it a success, it should be free to do so.

Specimen
Scheme.

101. A good part-time scheme in our opinion would be to establish one continuation school to serve four or five primary school areas. About 50 to 80 pupils between 14 and 16 years of age would in this event be available for the continuation school. Separate instruction would ordinarily be provided for boys and girls. For example, the boys might attend in the forenoon from say, 9.30 to 12.30, and the girls in the afternoon from 2 to 5. Classes would be held on five days per week. Each pupil would thus be provided with 600 hours' instruction in each year, sufficient to form a sound foundation for subsequent instruction in agriculture.

Under such a scheme it would be necessary to provide buildings at most centres as the classes would be held in the day time and the existing school houses would not be available. The buildings should be self-contained structures, though they might be combined with village halls and afford accommodation for libraries, local farmers' societies, cow-testing associations, credit societies, as well as for classes in agriculture and technical subjects proper. The schools should be located at genuinely rural centres, near churches, creameries, and other places where the rural population congregate frequently. Everything that would tend to make the continuation school urbanised or abstract should be avoided.

Curriculum.

102. The subjects which we would suggest as suitable for continuation courses in rural areas are :—

Recommendation 8.

Practical Mathematics, including mensuration and simple accounts.

Rural Science, including Nature Study and the elements of Hygiene, and Geology, Physics and Chemistry (with special reference to agriculture).

Drawing.

Woodwork.

Cookery.

Sewing.

Laundry.

Irish, with Irish Music.

Composition, letter writing and reading.

Commercial Geography, with special reference to agricultural products.

History, local and general.

Civics and Citizenship.

It is not suggested that all of these subjects should be in the two years' course. The list is a comprehensive one from which a selection can be made to suit local requirements. Certain subjects might be indicated as obligatory and a practical subject should be essential in every course.

103. It is plain that specially qualified teachers will be required for service in the continuation schools, and the training of these should be undertaken without delay. In their course of training they should receive instruction in Rural Science, Mensuration and Land Surveying, Accounts and Agricultural Economics, as well as in general literary subjects. Their training in professional methods should be of a very special character, inasmuch as they will be required to deal with young people of a critical age. Such training should be in the hands of persons specially selected for the purpose.

Teachers.
Recommendation 9.

Opportunities will arise for the employment of existing county staffs of itinerant teachers of Woodwork and Domestic Economy for part of their time in continuation schools. The staff of Irish teachers employed at present under county schemes should be absorbed as far as possible into continuation work. Special courses of training should be arranged to enable them to undertake other portions of the continuation school curriculum.

104. It is clear that the scheme outlined in the above paragraph could not be proceeded with at an early date. Neither the schools nor the staffs are available and considerable time must elapse before they can be obtained. Some favourably placed localities might find accommodation immediately, but for most cases a temporary solution must be sought. For a temporary solution we would recommend the use of the national schools or technical schools where they exist, choosing a school which is centrally situated in four or five national school areas and holding afternoon or evening classes in it for 6 or 8 hours

Transitional
Scheme.

Recommendation 10.

weekly. Manifestly the work that can be done in this restricted course compares unfavourably with what is possible under the scheme already outlined, but it can be effective if proper subjects are chosen and the teaching is good. The difficulty of accommodation is obviated and to some extent the difficulty of staff, for selected national school teachers can be employed for some of the literary and mathematical instruction. Even with this scheme additional teachers would be required, particularly for Rural Science. Manual Instructors, Domestic Economy Instructresses and Irish Teachers could also be employed for portion of their time at continuation classes, though the present staff would be entirely inadequate for the purpose.

**Aims and
Methods.**

105. It is important to observe that the policy, aims and methods of rural continuation schools should be carefully directed. The school atmosphere should be quite different from that of the primary school. The teaching should be on lines suited to adults rather than school-children, the pupils being made conscious that it is to their interest to avail themselves of the services of the teacher and that the responsibility for doing so rests on them rather than on him. They should feel that they are passing into a new educational environment where they are invited to begin study afresh, with the idea of fitting themselves to earn their livelihood. The main object of the teacher should be to encourage observation, initiative and self-reliance rather than to impart information and enforce rules. With wise direction the level of rural education can be raised and a foundation laid for vocational training in agriculture and other rural industries.

(b) URBAN AREAS.

106. While we have advocated that continuation education in rural areas should be of a part-time character in general, we do not hold that the same policy should be adopted in urban areas. Conditions of employment on a farm differ materially from those in a workshop or factory. In the former, it is necessary that the youth should get as quickly as possible into touch with farm life, while in the latter, according to the evidence submitted to us, it is almost a disadvantage that he should be employed before 16 years of age. Were it not, as we have already stated, that economic necessity makes employment at an earlier age imperative in the towns, we would favour the universal raising of the school-leaving age to 16. In the circum-

stances, however, we must contemplate schemes of part-time instruction for those in employment as well as whole-time instruction for those who are not in employment.

Recommendation 11.

It is interesting to note that a scheme of continuation classes has been in operation for some years in the successful firm of Messrs. W. and R. Jacob and Co., Biscuit Manufacturers, Dublin. The juvenile employees of the firm are obliged to attend classes for 13 hours a week in such subjects as Irish, English, Arithmetic, Physical Drill, Manual Work, Sewing and Hygiene, great stress being laid on the practical subjects. These classes are held on Messrs. Jacob and Co.'s premises. While it is possible that other large firms might follow the procedure of Messrs. Jacob and Co., and hold classes on their premises, it is obvious that by far the greater portion of continuation education would have to be conducted in outside schools. Compulsory schemes of continuation education are also conducted by the State for messengers employed in the Post Office.

107. There should be a strong policy of encouragement of attendance at whole-time schools in urban areas. This point of view is strongly urged by those interested in the skilled trades, where a pressing need is felt for pre-employment education of a semi-vocational character. Pupils anxious to learn a skilled trade should have a whole-time course of instruction in mathematics, drawing, geometry, science and manipulative work with tools (wood and metal). This course would enable a pupil's natural aptitude to be discovered before he had definitely entered a trade. The same holds true with regard to employment in shops and offices, where a knowledge of commercial subjects is generally required as a condition for entrance. The great success of the Day Continuation Schools conducted by the London County Council Education Authority is indicative of the value of pre-employment education with a practical bias. The schools are crowded and have the support of firms of the highest standing.

Whole-time Schools.

108. In accordance with the policy adopted in other countries courses of instruction for whole-time schools might be organised in three main groups: junior technical, junior commercial and junior domestic, and should be built up from the following list of subjects:—

Courses of Instruction. Recommendations 8, 12 and 13.

Irish.	Science (including electricity).
English.	Manual Instruction.
Geography.	Domestic Economy.
Industrial History.	Book-keeping.

Civics and Citizenship. Business Methods.
 Mathematics. Physical Culture.
 Drawing.

It should be an essential condition that all courses should include a practical subject such as manual instruction or domestic economy. The type of junior technical school which we have in mind is the existing trades preparatory school (see para. 59 *et seq.*) which has been described as a school, not for vocational training as the name would seem to imply, but as a secondary school with a very strong practical bias. The existing day commercial schools (see para. 64 *et seq.*) should be brought under the proposed programme of Continuation Schools and Classes; their curricula should be broadened and essential practical studies added thereto. The subjects of instruction of part-time classes in urban areas should be taken from the above list, with the qualifications that there should be at least one practical subject, preferably manual instruction or domestic economy and that the instruction should relate as far as possible to local industry.

Teachers. 109. Again as in rural classes teachers must be trained. Those who will be most in requirement are teachers of science and mathematics, metal-work, woodwork, domestic economy and drawing. The same teachers would be needed to some extent for evening classes also, so that their employment in the dual capacity is of an economic character to the State.

Accommodation. 110. The problem of accommodation for continuation schools and classes in urban areas is in some respects not so difficult as in rural areas. The existing technical schools can be used to a full extent in the day-time and still be available for evening technical classes, but some of them need improvement and extension, and it must be remembered also that an efficient scheme of continuation education will increase the demand for subsequent technical education. There are many towns, however, where there are not technical schools and in which continuation education will be required. The following table gives a summary of the position :—

Centres.	Number.	Number with Technical School Buildings available for day classes.
Dublin and the 4 adjoining townships	5	5
Other towns over 10,000 population	10	10
Towns 5,000 to 10,000 population	14	13
Towns 2,000 to 5,000 population	53	20
Total	82	48

(c) GENERAL.

111. It is obvious that a general consideration of continuation education in any locality, rural or urban, would be incomplete without examination of the position of existing secondary schools. Manifestly there is little to be gained in organising a whole-time continuation school in a district, if it is already provided with a secondary school which can carry out the functions which the continuation school is intended to fulfil. Generally, however, the secondary schools in the Saorstát do not discharge the function which we have in mind and are not concerned with the special preparation of youth for employment at the normal age of 16. They have maintained a tradition of preparing young people for university and professional life and for appointments to the civil service. Many witnesses commented on the lack of relation of the work of the secondary school to the ordinary requirements of the locality which it serves and expressed the view that the secondary school would fulfil frequently a more useful purpose if it were of junior technical or junior agricultural type. We believe that there are many secondary schools, the large majority of whose pupils do not remain in attendance beyond the Intermediate Certificate age. It is our view that the curricula of such schools should be designed to meet the needs of the majority, and should be influenced to a slight extent

Existing
Secondary
Schools.

Recommendation 14.

only by the needs of a small minority proceeding to university and professional life. In such curricula there should be a distinctly practical tendency. Science, drawing, manual instruction or domestic economy should be obligatory subjects. We understand that most of the schools are equipped for the purpose of practical instruction, but that it is difficult in many cases to secure the services of expert teachers particularly in drawing and manual work. It is desirable in such cases that the services of expert instructors employed in technical schools should be made available in classes for secondary schools.

Programmes similar to that of the Christian Brothers' Trades Preparatory School at Cork could be adopted with great advantage by other urban secondary schools conducted by the Order, and with certain adjustments could be used in schools serving rural areas, in substitution for the present programme.

Age at
Entry.
Recommendation 15.

112. The normal age of entry to whole-time continuation schools and classes should be regarded as 14 years. Pupils who have obtained the Leaving Certificate of the primary school before the age of 14 should be permitted to enrol at a whole-time continuation school, but their attendance at such a school should be compulsory until the age of 14.

Continuation
Classes
under the
National
Education
Office.

Recommendation 16.

113. The existing programme of continuation classes under the National Education Office permits of the establishment of evening schools in a wide variety of subjects including those provided under the local schemes of technical instruction. These classes, which were suspended in rural areas in 1921 on grounds of economy, are still in operation in urban centres and are mostly concerned with instruction in Shorthand and Typewriting. They form no part of an organised system of continuation education, as their formation depends almost entirely on private initiative, and it is not the business of any authority, either central or local, to ensure their continuity, no matter how important such continuity may be to the district. It is obviously desirable that this scheme should be merged in a general scheme of continuation schools and classes, and that the regulations under which the classes have been conducted should be superseded by the new Regulations for Continuation Schools and Classes.

Abolition of
Introductory
Course.

114. These new Regulations would render unnecessary the continued operation of the Introductory Course of the Programme for Technical Schools and Classes, referred to in paragraph 50. We recommend that the Introductory

Course in its present form should be abolished. It may be necessary for a few years to organise classes for some who have not benefited by the School Attendance Act, 1926, and whose primary education is defective. The organisation of such classes should be regarded as a temporary expedient only, and should not become a permanent feature of either a continuation or a technical school programme.

Recommendation 17.

115. It is realised that some time must elapse before schemes of continuation schools and classes can be made general in the Saorstát, but it is our view that **A PROPER SYSTEM OF CONTINUATION EDUCATION IS OF VITAL IMPORTANCE TO THE SOCIAL AND ECONOMIC WELFARE OF THE PEOPLE, AND ITS ORGANISATION MUST BE UNDERTAKEN WITHOUT DELAY.** As soon as the necessary accommodation and staff are provided in a locality, compulsory attendance at the classes should be enforced at the discretion of the Minister for Education. We recommend that attendance at whole-time schools should be compulsory in urban areas for all young people between 14 and 16 who are not in employment. Exemption from obligation to attend whole-time schools should be granted only to those engaged in approved employment. Those who are in employment between the same ages should be obliged to attend part-time classes for a minimum of 180 hours in each year of the period. This is the minimum of compulsory attendance enforced in Sweden under the terms of an Education Act of 1918.* Young people of both sexes engaged on farm work should be regarded as employed whether they are paid or not, and should be obliged to attend part-time classes only. Hence it is clear that compulsory attendance in rural areas cannot in general be of a whole-time character. Localities should have a wide choice in arranging the minimum period of compulsory attendance (180 hours) so as to conform to local working conditions.

Extent of obligation to attend Continuation Classes.

Recommendation 18.

116. In this insistence on compulsory continuation education we are supported by the views put forward by the Dublin Chamber of Commerce and the Advisory Committees for juvenile employment in Dublin, Cork and Limerick. We direct attention to the following extract

Juvenile Advisory Committees' Views.

* If this minimum has not been obtained at the age of 16, the Swedish Government has powers until the pupil concerned has attained the age of 18 to require further attendance at continuation school.

from the evidence of the Dublin Advisory Committee who have had fifteen years' experience in connection with the employment of juveniles between the ages of 14 and 18 in Dublin.

“ In the course of their work the Committee have been impressed by the low standard of education of many juveniles applying at the Employment Exchange for work, and have frequently urged the necessity for continued education and recommend the raising of the school-leaving age and standard. These recommendations were, for various reasons, not accepted by the Department of Education, but the Committee feel that the matter has now become of greater urgency, not only from the point of view of improved education, but also owing to the importance of maintaining the standard of education and efficiency that has been reached.

Every year a considerable number of children for whom no work is available leave our primary schools at the age of 14 and in the period of idleness which follows lose the good habits and much of the knowledge acquired at school. The evil effects of unemployment on boys and girls at an impressionable age and newly released from restraining influences need not be stressed. They affect the individual development of the child and have ultimately an adverse effect on the industrial development of the country. Some form of continued control over these children would appear to be necessary and the committee consider that a scheme should be devised whereby only those children for whom employment is available should be free to leave school under the age of sixteen years. They would like to see a comprehensive scheme adopted which would apply throughout the country, but being aware of the difficulty arising in connection with the general application of any scheme and being of the opinion that the dangers of demoralisation are greater in large industrial centres, they confine their recommendations to the area of their activities. They recommend, therefore, that juveniles in this area—that is the County Borough of Dublin and the urban districts of Rathmines and Rathgar, Pembroke, Blackrock, and Dun Laoghaire—between the ages of 14 and 16 years should be obliged to attend school unless they are engaged in suitable employment. No new legislation would be needed to give effect to this recommen-

dition, as under Section 24 of the School Attendance Act, 1926, the Minister for Education has power by Order to extend the provisions of that Act to any particular part of the Saorstát and to except any children or class of children from the operation of the Order.

It is not considered desirable that all these children should remain in the primary school. Those who have attained a certain standard of proficiency, say, VIth. Standard, should be transferred to a more advanced school where their education will be continued on different lines to those adopted in the primary school. In this school provision should be made for handicraft and domestic economy training. Simple lectures on citizenship and economics should be included in the curriculum. Drill instruction should be given and in suburban schools lessons in gardening. These schools, it is suggested, could be established in existing buildings.

In regard to exemption for children for whom employment is available, it is proposed that this should be done by means of a Certificate from the Committees."

CHAPTER V.

**TECHNICAL EDUCATION IN RELATION TO
EMPLOYMENT.**

- (a) AGRICULTURE.
- (b) INDUSTRIAL OCCUPATIONS IN WHICH THE SKILL OF THE WORKER
IS OF IMPORTANCE.
- (c) OCCUPATIONS IN WHICH SUCH SKILL AS IS NECESSARY ON THE
PART OF THE WORKER IS EASILY ACQUIRED.
- (d) CRAFT WORK THE VALUE OF WHICH DEPENDS ON ARTISTIC MERIT.
- (e) COMMERCIAL PURSUITS.
- (f) HOUSEHOLD, HOTEL AND INSTITUTION OCCUPATIONS.

117. With a sound foundation of continued education of whole-time and part-time character to 16 years of age, it is possible to conduct schemes of technical education on successful lines. The programme under which the schemes should operate should be distinct from the programme of continuation schools and classes already mentioned, and work of a primary or continuation character should form no part of this programme. Accordingly the age of entry into specialised technical courses should generally be sixteen years. At this age most people will have obtained employment or have formed precise opinions as to the nature of the employment they are going to obtain. The success of a technical course or class depends on the extent to which it deals with young people in employment between 16 and 20 years and not those of continuation school age. An entrance examination to a technical school would be desirable; the record of the candidate at continuation or other classes should be available, and, combined with the results of the examination, would enable the school authorities to place him in classes appropriate to his attainment.

Recommendation 19

118. The types of employment that are available for young people at 16 (or an earlier age) may be classified in the following groups :-

- (a) Agriculture.
- (b) Industrial occupations in which the skill of the worker is of importance.
- (c) Occupations in which such skill as is necessary on the part of the worker is easily acquired.
- (d) Craft work the value of which depends on artistic merit.
- (e) Commercial pursuits.
- (f) Household, hotel and institution occupations.

Young people employed in these groups can be assisted in varying degrees by education related to their employment—and it is the policy of practically every country to provide adequate facilities for the purpose. It is true that it is difficult to interpret as “technical,” in the strictest sense of the term, instruction that would be required to meet the needs of some of these groups. It is also true that young persons in employment may frequently require instruction in a subject or subjects that do not appear to have any direct relation with the employment in which they are engaged, but which, nevertheless, would increase their efficiency. Thus it is conceivable that a young tradesman may desire to start business on his own behalf and for this purpose seek instruction in book-keeping and

business methods. We feel that any programme of technical education which concentrates on the specific training required by each individual for his occupation would fail to serve the wider needs of the community.

(a) AGRICULTURE.

119. Instruction in agriculture is at present under the control of the Department of Lands and Agriculture, and is imparted through the medium of schemes administered directly by that Department and also through the medium of schemes administered by County Committees of Agriculture. In referring to this system of agricultural education a Commission on agriculture, which was set up in 1922, stated, in its report published in 1924 :—

“ Much evidence has been received respecting the educational schemes conducted by and under the direction of the Department of Agriculture and Technical Instruction, and it is with pleasure that we record our opinion that these schemes have been, in the main, well directed and productive of good results. In so far as we recommend any further development in the realm of agricultural education in Ireland we do so, not with the intention of changing or abolishing, but rather with that of supplementing and extending the existing system of the Department of Agriculture.”

We have assumed that instruction in agricultural subjects proper should remain under the control of the Department of Lands and Agriculture, and we have sought information only in so far as such instruction is affected by the educational standard of those with whom the teachers of agricultural subjects and the administrators of agricultural schemes have to deal. We have been informed that among the causes which militate against the greater success of agricultural education are those stated in regard to technical education, namely, the defective primary education of many of those attending classes and lectures, the break in the continuity of education after leaving primary schools, the amount of time which teachers have to devote to subjects which should be mastered in a primary school or, failing this, in a continuation school, and that generally a better return would be obtained from the educational schemes of the Department of Lands and Agriculture if those for whose benefit such schemes were designed possessed a higher standard of education. It is hoped that the combined effects of the School Attendance

Act, 1926, and of a system of continuation education such as that we propose, will effect an improvement in this direction.

120. The majority of the farms in the Saorstát are small farms, and the farmer has to be acquainted with many operations of a technical character other than those connected with the actual working of the land. As already stated in paragraph 56, he requires a knowledge of woodwork, the making of fittings and furnishings for the homestead, metalwork, simple building work especially in concrete, the use and care of motor engines, and possibly map reading and surveying. Instruction in Woodwork is provided at present in county technical schemes, but as stated in paragraph 54 it is on too small a scale to produce effective results. We recommend that the Department of Education should extend the scope of the instruction given by itinerant teachers to embrace subjects enumerated above and that activities on these lines should be intensified by the employment of increased staffs. These staffs will be required for rural continuation as well as adult technical classes.

Recommendation 20.

121. A similar intensification is required in the work carried on in the county technical schemes by the domestic economy instructresses. The existing staffs of one or two instructresses per county are inadequate to meet the demand for instruction and much larger numbers are required; also the courses in any particular locality should be of longer duration than six weeks. According to our information it is necessary that a change should be effected in the type of instruction given by many of the present instructresses so as to make it conform more closely to the conditions of rural life.

Recommendation 21.

122. While it is obvious that the bulk of the instruction must be carried on in local courses by itinerant teachers, we are of opinion that it is sound educational policy to encourage attendance at residential schools of Rural Domestic Economy. There are at present in the Saorstát twelve such Schools, all of which are under private management. Six of them, namely, those at Ramsgrange, Portumna, Clifden, Swinford, Claremorris and Ardagh cater mainly for the daughters of farmers, who are assisted by scholarships provided by County Committees of Agriculture, and in respect of whom grants are made by the Department of Lands and Agriculture. While instruction in Domestic Economy subjects is included in the curricula

at these Schools, instruction in Poultry Keeping and Dairying occupies a predominant place. The course of instruction at these schools extends over a period of about one year, and on its termination a number of selected girls who wish to qualify for posts as Dairymaids, etc., are afforded facilities in this direction. A number of the most promising pupils who show special aptitude and who are likely to prove suitable as teachers are also afforded—at the Munster Institute—a further course of training designed to qualify them for employment by County Committees of Agriculture as Itinerant Instructors of Poultry Keeping and Dairying. As already indicated in paragraph 83 the six remaining schools, viz., those at Dunmanway, Drishane, Dundrum, Carrick-on-Suir, Moate and Stradbally are assisted by grants from the Department of Education and by scholarships provided by County Committees of Technical Instruction. At three of these schools, namely, those at Carrick-on-Suir, Moate and Stradbally, instruction is confined to Domestic Economy subjects, while at the remaining three, namely, those at Dunmanway, Drishane and Dundrum, instruction in Dairying and Poultry Keeping is also provided. It appears, however, that Dairying and Poultry Keeping do not receive at the latter three schools the prominence which these subjects receive in the schools subsidised by the Department of Lands and Agriculture and which such subjects should receive in schools which cater almost entirely for the daughters of farmers, most of whom are to return eventually to their own homes. We are of opinion that the number of Schools of Rural Domestic Economy should be increased; that attendance thereat of young girls of the farming community should be encouraged by a scheme of county scholarships; and that in the curriculum of all such schools Poultry Keeping and Butter Making should occupy a no less prominent place than these subjects occupy in the schools now subsidised by the Department of Lands and Agriculture. Instruction in Gardening and Bee Keeping should also be provided. If necessary, arrangements could doubtless be made whereby the Department of Education would assume responsibility for the inspection of classes in subjects other than the agricultural subjects mentioned and for the payment of grants in the same connection, but any arrangements should envisage the paramount importance to girls of the farming community of such subjects as Poultry Keeping and Dairying. We are also of opinion that a School of Rural

Recommendation 22.

Domestic Economy is more likely to achieve its object when run as a separate institution and not merely as an adjunct to a large Secondary School, where there will inevitably be a tendency to underestimate the importance of such subjects as Poultry Keeping, Dairying, etc., and we recommend that this be borne in mind when further Schools are being established.

123. There are certain trades associated with agriculture, the most important of which is that of the smith. The skill of the smith in shoeing and other operations of the country forge has deteriorated greatly in recent years and is insufficient to enable him to carry out the repairs that are frequently required in modern agricultural machinery. It is necessary to increase the number of expert farriery instructors employed by the Department of Education. The two employed at present have achieved excellent results in the counties in which they have taught, but they are unable to cope with all the work that is to be done. Although they have been working for the past 15 years many counties have not yet had the benefit of their services. The new instructors should be fully qualified farriers, preferably with an intimate knowledge of the methods of effecting repairs to agricultural machinery.

Recommendation 23.

124. Technical Education in so far as it relates to the farming community and to those who live in rural areas must generally remain on a basis of voluntary attendance.

(b) INDUSTRIAL OCCUPATIONS IN WHICH THE SKILL OF THE WORKER IS OF IMPORTANCE.

125. Technical education in relation to this group is of prime importance. It is to this group that the apprenticeship system pertains in general. Formerly the master tradesman or craftsman educated his apprentice, guided him through intricacies of his trade or craft, and was responsible to the Guild for his efficiency at the termination of the period of apprenticeship. In modern times this has changed. The extended use of machinery in industry, the restriction of working hours and the consequent intensification of shop methods have left the apprentice without adequate guidance. The employer cannot afford to use the services of a highly-skilled and highly-paid workman for the purpose of training apprentices, and this duty is devolving more and more on the technical school. It can be realised, therefore, how important it is to industry that

adequate technical school facilities should be afforded for the acquisition of knowledge and skill by the apprentice.

126. The main trades in which apprenticeship is the predominating practice are Building, including carpentry and joinery, bricklaying, masonry, plumbing, painting, plasterers' and slaters' work ; Engineering, including fitting and turning, smithwork and boilerwork ; Printing, mainly typographical ; and Electrical trades. It is noteworthy, however, that the apprenticeship system does not generally prevail in motor garage work where the degree of skill required is certainly comparable with that required in the trades mentioned.

127. A large mass of evidence has been submitted to the Commission to indicate the various ways in which the " skilled " trades are replenished. Generally it would appear that recruits are drawn from three main sources, (a) the sons or relatives of those engaged in the trade, (b) the sons or relatives of customers, (c) boys whose parents offer substantial premiums to secure their employment. Each trade has its traditional method or methods but it is remarkable that little emphasis has been laid in recent times on educational attainment as a condition of entry. From the standpoint of our terms of reference, this is a matter of vital importance. We hold that if the trades are to be maintained in the state of efficiency that will make them an asset to the country, candidates for entry to the trades must be of sound education. This is the opinion held by representatives of many skilled trades, who further state that sixteen years is a desirable age of entry to the trade. It is our view that, in a centre where the requisite educational facilities are available, an apprentice should not be engaged until he has reached the standard of proficiency that should be attained by completion of a course at a whole-time continuation school of practical character.

Recommendation 24.

128. The majority of candidate apprentices to the skilled trades reside in the large towns and will have no difficulty in attending continuation courses in preparation for entry to a trade, but a considerable minority belong to rural areas where similar facilities may not be available. This deficiency might to some extent be filled by the grant on a competitive basis of scholarships to enable promising country boys so situated to attend practical continuation classes established in urban areas. There is already in existence a system of scholarships to assist primary pupils to proceed to secondary schools. This system tends to

turn some of the best products of the primary schools away from the skilled trades. The Commission is of opinion that it would be a useful corrective to such a tendency to make these scholarships in suitable cases tenable in continuation schools with a trade bias.

Recommendation 25.

129. The education of an apprentice in a technical school should not be conducted as it has been mainly hitherto, through the medium of evening classes voluntarily attended. The evidence tendered to the Commission, as well as the records of enrolment, attendance and progress at the Technical Schools (*vide* paragraphs 38, 40 and 42) indicate that trade instruction for junior apprentices after working hours has failed to produce effective results in the Saorstát. With respect to the first two years of apprenticeship at least, there was general agreement among trade witnesses on two points :—

(a) that attendance at the school should be made compulsory ;

(b) that the instruction should be given in day classes. There was not agreement among witnesses as to the form which such day-time instruction should take. Some favoured part-time day classes and others whole-time instruction in organised apprentice schools. Objections were raised to both schemes; to the former, that attendance at the technical school for part of the day caused disorganisation in the workshop and disturbance in outdoor work such as prevails in the building trades ; to the latter, that the apprentice attending a whole-time school remains too long out of touch with actual working conditions, that he becomes pampered in the school and rendered unfit to overcome the hardships and grapple with the difficulties which he will afterwards have to face in the workshop and which are not encountered in the school. As far as technical school organisation is concerned, both whole-time and part-time schemes are feasible, though it must be remembered that what is feasible for a particular trade in Dublin is not equally so in a smaller town like Galway or Dundalk.

130. *We recommend that attendance at a technical school should be made compulsory in the first two years of apprenticeship* in such trades as are scheduled under the terms of an apprenticeship Act, as proposed in the succeeding chapter of our Report, and in such areas as possess the requisite educational facilities. We further recommend that the instruction should be by day-time classes, part-

Recommendations 26 and 27.

time or whole-time for each trade in accordance with the advice of apprentice committees, representative of employers and employees of the trade, which we contemplate should be set up under the proposed Act. Where a committee for a trade prefers part-time instruction, it should be empowered to recommend the extent of such instruction, subject to the governing condition that attendance should be of not less than 180 hours' duration in each of the first two years of apprenticeship. We believe that committees will not restrict the attendance of apprentices to the compulsory minimum, but we are not disposed to recommend that any additional attendance required should necessarily be day-time attendance. On the contrary, we are of opinion that the apprentice should be prepared to make some corresponding sacrifice of his spare time after working hours and attend for instruction in such additional hours and at such additional times as are prescribed for his trade. In the case of whole-time apprentice schools, the conditions, including hours, should approximate as closely as possible to the factory or workshop conditions pertaining to the trade concerned.

Recommendation 28.

131. With regard to the education of senior apprentices—third year and onwards—there is general agreement that it should be conducted in night classes as hitherto and should be compulsory or optional as each trade requires. It is our view that the courses of training should extend over two years at least.

Recommendation 29.

132. Appropriate technical examinations should be held annually, and at the close of the two main periods of training, candidates should be eligible for the award of elementary and advanced certificates. The examinations should be conducted under the authority of the Department of Education and based on syllabuses devised for each trade group in consultation with its apprentice committee. The practical examination in any trade should be conducted by an examiner appointed by the Department and he should have the assistance of a representative employer and a representative tradesman.

133. Certain witnesses expressed the view that not only should the apprentice be required to attend classes appropriate to his trade, but that acceptance as a journeyman at the conclusion of apprenticeship should be conditional on his passing a recognised trade test. It is unquestionably in the interests of both employers and employed that they should co-operate in restricting recognition as a tradesman

to those with some defined hall-mark of efficiency. The "trade test" has become a recognised feature of employment in skilled trades in many countries.

134. Co-operation of the employer and the worker is in our view essential to the success of any scheme of technical education for a trade. The appointment of an apprentice committee representative of both parties would ensure the adoption of a school curriculum that is suited to trade conditions, the equitable distribution of time between the school and the workshop and the effective progress and periodic examination of the apprentice. An apprentice committee should be representative and should function for the country as a whole in respect of each particular trade. Some time must elapse before schemes of compulsory apprentice education can be applied to any extent outside the four main areas of Dublin (including the adjoining townships), Cork, Limerick and Waterford. The conditions pertaining to a trade in these main areas are not likely to be radically different and in any case the amount of variation is easily ascertained. If the educational recommendations of an apprentice committee for a trade are approved by the Minister for Education, they can be enforced in the areas mentioned as well as in such other areas as he considers it practicable and desirable to enforce them. The function of the committee will be to ensure that the work of the technical school bears the closest and most effective relation to the needs of the trade, and success in carrying out this function will remove from the school atmosphere that feeling of aloofness from trade conditions that has formed the subject of frequent criticism.

135. Outside the main urban centres the education of the apprentice presents a problem of some difficulty. Certain trades may be sufficiently strong in a locality to justify the organisation of classes to meet their special needs. Where they are not, it would be feasible to adopt a scheme of "apprentice scholarships" which would enable the apprentice to attend a course of training at a centre where suitable facilities are available. The scholarships should be competitive in character and of sufficient value to enable the apprentice to take out a full year's course. It would be to the general advantage to have the standard of workmanship in the remoter areas raised by the presence of occasional journeymen possessing a training equal to that of the town tradesman.

Recommendation 30.

(c) OCCUPATIONS IN WHICH SUCH SKILL AS IS NECESSARY
ON THE PART OF THE WORKER IS EASILY ACQUIRED.

136. While we feel that we can scarcely over-emphasise the importance of maintaining the "skilled" trades at a high level of efficiency so that they will form a sound nucleus for the industrial development of the State, we must recognise the general revolution that has been going on in industrial methods in the direction of mass and specialised production. The trend of modern industry as illustrated in the mass production system is to reduce the number of the craftsmen class skilled in all the operations of a trade. Thus many industrial undertakings conducted on modern lines are directed by a small highly skilled section in which scientific control, specialised engineering skill and highly technical qualifications peculiar to the industry concerned are the guiding factors. This tripartite combination represents in most cases not more than 10 per cent. numerically and the remaining 90 per cent. consists of workers who may be described as machine minders. The introduction and perfection of machinery means for the workers employed in many industries specialisation in one operation or process.

137. In the clothing trades, with the exception of hand-craft tailoring, this system now prevails. It also prevails in chemical trades, and very largely in boot and shoe manufacture, tobacco factories, in the manufacture of sweets, jam and similar commodities.

138. The Brush and Broom trade affords an example of an evolution of an industry from a highly skilled "hand-craft" to an industry in which machinery capable of being worked by youthful operatives on a system of divisional labour prevails. The Brush and Broom industry was one in which the Union rule prescribed a seven years' apprenticeship for a boy and a three years' apprenticeship for a girl. This system of apprenticeship was laid down with a view to making the boy or girl a competent worker in several branches of the trade. At present in the industry there exists this old system of apprenticeship and side by side with it the new system which is replacing it. Under this new system a boy or girl with a very short period of training can efficiently work a machine which simultaneously bores the holes in the heads of two brooms or a machine which fills the holes with bass or hair.

139. The manufacture of biscuits is stated to be a non-

technical industry. We had evidence that in the manufacture of biscuits no technical training is required of the worker. Most of the operations are analogous to those carried on in bakeries in which power-driven machinery is used. In machine bakeries, there is practically no handling of flour in the case of the ordinary loaf. The dough mixers and other machines do the work.

140. It is necessary in considering the general problem of technical education to have as clear ideas as possible of what is required in the trades that are tending towards specialised operation and labour. This is especially so when it is remembered that any industrial developments that may occur as a result of the Shannon Power Scheme are likely to be in the direction of factories conducted on such specialised lines. No doubt the older trades and industries in which individual skill is of importance will benefit by any such development; for example, the building trade will benefit by the building of a factory and the engineering and furnishing trades by the fittings and equipment that would be installed. It is important, however, to realise that any mass production factory such as the firm of Messrs. Fordson, Cork, cannot start with machine minders only. There must be a nucleus of well-trained craftsmen, experienced in various branches of the engineering trade, if the new industry is to have an effective start, and it is for this reason among others that we have advocated increased attention to the education of the worker.

141. The training of the factory operative in so far as repetition processes are concerned should be done in the factory and not in the technical school. Facilities might, however, in certain cases, particularly in respect of new industries, be granted to the management of firms for the training of young workers. These facilities might in some cases take the form of grants from the Department of Education towards the cost of employing an instructor and in others the loan of the services of an instructor employed by the Department for the purpose. The training period should in all cases, in which facilities are provided, be of limited and definite duration. In general not more than a few weeks' training is required to make the workers adept in the use of a machine.

Recommendation 31.

142. The education that should be provided in technical schools for young people employed in an industrial undertaking in which repetitive processes predominate should be determined, in consultation with its trade board or appren-

Recommendation 32.

tice committee. It is difficult to say how far this education will be technical. The workers in an industry do not necessarily become more effective units in a specialised mechanical process by technical education no matter how liberal, but they should be saved from becoming mere stupid cogs in a machine and should be educated to ensure a ready adaptability to changes which in industries of this character are often rapid and severe. A general knowledge of the industry and of kindred industries, the acquisition of increased skill in the use of hand tools (wood and metal, etc.), domestic craftwork, should form part of the education provided in the technical school. Obviously the classes must be evening classes after working hours; in general they will be on a basis of voluntary attendance.

143. The age of entry into employment in many of these industries will be below 16 years. It will be recalled that we have recommended that attendance at part-time continuation classes should be made compulsory between the ages of 14 and 16. In order that this obligation to attend continuation classes should not involve too great a strain on the young worker, the employment of children under 16 should be restricted to a maximum number of hours.

Recommendation 33.

(d) CRAFT WORK THE VALUE OF WHICH DEPENDS ON ARTISTIC MERIT.

144. Employment of a permanent character available in artistic handicrafts is restricted practically⁴ to the four county boroughs. Even in the county boroughs such employment is scattered over a number of handicrafts—carpet-weaving, tapestries and embroideries, book-binding, jewellery, artistic leatherwork, stained glass work, cabinet-making. The number of workers engaged in many of these groups has been too small in the past to warrant the provision of special group-instruction. The efforts of the Metropolitan School of Art in Dublin and of the schools of art in Cork, Limerick and Waterford have been directed to the encouragement of individual talent in the student whose occupation frequently had little or no connection with the craft in which he was being instructed.

145. The task of exploring this specialised branch of technical education has been entrusted to a Special Committee of French and Irish experts appointed, early in the present year, by the Minister for Education with a view to "the improvement of craftsmanship and design as applied to industries." We had hoped to have the advan-

stage of its review of existing needs and conditions and the guidance of its considered recommendations before bringing our Inquiry to a conclusion, but we are informed that it has not presented a Report. We have thought it desirable, in the circumstances, to confine ourselves to the main purpose of our Inquiry and to abstain from making any observations on this specialised branch of the subject.

(c) COMMERCIAL PURSUITS.

146. From the evidence furnished to us, it would appear that there has been a tendency in schemes of technical instruction to develop commercial classes unduly. The impression gained from witnesses is that the undue commercial bias in the programmes of technical and other schools influences young people to take up clerical rather than industrial or agricultural pursuits. It is difficult to say how far the preference for commercial work is the outcome of an educational bias rather than the result of better and quicker opportunities for employment in commerce than in industry. We are of opinion, however, that the scheme of continuation education we propose, with its strong practical bias should provide the means necessary for diverting the youth of the country from clerical pursuits.

147. The general programme of the whole-time continuation schools will furnish a sound preliminary training for those who will ultimately take up commercial posts. For the completion of their training, a further course of one year's intensive work in commercial subjects will be required at any rate in the county boroughs and the larger urban centres. Students thus trained will find employment in the better branches of commercial work. Their subsequent technical education should be carried out in specialised evening classes in technical schools, but we are convinced that outside the county boroughs and the larger urban centres enumerated in paragraph 249 there is no necessity for commercial instruction of this character.

Recommendation 34.

148. In the county boroughs, it will be desirable to arrange part-time classes so as to meet the specialised requirements of the various types of commercial employees. These are controlled to some extent by the regulations of the various commercial bodies such as the Institute of Bankers, the Institute of Chartered Accountants and the Institute of Secretaries. It would be impossible to state

generally what length of course is needed by the evening commercial student. It will vary from two to four or five years.

Recommendation 35.

149. Entry into business life cannot, however, be restricted to students over 16 years of age who have spent two years at a whole-time continuation school. According to the evidence presented to the Commission, business people could not, without undue inconvenience, allow junior employees to attend part-time continuation classes during working hours; but it is our view that such employees should not be exempt from the compulsory minimum attendance recommended. The instruction provided for them during the 14-16 period should conform to the programme of a continuation school. No encouragement should be given to specialise at too early an age, and we are of opinion that much of the existing junior evening instruction in shorthand and typewriting and such mechanical aids to business should be considerably restricted.

150. For business students in employment who have completed a part-time continuation course, further classes will be required to increase their efficiency as junior clerks, assistants or shorthand-typists. These might extend over two years at the end of which students should be able to benefit from the more specialised evening instruction already suggested.

Recommendation 36.

151. In areas other than the county boroughs and the larger urban centres enumerated in paragraph 249 the present extensive facilities for commercial instruction should not be continued. Generally speaking, schemes of continuation and technical education in such places should not make definite provision for commercial classes. In the smaller urban centres it may, however, be advisable to provide a course of intensive commercial work for one year for those who have completed the whole-time continuation course, and for others occasional classes of a part-time character. Such facilities should only be granted when a genuine demand exists and should cease automatically as soon as the need has been met.

Recommendation 37.

152. Attendance at part-time commercial classes should be on a voluntary basis and admission should be more strictly confined to students over 16 already engaged in occupations, subject of course to suitable facilities being provided to meet cases such as that referred to in the concluding portion of paragraph 118.

(f) HOUSEHOLD, HOTEL AND INSTITUTION OCCUPATIONS.

153. The consideration of technical education as a means of providing domestic training for unpaid work in the home does not come directly within our terms of reference. Such work, however, is closely associated with paid domestic service, with the various functions performed by hotel staffs, and with certain occupations in institutions and will always bulk largely in schemes of technical instruction.

154. After the whole-time course that will be taken between the ages of 14 and 16 at a suitable secondary or continuation school there should be facilities in technical schools for a year's course of domestic training. The course would be a whole-time one and could be availed of not only by young people intending to enter paid employment such as nursing, but also by many to whom such a course would be of great value in their home life. One year's intensive training is, in our opinion, sufficient.

Recommendation 38.

155. At present the great difficulty in connection with domestic service is the lack of trained workers. It is a common fallacy that domestic service is an occupation that does not require skilled training. Until domestic service is recognised as a skilled occupation and treated accordingly, the difficulties of attracting suitable girls must necessarily continue. The tendency to employ girls at the age of 14 should be discouraged by the authorities who will deal with the question of exemption of girls from attendance at whole-time continuation classes. Employment in good houses is seldom available for girls of less than 16 or 17 years of age, and, if these girls after leaving the primary school at 14 are engaged in the interval on casual unskilled domestic work in houses that afford no opportunity for training, the bad habits developed during these years can hardly be eradicated.

156. The technical school should pay more frequent attention than it has in the past to the training of girls who are prepared to take up domestic work as an occupation. Courses should be conducted for the training of general servants, housemaids, cooks. The work which is carried on in the Killarney School of Housewifery (referred to in paragraph 80), which is an institution for the training of girls in domestic service, is admirable, and such work should be extended to other urban centres.

157. The main work of the domestic economy classes in urban centres should be continued on the lines followed

in the past. It serves a very useful purpose to the community. Efforts should be made, however, to bring the instruction into touch with the large mass of the working classes that in existing circumstances appear to shun the technical school.

158. All the classes organised in connection with occupations of a household character should continue on a basis of voluntary attendance.

CHAPTER VI.

APPRENTICE COMMITTEES.

159. As stated earlier in this Report, compulsory instruction in a technical school for a minimum of 180 hours in each of the first two years of apprenticeship is in the opinion of the Commission essential, but the questions as to the form this instruction should take and its continuance beyond the compulsory minimum are considered to be matters on which the advice of a representative committee in each trade should be obtained. The suggestion was made by witnesses that such committees would be the bodies best fitted to help in the solution of the many problems—industrial and educational—that have arisen since the decline of the apprenticeship system.

160. From the evidence tendered to the Commission by certain representatives of employers, by the National Executive of the Irish Labour Party and Trade Union Congress and by the Department of Industry and Commerce, it is clear that the system of apprenticeship entailing a voluntary arrangement under which the employer, the youthful worker and the guardian of the worker fulfilled certain obligations, has ceased to be effective and that at present there exists no guarantee either for the efficient technical training of the apprentice or for employment after apprenticeship. Under the older system of apprenticeship the guardianship of the terms of apprenticeship in the matter of the number of years of apprenticeship, remuneration and general conditions of working, as well as the proportion of apprentices to adult workers was the joint responsibility of the employers and organised workers in the trades concerned. So long as the older conditions lasted this worked fairly satisfactorily, particularly so where the indentured system was in force.

161. It is generally agreed that the rapid revolution in industrial methods has not been accompanied by corresponding changes in the apprenticeship system and that the system which suited older industrial conditions bears but little live relationship either in respect of the period or methods of training to the demands of modern trade and industry. The provision of adequate facilities for training young

persons in skilled trades is a problem that must be taken in conjunction with the problem of providing industry with an adequate number of competent workers and of providing competent workers with employment. Especially since the war, this problem has demanded the serious consideration of many countries. The balance of power between the unstable requirements of the market on the one hand and the recruitment of the standing army of industrial workers on the other has for many countries become a matter for State supervision or control. States have, however, realised that if the problem is solvable the best advice is that from the industry itself. Consequently, the establishment of committees consisting of equal numbers of representatives of employers and of workers for the purpose of advising the most effective means of providing industry with skilled workers, of maintaining an equitable balance between juveniles and adults, of recruiting in such numbers as will enable an industry not only to meet the existing demands of the market but to develop, has become a common feature in modern industry.

162. Laws regulating apprenticeship have been in operation in Germany and Denmark for the past fifty years. Apprenticeship laws have become a feature of modern social legislation in many countries and legislation of this nature providing in certain cases for the establishment of apprenticeship committees to deal with all matters connected with the training of apprentices is now in operation in Switzerland, Hungary, Finland, Australia (Queensland), New Zealand, South Africa and in some parts of the United States. The object of this legislation is on the one hand to secure adequate training for juveniles engaged in craft and industry so as to afford them better prospects in life, and, on the other, by encouraging the training of craftsmen to increase the productivity of the State. Under some of these laws certain trades have been designated or scheduled and entry to such trades is strictly regulated. Contracts of apprenticeship must be in accordance with prescribed regulations, entrants must have reached a certain age and standard of education, and on completion of apprenticeship an approved trade test must generally be passed before a certificate of competence is issued. To ensure an adequate supply of journeymen in the interests of the industry, legislation in certain countries requires employers to employ and to continue to employ a prescribed number of apprentices.

163. In the Union of South Africa, under the provisions of the Apprenticeship Act (No. 26 of 1922,* amended by No. 15 of 1924), apprenticeship became compulsory in such trades as decide, under advisory powers vested in special apprenticeship committees, to adopt the provisions of the Act. A trade designated by the Minister of Mines and Industries, on the advice of a committee, becomes subject to the law. No person can enter into a contract of apprenticeship in respect of any designated trade except in accordance with the provisions of the Act and no person can employ in a designated trade any minor otherwise than under contract of apprenticeship entered into in accordance with the Act or otherwise than in a standard form as set out in the Act. The State not only undertakes the scrutiny and registration of apprenticeship contracts but also assumes certain responsibilities relative to the performance of their terms. Payment of premiums for engagement is forbidden and minimum and maximum ages for apprenticeship are fixed. Transfer and cancellation of contracts in certain circumstances are provided for. Questions of importance for which provision is not specifically made are dealt with by the Minister on the advice of committees representing groups of trades.

164. The Apprenticeship Committees consist of not less than five members, one of whom, the Chairman, is an independent person appointed by the Minister, and the others are composed of equal numbers of representatives of employers and employees chosen by the organisations, associations or Trade Unions concerned. Recommendations of the Committees, if accepted by the Minister, have the force of law. The Minister, in consultation with the committees, prescribes the qualifications required by apprentices in particular trades, though the minimum age and standard of qualification are fixed. The Minister may moreover fix or vary the periods of apprenticeship, having regard to the age and qualifications of the apprentice. Acting with the advice of committees, he is empowered to fix the number of apprentices who may be employed in given shops, to investigate any dispute which may arise out of a contract and to determine in consultation with the Government educational authority what continuation or technical classes shall be attended by the apprentice.

* See Appendix VIII. See also article on Apprenticeship in the Official Year Book of the Union of South Africa No. 8 for the period 1910-25.

165. The following industries in South Africa are scheduled as industries to which the Act applies :—

Boot Making,
 Building,
 Clothing,
 Carriage-building,
 Food (baking, butchering, milling),
 Furniture,
 Leather-working,
 Mechanical Engineering,
 Printing,

and in 1925, three years after the passing of the Act, nineteen committees were in operation :—

Transvaal Engineering Apprenticeship Committee,
 Witwatersrand Building Apprenticeship Committee
 Pretoria Building Apprenticeship Committee,
 Government Apprenticeship Committee,
 Railways and Harbours Apprenticeship Committee,
 Cape Division Mechanical Engineering Apprenticeship
 Committee,
 Cape Division Building Apprenticeship Committee,
 National Printing Apprenticeship Committee,
 Cape Furniture Industry Apprenticeship Committee,
 Durban Engineering Apprenticeship Committee,
 Durban Building Apprenticeship Committee,
 Bloemfontein Engineering and Building Apprenticeship
 Committee,
 Port Elizabeth Engineering and Building Apprenticeship
 Committee,
 Port Elizabeth Building Apprenticeship Committee,
 East London Engineering Apprenticeship Committee,
 East London Building Apprenticeship Committee,
 Queenstown Building Apprenticeship Committee,
 Kimberley Building and Engineering Apprenticeship
 Committee,
 Pietermaritzburg Building Apprenticeship Committee.

166. It is understood that both employers and employees are giving the training of apprentices their whole-hearted support. Special attention is being devoted to the technical education of apprentices. It will be seen from Appendix VII that most of the committees have prescribed the number of hours of attendance of apprentices at technical classes. In conjunction with apprenticeship committees, the Union Education Department has in most cases settled the syllabuses for the courses of technical education which the apprentices under contract are

required to attend. In the larger centres provision is made for the instruction to be given at the local technical institute, while for apprentices in the smaller country towns the question of instituting correspondence courses is under consideration.

167. In Queensland, by an Act passed in 1924, two years after the South African Act, it is prescribed that no minor may be employed in any of the scheduled trades except under the conditions laid down by the Act. Every person desirous of becoming an apprentice must notify the Director of Labour who is responsible for keeping a register of all such persons, and every employer desirous of obtaining an apprentice must make application to the Director of Labour and must select as an apprentice only a person whose name is already registered. Every apprentice must be employed for a probationary period so as to determine his fitness or otherwise for apprenticeship. Whenever the Minister of Labour considers it desirable, he may prescribe public examinations which must be passed by every minor before he may become apprenticed. The Minister, however, may determine what certificate of education might be regarded as entitling the holder to exemption from such a preliminary examination and may dispense with the qualifying entrance examination, if the candidate is in possession of a satisfactory school-leaving certificate of the standard prescribed. Queensland.

168. An Apprenticeship Executive, consisting of representatives of employers and of unions together with representatives appointed by the Minister, is under this Act appointed to advise the Minister as to :—

- (1) The trades or industries which should be scheduled,
- (2) The grouping of trades,
- (3) The character of entrance examination which may be prescribed for apprentices, and
- (4) Any matters bearing on general principles of apprenticeship.

This Apprenticeship Executive collaborates with the special apprenticeship committees appointed by the Minister for each trade or group of trades. The latter committees consist for each trade of equal numbers of representatives appointed by the employers and by the unions of employees in the trade or group of trades to which the committee relates. The duties of these apprenticeship committees include the following :—

- (1) To receive from the Director of Labour the nominations of entrants for each trade or group of trades ;
- (2) To advise the Minister as to the apprenticeship of each nominee and his indentures ;
- (3) To make recommendations as to the matters to be taught to apprentices, as to the examinations which should be passed by apprentices during their period of training, and as to the granting of final certificates of competence ;
- (4) To advise as to the educational facilities that should be provided during the prescribed period of training ;
- (5) To make recommendations as to the supervision of the facilities provided by employers so that apprentices may become proficient in their trade.

169. At the end of the period of probation, if it is mutually agreed upon by the employer and the legal guardian of the minor, the minor may become an indentured apprentice. Special rules are laid down in the Act in regard to indentures, and compulsory attendance at technical schools is provided for. The mutual duties of employers to apprentices and of apprentices to employers are also dealt with.

170. In any case in which an employer has not in his employment the required number of apprentices steps are taken to ensure that the minimum prescribed by the Act is trained. If the Minister is of opinion that the number of apprentices being trained in any trade or industry is insufficient to meet the requirements of that particular trade or industry in the matter of skilled artisans, provision is made for increasing the number of apprentices. Cases are also dealt with under the Act in which employers are unable to provide work for the prescribed number of apprentices. The enforcement of the provisions of the Act is mainly vested in industrial inspectors who have power to enter any premises and make whatever inspection of the premises, plant, machinery, or work upon which any apprentice is employed as may appear necessary, and who also have power to interview any apprentice or employee and to see that all the provisions of the Act are carried out.

171. The trades scheduled in Queensland in the 1924

Bread, Baking and Pastry—

Cooking.

Boot Trade—

Clicking.

Stuff cutting.

Making.

Finishing.

Building—

Bricklaying.

Carpentry and Joinery.

Painting.

Sign writing.

Plumbing.

Stonemasons' work.

Plastering.

Coach and Motor Body Building—

Coach and Motor painting.

Coach and Motor smithing.

Coach and Motor body building.

Coach and Motor trimming.

Panel beating.

Wood-machinist in coach and motor body building.

Clayworking—

Pottery.

Modelling.

Clothing—

Order tailoring for males.

Order tailoring for ladies.

Ready-made clothing for males.

Women's order dressmaking.

Ready-made tailoring and ready-made dress-making.

Underclothing and white work of all descriptions except knitted goods.

Collars, shirts and pyjamas.

Head wear and millinery, including straw hats.

Dyeing, cleaning and repairing.

Confectionery—

Cooks—

(As covered by the Hotel, Club and Restaurants Award, the Boarding-house Employees Award, and the Railway Refreshment Rooms Award).

Coopering.

Dental Mechanics.

Electrical.

Engineering—

Fitting and turning.
 Blacksmithing.
 Moulding.
 Boiler-making.
 Pattern-making.
 Copper-smithing.
 Motor mechanics' work.

Furniture—

Cabinet-making.
 French polishing and staining.
 Wickerwork.
 Wood-turning.
 Wood-machining.
 Venetian blind-making.
 Bedding-making.
 Upholstering.
 Glass bevelling.

Leather—

Harness-making (including strapping).
 Riding saddle making.
 Buggy saddle making.
 Collar-making.
 Bag-making (including clicking.)
 Trunk and case making.
 Fancy leather working and sporting goods
 making.
 Machine belt making.

Musical Instrument Making—

Piano and reed organ tuning and repairing.
 Pipe organ building and tuning.
 Polishing.

Printing—

Composing.
 Letterpress machining.
 Bookbinding.
 Lithography.
 Process Engraving.

Sheet Metal Work.

Watchmakers, Jewellers, and Opticians.

172. The Commission is of opinion that the principles underlying the South African and Queensland Acts indicate the best method of dealing with the problem of industrial training and apprenticeship in the Saorstát. The Commission accordingly recommends the scheduling of trades, the registration of apprentices and the appointment of statutory apprentice committees for each trade or group of trades to advise on all matters relating to apprenticeship, industrial training and means of entry to industry. The functions of these committees must necessarily include advice on such matters as the proportion of juveniles to adults, the length of the period of apprenticeship or learnership, the prescribed form of indenture, the age of entry, the standard of education on entry, the opportunities in the workshop or factory for learning a trade, the arrangements for attendance at technical classes, the special type of technical education that would appear to be most suitable, having regard to the requirements of the trade, and on all other matters connected with the training of workers.

Conclusion
from
foregoing.

Recommendation 39.

173. The apprentice committees should be appointed by the State and should consist of equal numbers of representatives of employers and of workers chosen in consultation with the organisations of employers and of workers, and should have an independent Chairman. In addition each committee should have as members Officers of the Department of Education and of the Department of Industry and Commerce. By this means a definite liaison would be established between the Departments responsible respectively for the education of the worker and for the recruitment and development of industry, and the close association of these Departments with representative industrial bodies should be the means of ensuring that no industry suffers from a shortage of trained workers.

Recommendation 40.

174. A joint body constituted on the lines referred to is the only body on whom it is possible to place the burden of solving the problems connected with the education of workers for any special trade or industry. The Minister for Education would through this joint body have first-hand information on the views of the industry itself as to the plans proposed for technical training in that industry. The actual courses to be adopted would be a matter for the Minister for Education, but his decision would not be given until the joint body had made representations to him.

175. Particulars are, in accordance with the School

Attendance Act, 1926, furnished at the beginning of each quarter to the Department of Industry and Commerce in respect of every boy and girl who will attain the age of 14 years during that quarter. The Commission is of opinion that similar particulars should be furnished in respect of students attending continuation classes. In this way the Department of Industry and Commerce has at present records of all children about to leave primary schools and would have similar records in respect of students at continuation classes. Particulars of those eligible for and desirous of entry to the scheduled trades should be supplied to the apprentice committee concerned, so that the committee might advise as to each individual entrant. At present there is no means of ascertaining the needs of industry in the matter of recruiting new workers. The Apprentice Committees should be in a position to furnish statistics indicating the special requirements of any industry ; these statistics would in themselves be a most valuable contribution towards the solution of the problem.

176. The Labour Exchanges Act, 1909, provided for the establishment of Juvenile Advisory Committees, and, accordingly in 1911, such Committees were appointed in Dublin, Cork, Limerick and Waterford to advise the Labour Exchange Department as to suitable employment for juvenile applicants and to assist boys and girls in their choice of employment. These Committees are composed of representatives of religious, educational, industrial and social organisations and unite in their membership the various interests concerned in the welfare of juveniles. The Committees work in close touch with the local Employment Exchange, the officer in charge of Juvenile work in the Exchange acting as Secretary to the Committee. The Committees study local industrial and commercial conditions and should therefore be fully qualified to advise on prospects of employment for juveniles with a view to their welfare and advancement. Some members of the Committees act as After Care Visitors and exercise a certain amount of unobtrusive friendly supervision over juveniles during the early years of their employment. Impressed by the low standard of education of many of the boys and girls with whom they come in contact, the Committees succeeded in having courses of instruction established for unemployed juveniles. In Dublin, payment of Unemployment Insurance Benefit to unemployed boys and girls is conditional on their attendance at such a course. The Committees on several occasions made representations

to the Government on the necessity for providing facilities for continued education and on other matters affecting the industrial careers of juveniles. As the aim of these Juvenile Advisory Committees is to substitute a deliberate for a haphazard method of entry to employment and to place boys and girls in occupations for which they are mentally and physically suited, the closest co-operation should be established with the proposed Apprentice Committees.

CHAPTER VII.

TECHNICAL EDUCATION IN RELATION TO SPECIFIED TRADES AND OCCUPATIONS.

- (a) BUILDING AND ALLIED TRADES.
- (b) MECHANICAL ENGINEERING.
- (c) ELECTRICAL ENGINEERING.
- (d) MOTOR GARAGE WORK.
- (e) THE PRINTING TRADE.
- (f) HOTEL AND RESTAURANT WORK.
- (g) THE FISHING INDUSTRY.
- (h) THE MERCANTILE MARINE.
- (i) TRAINING FOR NURSES.

177. It will be well at this stage to review some of the evidence given in respect of certain trades and occupations and to make such recommendations as are required :

(a) BUILDING AND ALLIED TRADES.

178. In the Building and Allied Trades, employment is afforded to a variety of workers, skilled and unskilled. The skilled trades include carpenters, bricklayers, masons, slaters, plasterers, plumbers and painters and decorators. Attached to each skilled trade is a section of unskilled workers, and there is a large body of general unskilled labour. According to evidence furnished by the Dublin Master Builders' Association there has been a marked decline in the number of skilled workers engaged in the industry in the City and County of Dublin during the last quarter of a century. Figures supplied by the Department of Industry and Commerce shew that the number of skilled workers in the building industry in the Saorstát has fallen in the aggregate from 12,146 in 1923 to 10,193 in 1926. The variation in the number of skilled workers in the Saorstát in each section of the industry between the years 1923 and 1926 may be seen from the following figures :—

	Total Number of Skilled Workers in			
	1923.	1924.	1925.	1926.
Carpenters	5,530	4,597	4,359	4,305
Bricklayers	918	711	660	741
Masons	1,263	1,428	1,290	1,258
Slaters	254	218	164	182
Plasterers	849	865	821	821
Plumbers	776	678	575	647
Painters and Decorators	2,556	2,010	2,049	2,239
Total	12,146	10,507	9,918	10,193

This decline in the number of skilled workers is more marked in the case of apprentices, and it was admitted by the Dublin Master Builders' Association that employers

to-day were not taking their full complement of apprentices. The following table, supplied by the Department of Industry and Commerce, gives the actual number of apprentices and of skilled tradesmen in each section of the building and allied trades in Dublin and in the Saorstát for the year 1926 :—

Trades	DUBLIN.		SAORSTAT.	
	Estimated number of		Estimated number of	
	Skilled Men.	Apprentices.	Skilled Men.	Apprentices.
Carpenters ..	1,624	153	3,967	388
Bricklayers ..	441	95	643	98
Masons	185	25	1,221	37
Slaters	121	3	175	7
Plasterers ..	239	25	764	57
Plumbers ..	368	55	570	77
Painters and Decorators	1,028	222	1,942	297

Figures in the above returns relate to the building industry only and do not include workpeople following the occupations mentioned who are employed in connection with some other industry. For instance, a carpenter or painter employed by a firm of brewers would not be included. The proportion of apprentices to skilled men which is specified in certain agreements between employers and trade unions indicates the maximum number permitted and represents a proportion rarely reached in practice. In the Rules of Agreement between the Dublin Building Trades Employers' Association and the Irish National Painters' and Decorators' and Allied Trades' Union and the National Amalgamated Society of Operative House and Ship Painters and Decorators, it is provided that "the number of apprentices shall not exceed one to every three men employed, the men to be calculated on the average over the year." In accordance with the Agreement between the same Association of employers and the United Operative Plumbers and Domestic Engineers'

Association of Great Britain and Ireland " each employer may have one apprentice up to two men and one for every two men in addition upwards, and one extra when the oldest apprentice is on the last year of his time. The number of men shall be reckoned on a three years' average."

179. The evidence tendered to the Commission, in so far as technical education is concerned, centred mainly on the training of apprentices. There was general agreement that the primary education of many of the apprentices was defective, one large employer asserting that as high a proportion as fifty per cent. of the boys who entered the building trade suffered from defective primary education. The consequence of this, as was pointed out by another witness, was that when these boys came to man's estate and went to undertake work in the country, they were unable to furnish written reports and estimates or to give any account of money transactions.

180. At present in the Saorstát, there is no compulsory system for the training of apprentices in the building industry, or indeed in any of the trades. The preliminary course of training afforded by the trades preparatory schools (see paragraphs 59 to 63) in the few centres where they are established, produced, according to employers, a much more satisfactory type of apprentice than the boy who came from the primary school. Once having entered the industry, the training of the apprentices was mainly confined to the workshop. There was a general realisation of the need for further technical training, and for this purpose the attendance of apprentices at night classes in the technical schools was encouraged alike by employers and trades unions. Prizes were presented by some of the latter for good work done at the classes, while the former in some cases paid the fees of the students. The evidence before us shews that it was not easy to ensure regular attendance. On the part of the Trade Unions, it was asserted that, though the apprentices were threatened with penalties, it was not easy to enforce them and that there were employers who would not allow the apprentices half an hour of time off to enable them to attend the night classes. Employers maintain, however, that it was difficult to induce apprentices to avail themselves of these opportunities, and that there was no guarantee that apprentices, if allowed off, would attend the classes.

181. In Dublin, however, a definite attempt has been made to provide a systematic course of training for appren-

tices in the building trade through the medium of the Day Apprentice School (see paragraphs 66 to 70). The school is restricted to boys resident in the City of Dublin, with the result that the boys of many large firms outside the city boundaries cannot benefit under it. There is a general agreement between employers and the trade unions that the existing scheme does not afford a solution of the large problems involved. They are agreed also that the existing system of apprenticeship as a whole has failed. There is no public control of apprenticeship such as would guarantee effective technical training and employment after apprenticeship, and in addition there is no obligation on employers to take apprentices.

182. Labour bodies who gave evidence before the Commission stated that there was a definite need for the registration of all apprentices with a local trade advisory committee. Such a committee properly constituted should be able to arrange for the training of apprentices and the reasonable adjustment of their numbers to the needs of the various trades. It was generally agreed that compulsory attendance at technical schools during the period of apprenticeship was essential and that such attendance should be in the day-time. In the scheme submitted by the Amalgamated Society of Woodworkers, the time to be spent at the technical schools was as follows :—

During the first two years	12 hours a week
„ third and fourth years	8 „ „
„ fifth and sixth years	4 „ „

It was suggested that apprentices should not be sent out of a district on work which would entail their absence from classes ; also that the workshop training should be open to inspection by a local trade advisory committee. The Incorporated Brick and Stonelayers' Trade Union expressed the opinion that whole-time attendance at a technical school for the first two years of apprenticeship would be of advantage to the boys.

183. The employers, in common with the trade unions, emphasised the necessity for the compulsory registration and training of apprentices, but they were not in agreement with the solutions put forward by the trade unions. Some employers favoured whole-time attendance at a technical school for the first two years of apprenticeship and part-time attendance subsequently, the work being supervised by trade advisory committees. An interesting scheme was submitted by Sir Henry McLaughlin and

supported by the Dublin Master Builders' Association. This scheme contemplated the appointment of a Director of Employment to control entrance into all forms of occupations, skilled or unskilled. All vacancies were to be reported to him by employers and all workers were to be registered with him. His Department was to deal with the entire problem of apprenticeship, fixing the number of apprentices per craftsman in any trade and deciding in advance the number of apprentices required each year. After spending two years in compulsory attendance at a Trades Preparatory School, boys were to compete at the age of 16 for apprenticeship scholarships, the number of which had previously been decided by the Director for employment. At the termination of the two years' course in the apprentice school the boys were to pass examinations, as a result of which they would be allocated to employers and would enter the workshop as third year apprentices. On the conclusion of the period of apprenticeship, a final examination should be passed before the apprentice could be regarded as a fully qualified tradesman. It was suggested that this scheme should be confined, at first, to the four county boroughs and to specially selected industries therein, starting with the building industry. Each county borough was to have an advisory committee of employers, workers, parents' and others interested in education to co-operate with the Director of employment. The maintenance allowance paid to boys between the ages of 16 and 18 at the apprentice school should be defrayed by the State out of taxation.

184. After careful consideration we recommend that the attendance at technical schools of apprentices to the Building industry should be compulsory in the first two years of apprenticeship. We are of opinion that the minimum of 180 hours per session, already recommended, would not be sufficient for the needs of the Building industry, and in this we are supported by the evidence. The extent of obligatory attendance is, however, a matter to be decided after consultation with an apprentice committee of the trade (see Chapter VI). There would appear to be strong arguments in favour of even whole-time attendance at technical schools during the first two years. Other problems raised in the evidence, such as the recruitment of apprentices, their age and qualifications at entry, the form of indenture and the proportion of juveniles to adults in the industry, can best be solved through this apprentice committee.

Recommendation 41.

(b) MECHANICAL ENGINEERING.

185. It was stated in evidence that applications for apprenticeship to mechanical engineering in Dublin were generally in excess of the demand. Nevertheless it would appear that employers were not taking their quota of apprentices, for, according to the evidence of the Free State Organiser of the Amalgamated Engineering Union, whilst the Union allows 2 apprentices to 5 journeymen, the general average for the country would be only 1 apprentice to 6 journeymen. The complaint was made that many small employers took in boys at 14, whereas the Union did not wish them apprenticed until 16 as in England. Furthermore, trade unions do not favour the system of premium apprenticeship owing to the preferential treatment which such apprentices received.

Views of
Employers.

186. From the point of view of educational qualifications, apprentices in Dublin could be divided into three groups, those recruited from the primary school at 14, those who enter the trade after a two years' course in the Trades Preparatory Schools of Blackrock and Pembroke, and those who have had a two years' special training in the City of Dublin Day Apprentice School. It was generally agreed that the boys from the trades preparatory schools were very satisfactory. The representatives of the employers stated that no case of failure is recorded among these, and that more apprentices would have been taken from the schools but for the fact that the schools did not like parting with their pupils, except at certain periods of the year, and these periods did not always synchronise with the opportunities for employment that arose in the engineering shops. It was admitted that boys of a good type were obtained also from the Day Apprentice School.

187. No matter how he entered the trade or what was his educational standard, the apprentice had to rely for further training, outside the workshop, on night classes at technical schools. It was generally stated that boys leaving the primary school were not sufficiently educated to be admitted to the trade, and representatives of the employers advocated that apprentices should only be recruited from those who had spent two years in a trades preparatory school. They insisted that drawing, science and manual instruction should form an important part of the course, but were of opinion that the practical training in engineering would be imparted successfully in the work-

shop only. They recommended that a special Advisory Committee should be constituted to discover how many apprentices were required in the trade and to select the boys at the end of their preliminary training. They maintained that boys apprenticed at 16 should continue their technical education in voluntary night classes under the supervision of the Advisory Committee. Part-time day classes for apprentices would mean disarranging the whole system of work and, in the view of the employers, were not feasible in so far as Dublin was concerned.

188. On behalf of labour it was urged that boys should be trained in special trade schools between the ages of 14 and 16, and that, on being apprenticed, subsequent training, at least in the early years of apprenticeship, should be through part-time day instruction. It was also stated that attendance at night classes was objectionable as it tended to dull the intellect of the boy rather than develop it, and that boys could be allowed off for three hours on two afternoons of the week for the first two years.

Views of
Labour.

189. It is evident that the divergence of views as to the nature and extent of apprenticeship training can only be reconciled through the agency of an apprentice committee such as we have already suggested. We believe, however, that compulsory attendance at day classes in the first two years with voluntary attendance at night classes in the subsequent years will ultimately prove to be the most satisfactory system of technical education for the engineering trades. We hold strongly that education in a continuation school with a technical bias should be an essential condition of admission to the trades.

Recommendation 42.

(c) ELECTRICAL ENGINEERING.

190. It is difficult to obtain a clear view of the amount of employment of a technical character that will result from the Shannon Power Development Scheme and of the further development of hydraulic and steam electricity supply in the Saorstát. The country has no previous experience in this connection. There is not only difficulty in estimating the amount involved in actual constructional work on high and low tension systems, house connections and installations, all of which will relate to employment of a temporary character, but also of estimating what will be needed for general maintenance and repair work, central and

local, when the constructional work is completed. Further, it is difficult to gauge the effect of the scheme on industry generally and on the employment of skilled electricians in industrial undertakings. A comparison with the initiation of electricity supply in other countries shews, however, that the consumption will quickly increase. The present consumption in Ireland is below the world average.

191. The evidence presented to the Commission did not throw much light on the question, but it can be readily understood that witnesses, while prepared to give views based on existing conditions in any trade or industry, hesitate to express a definite opinion about a development that is not within their experience. Any opinion expressed was to the effect that employment connected with the constructional work would be of non-technical character mainly, would be temporary, and would not affect the general position with regard to the employment of skilled electricians. This opinion, however, we are not disposed to agree with because we believe in an increased further development.

192. The Shannon Power System and later power systems can be divided, from the point of view of labour involved, into the following sections :—

- (a) bulk distribution, high tension net-work and transformer stations.
- (b) town net-works,
- (c) house and factory connections.
- (d) house and factory installations.

193. Some of the high tension net-works in connection with the Shannon Power System are already in process of construction. The type of labour required in the main portion of this work can scarcely be regarded as "skilled," but a number of men, 100-200, will be required permanently for the maintenance of high tension networks. The technical knowledge they require is small and easily acquired and no general problem of technical education is involved. The duties of this permanent maintenance staff will be such as to require a knowledge of only a few simple operations. A sufficient number of Irishmen should be employed on high voltage, during the construction of the net-work, to ensure that sufficient staff for permanent maintenance will be available when the construction is complete. For the transformer stations a very limited number of fitters and assistant fitters will be needed. The estimate of

Messrs. Siemens Schuckert in their report on " the Electrification of the Irish Free State " is 12 for the full scheme.

194. For the erection of town net-works in towns that have yet to be wired, no problem arises either as to numbers available or technical training. The process is simple and rapid and can be carried out by men that are accustomed to work such as the erection of telephone poles and wires. All that is required is a nucleus of experienced foremen.

195. It is in the work of house connections and house installations that the real problem will arise. We understand that the number of houses to be wired may amount to 150,000. Skilled men will inevitably be required for this work. In bringing electricity from the town net-works through a lead-in tube to the house, fixing meter, fuse, etc., 300-400 electricians will be needed, if the work is to be accomplished in 18 months or two years. For house and factory wiring probably 800-900 will be needed—skilled and semi-skilled men. These figures are based on the assumption that the major portion of the house connections are made street by street in a systematic manner. We are not in a position to say how far these numbers can be supplied from electricians resident in the Saorstát, but we fear that they cannot be supplied to any extent, and if so the situation is serious.

196. After completion of the constructional work, there must inevitably be permanent employment for electricians in the maintenance of town networks and house installations, management of small show-rooms, sale of appliances and fittings, care of motors, etc., in the large industrial undertakings. Every town, no matter how small, will require an electrician or two. It is clear, therefore, that any training of electricians that is embarked on now should be of such a character as will fit the trainees not only for temporary employment on constructional work but to a large extent for subsequent permanent employment.

197. The requirements as regards staff—engineers of the highest qualifications—in connection with power production and bulk distribution on the Shannon Scheme are very limited. Tables 43 and 44 of Messrs. Siemens Schuckert's Report on the " Electrification of the Irish Free State " give estimates of the staff required for the two proposed schemes, as follows :—

<i>(a) Partial Development.</i>			
<i>Power Station.</i>	Chief Engineer	..	1
	Assistant Engineer	..	1
	Switchgear Engineers	..	4
<i>Net-work.</i>	Chief Engineers	..	4
	Line Inspectors	..	5
<i>Transformer Stations.</i>	Chief Engineers	..	2
	Switch Foremen	..	2
<i>Management.</i>	Commercial Manager	..	1
			—
		Total	.. 20

<i>(b) Full Development.</i>			
<i>Power Station.</i>	Chief Engineer	..	1
	Assistant Engineer	..	1
	Switchgear Engineers	..	4
<i>Net-work.</i>	Chief Engineers	..	4
	Line Inspectors	..	6
<i>Transformer Stations.</i>	Chief Engineers	..	3
	Switch Foremen	..	3
<i>Management.</i>	Commercial Manager	..	1
	Assistant Director	..	1
			—
		Total	.. 24

These are the staffs estimated for "major" work in the permanent maintenance of the power and transformer stations and of the 100 kV, 35 kV, and 10 kV, net-works. The figures have no relation to the staff of engineers required for constructional work either at the Shannon or throughout the country.

198. The problem of supplying trained engineers to fill the small number of posts of a responsible character on the scheme itself and to meet the possible demands of any contingent industrial development is not one that will present any difficulty. Suitable men will doubtless be obtainable on the open market; their training and experience must be wide and thorough, but it is believed that there are many engineers available to meet the demands that will arise.

Recommendation 43.

199. It would be well, however, in view of the future importance of electrical undertakings to train, through scholarships or otherwise, a limited number, say 5 electrical engineers annually at the University or College of Science and about 10 at the secondary technical schools

mentioned in Chapter VIII. It would also be of advantage to provide one or two post-graduate travelling scholarships to enable selected students to continue their studies in a country such as Sweden or Switzerland where hydro-electric power is highly developed.

(d) MOTOR GARAGE WORK.

200. The repairing of motor cars is an important and widespread industry in the Saorstát. Yet in few industries is there to be found so great a state of disorganisation from the point of view of the technical training of those engaged therein. At present apprentices in certain cases pay premiums and are taken into garages, irrespective of their standard of education, which is generally poor. It was stated in evidence that in many cases the employer takes little or no interest in the training of the boy, and that frequently the garage itself contains neither the requisite equipment nor mechanics qualified to teach the boy his trade. As a result of faulty training, it is very difficult to secure a good motor mechanic in the Saorstát, and on more than one occasion men have had to be specially brought from England.

201. We believe that boys prior to entering the motor trade should follow a two years' course in a continuation technical or similar school where they would receive instruction in mathematics, drawing, geometry, general science and manipulative work in wood and metal. They should not be accepted for the trade unless they show aptitude for it at the end of this course.

202. The Society of Irish Motor Traders, Ltd., in their evidence put forward a scheme for the organisation of the trade to secure the efficient training of the young people employed therein. The main features of the scheme are :—

- (1) that admission to apprenticeship be permissible only on attainment of a certain age—to be fixed ; a certain educational standard—to be agreed upon from time to time ; and such a degree of physical fitness as shall be deemed necessary ;
- (2) that apprenticeship papers should not be issued to any one without the seal of the Society and of the educational authorities ; and that these seals should not be affixed until the requisite standards of education, skill, etc., have been reached ;
- (3) that to give effect to these proposals an educational

committee of the trade should be appointed by the council of the Irish Motor Traders which would act in co-operation with the educational authorities in order to secure continuous supervision over matters of joint concern. It could deal with the whole problem of apprenticeship including the number of new apprentices necessary, the general supervision of classes and the qualifications required of garages before they would be considered as suitable for the training of apprentices ;

- (4) that the Society proposes to secure that any apprenticeship certificates issued under these conditions should be automatically approved of by the Society of Motor Manufacturers and Traders, Ltd., London, and by other outside bodies, so that any one properly qualified as an apprentice in this country will be accepted as a member of the Trade in any other country to which he should go.

Recommendation 44.

These proposals follow closely the lines of the scheme for Apprentice Committees which we have already advocated (Chapter VI.), and we recommend their adoption as the best means of remedying the present defective system of training in the trade.

203. Hitherto one of the greatest barriers in the way of providing suitable technical training for the motor trade was the dearth of qualified teachers. A special course of intensive training has now been organised, as a result of which it is hoped to have teachers available at an early date for conducting classes in most of the large and small towns.

(e) THE PRINTING TRADE.

204. The evidence tendered to the Commission in connection with the Printing Trade dealt exclusively with the provision of technical training during apprenticeship. The salient feature of the evidence was the large measure of agreement in the views expressed by the Dublin Master Printers' Association and the Dublin Typographical Provident Society on behalf of the employees.

205. According to the Master Printers, they afford employment in Dublin to 2,000 women and 1,500 men of whom 900 are engaged in the typographical section. On an average some 20 to 25 apprentices are taken annually

into this section. Up to recent years they were taken through the influence of customers or because they were the sons of employees. The trade, however, is free to recruit boys from other sources. In the last few years boys have also been accepted as apprentices from the Day Apprentice School.

206. Both parties, employers and employees, agreed that a more definite system of securing and training apprentices was required. They advocated that, for this purpose, there should be a special committee of the trade consisting of three members representing employers, three members from the Trade Unions and a Chairman nominated by the Department of Education. This Committee could deal with the whole problem of apprenticeship including the necessary technical training in so far as Dublin was concerned

207. They recommended that the entry into the printing industry should depend on the candidate's passing the entrance test of a day apprentice school, and that apprentices should be put on probation for six months and rejected at the end of that term if not found suitable. During the seven years of apprenticeship, there should be compulsory attendance at the apprentice school for the first five years on the following lines :—

- | | |
|-----------------------|---|
| 1st. and 2nd. years : | 3 days of eight hours each at school. |
| | 3 days at the works. |
| 3rd. year | : 6 hours day school ; 6 hours night classes and 42 hours at the works. |
| 4th. and 5th. years : | 6 hours at night classes in addition to full time at the works. |

The witnesses represented that a combination of school and workshop on these lines would remove their present objections to the Day Apprentice School :—

- (1) that the pupil gets a good general education but insufficient trade practice ;
- (2) that employers cannot afford to dispense with the services of apprentices entirely during the first two years of training.

We note, however, that these proposals have not received the support of the Proprietors of Dublin Newspaper Printing offices, who maintain that the printing works are

the proper places for training apprentices and that voluntary attendance at night classes in the technical institute should be sufficient.

208. In devising the course it would be necessary to bear in mind that printers require a good literary as well as technical education, and the witnesses advocated that in the first two years of training 14 out of 24 hours of school time should be devoted to courses of reading, with special application to the literature of the art of printing. Special training in Irish should be provided.

Recommendation 45

209. The production of a comprehensive scheme of this description by agreement between employers and employees emphasises the value of apprentice committees such as we have already recommended in Chapter VI. We are of opinion that an efficient system of training for the printing trade in Dublin would be provided by a scheme based on the proposals we have made therein and we recommend that they should be adopted.

210. Outside Dublin, typographical work gives employment to 870 men in the various urban centres in the Saorstát and, with the exception perhaps of Cork, the numbers in any one town are not sufficient to justify the establishment of separate schools for the training of apprentices. It is only by the adoption of the scheme of apprenticeship scholarships recommended in paragraph 135 that suitable training can be provided, and by selecting such centres as Athlone and Waterford, reasonable facilities would be available for the training of all such apprentices in the Saorstát.

(f) HOTEL AND RESTAURANT WORK.

211. The establishment of the Irish Tourist Association has focussed attention upon the economic importance of tourist traffic to the Saorstát. The potency of this source of revenue to the country is reflected in the fact that from the annual influx of tourists, France is estimated to receive £100,000,000; Italy £70,000,000; Spain £50,000,000; and the Isle of Man as much as £11,000,000. It is, therefore, of vital importance to take all the steps necessary to encourage tourist traffic in the Saorstát.

212. Good hotel service is essential to the successful development of tourist traffic. The hotels of the country must be regarded as the guest houses of the nation. There

is a widespread need for systematic training of chefs, cooks, waiters and waitresses, not only to render existing service more efficient, but also to open up a new avenue of employment, the higher ranks of which are filled to-day from other nationalities. It is estimated that some 7,000 persons in the Saorstát are engaged in hotel service. In Dublin alone the number employed exceeds 2,000 ; yet of 60 chefs in the metropolis in receipt of £1 a day with board and accommodation, it was stated that not 10 per cent were Irish, the majority coming from England, France, Austria and Switzerland.

213. Courses of training at present in existence in other countries fall into two main groups according as they afford whole-time or part-time instruction. One of the most complete forms of whole-time courses is given at the Westminster Technical Institute. This institute has a school for cooks with a three years' course of training and running in conjunction therewith, a school for waiters in which the period of training lasts only one year. Boys are admitted at the age of 14, a fee of £5 per year being charged for cooks and £3 for waiters. Amongst the trade scholarships awarded annually by the London County Council as the result of examination, a number are reserved for boys wishing to enter either of these schools. The scholarships cover free tuition and a maintenance grant. Substantial grants towards the maintenance of the school are made annually by the Incorporated Association of Hotels and Restaurants and by the Universal Cookery and Food Association.

Training of
Chefs and
Waiters in
London.

214. Courses are based on a working week of 37½ hours. For waiters, 24½ hours are devoted to such technical work as menus and study of food, pantry work and preparation of restaurant table service and cleaning of plates. The boys have to serve, in the restaurant attached to the school, the luncheons prepared in the cookery section. Meals are served to officers and staff of the institute, to students from other departments, and any members of the general public who care to lunch there. It is estimated that, in addition to the meals prepared for the boys themselves, some 60 to 90 luncheons are served daily. Besides this practical work, the boys spend five hours in the week at English and six hours at French in which they are instructed in all culinary terms and in the meaning of all items appearing in the menus, as well as in such general conversational phrases as the average waiter should possess. The remaining two

hours are devoted to physical culture. Students receive a certificate on the satisfactory completion of the course.

215. In the school of cookery, practical cookery takes up $22\frac{1}{2}$ hours weekly. Lectures in the theory of cooking occupy $6\frac{3}{4}$ hours, in English and arithmetic 3 hours, in French—on the same lines as for waiters—4 hours, whilst one hour is given to physical culture. In the third year the time set aside for theory of cookery is reduced to 5 hours, and English gets only one hour to permit of the addition of 4 hours for kitchen accounts. Certificates are issued at the end of each year to students who have satisfactorily completed the course.

216. The school has been 15 years in existence, and the results are very satisfactory. Two or three of its earlier students are now head chefs, while many are *chefs de partie* in leading West End hotels. No difficulty is experienced in placing in London hotels or restaurants boys who hold certificates for the satisfactory completion of their courses. At the same time the receipts from the restaurant, run in connection with the schools, are such as to cover the cost of the materials used in the kitchen.

Courses of
Training on
the
Continent.

217. Whole-time courses for the training of chefs exist in France and in most of the large towns in Switzerland. In addition to the special technical work of a chef, provision is made in these schools for training in hotel management, in cellar work, in office work and in book-keeping. In Switzerland intending waiters and chefs do not, as a rule, follow whole-time courses which are mainly taken by sons of proprietors of hotels who desire to get an intimate knowledge of kitchen work with the object of succeeding their fathers as managers.

French
Hotel
Certificate
and
Diploma.

218. In France, by a decree of April 20th, 1918, there has been instituted a practical Hotel Study Certificate and a Practical Hotel Teaching Diploma. To secure the certificate boys have to follow a three years' course at a special hotel school into which they are admitted after 12 years of age on producing certificates of primary education or passing an entrance test examination. Students have to pass a written and practical examination at the end of each year, the practical work being carried out at hotels designated by the examiners. The course is a very wide one and covers all sections of hotel work from the kitchen to the secretary's office. In theoretical subjects candidates are expected to know hotel book-keeping, to be familiar

with tourist routes and to be able to conduct correspondence in two languages other than French. The practical tests deal with the composition of menus, the criticism of the construction of hotels and of hotel sanitation.

219. The practical hotel teaching diploma is awarded to candidates who within three years of securing the certificate have spent at least one year in service in hotels outside France and have received satisfactory testimonials for their work.

220. According to one witness before the Commission the technical training of chefs in Switzerland was accomplished mainly in the hotel with part-time attendance at evening theoretical schools. At the age of 14, boys paid a fee to be apprenticed to a Swiss hotel proprietor as a cook's apprentice for two years during which they receive no pay. All the practical work was done in the hotel. In the afternoons or evenings apprentices attended technical schools in which they received purely theoretical instruction on such subjects as the composition and cost of menus. At the end of two years apprentices entered for the State examination. This was conducted by two independent chefs nominated by the Government and consisted of written, oral and practical work. At a hotel other than the one in which he was apprenticed, the candidate was required to prepare a given menu under supervision. Success in this examination entitled the candidate to a State certificate to the effect that he was qualified as an assistant. Without this certificate it was almost impossible to secure a post as *chef de partie*. No other examination was necessary but testimonials were secured from the various proprietors under whom the chefs worked. Chefs were not, however, regarded as fully qualified until they had acquired experience abroad.

Training in
Switzerland.

221. The general trend of the evidence furnished to the Commission favoured the establishment of part-time courses for chefs, waiters and waitresses already in employment, or full or part-time courses for those who were assured of employment on completion of courses. We recommend the establishment in Dublin and Cork of part-time courses of instruction devised after consultation with an apprentice committee of the trade. These courses could be organised on the lines of the course conducted at the Hammersmith day continuation school under the London County Council, where students attend for 15 hours a week. We could not, however, regard the part-time courses as affording a

Recommen-
dation 46.

complete solution of the problem and at some future date it will be necessary to establish in Dublin a whole-time school on the lines of the school run by the Westminster Technical Institute. To such a school a small restaurant should be attached. The school should be open to young people from all parts of the country and scholarships should be offered to attract suitable candidates. Efforts should be made to effect exchanges with other countries such as Switzerland so as to familiarise the students with other systems and other languages.

Courses for chefs, waiters and waitresses in Dublin.

222. Following on the evidence tendered to the Commission and realising the urgency of the problem, especially in view of the number of hotels at present being reconstructed in the Metropolis, steps were taken by the Dublin County Borough Technical Education Committee to inaugurate suitable courses for chefs, waiters and waitresses. A course for chefs was started in May in conjunction with the Day Apprentice School. Sixteen scholarships of £13 payable in weekly instalments over a year were offered to boys resident in the City of Dublin over 14 years of age who passed an entrance test examination and were selected by a special Advisory Committee of the Trade. The course of training is to extend over three years and in addition to technical subjects to include arithmetic and French in so far as required. At the end of the first year's training it is proposed that 16 boys should be taken as apprentices by employers, and attend part-time day classes in the second and third years for special training under an expert chef. Provision is to be made for courses for waiters and waitresses to start at the opening of session 1927-28, candidates to be taken at the ages of 14 to 17.

Recommendation 47.

223. There yet remains the problem of the many small hotels throughout the country in which the work of the hotel has to be done by the owner or manageress, assisted by waitresses and women cooks. Training for this purpose can best be secured by the establishment of a residential school for girls between the ages of 16 and 18 in centres such as Kerry, Mayo or Connemara, and Donegal, the main tourist centres. In addition to technical subjects such as table service, pantry work, cookery and composition of menus, instruction should be afforded in arithmetic and book-keeping. The course would be intensive and last six months, thus enabling two groups of students to be dealt with during each session.

224. That such schools would be successful is fully evident from the results of the experimental residential school in hotel catering and household management held in Castlebar under the auspices of the County Mayo Joint Technical Instruction Committee in the summer of 1926. Applications to attend the course were received from Dublin, Cork, Louth, and even Scotland. The course which lasted six weeks and for which a nominal charge of £3 was made was confined to 18 Mayo girls. Students were divided into groups to act as cooks, kitchenmaids, waitresses and housemaids and housekeepers, and the groups were changed weekly so as to give students experience in all branches. It was generally admitted that valuable work was done at this short course.

225. It was stated in evidence that in Mayo a suitable mansion could be purchased and equipped as a residential school at a reasonable figure. The witnesses stated that the proposed building would accommodate some 30 students and that 60 students could be trained annually by courses of six months' duration. Figures were supplied to shew that the school could be run on a sound financial basis. A residential hostel on these lines is in existence in France at which 30 girls between the ages of 18-25 receive intensive courses in hotel work for three months.

(g) THE FISHING INDUSTRY.

226. While technical training in so far as the fishing industry is concerned has not in the past been a feature of schemes of technical instruction, the industry has not been entirely neglected in this respect. The Congested Districts Board from its establishment in 1891 began to devote special attention to the industry. Scotch and Irish fishermen were employed to train the fishermen of Donegal, Mayo and Galway in the use of luggers. Expert workers were brought from Scotland to teach the art of herring curing to the boys and girls of Donegal. The building of large-decked fishing boats was encouraged by setting up boat building yards in Donegal and Galway. As soon as motor engines were introduced into the boats, suitable courses in marine motor-driving were given at Ringsend Technical School by the Department of Agriculture and Technical Instruction in conjunction with the Congested Districts Board. These courses were attended with success by boys from the western fishing ports and from centres like Arklow and Howth on the east coast. Subsequently a

special marine-motor school was set up by the Congested Districts Board in Galway. For some years instruction in the mending of nets was given by itinerant teachers, but the classes had to be discontinued owing to inadequate attendance. In recent years most of these facilities were not available. The marine-motor school in Galway still exists, but we understand that, from the point of view of the fishing industry, little or no use is being made of it.

227. These many and varied efforts represented spasmodic attempts to deal with difficulties as they arose. They could not be regarded in any way as courses of training for the industry as a whole. In view of the national importance of the fishing industry and, especially, of its importance as a means of livelihood in the Gaeltacht, it is essential that systematic courses of training should be provided. To deal with the problem successfully, it is necessary to realise the two-sided nature of the fishing industry as brought out in the Report of the Gaeltacht Commission. Technical training on systematic lines must be provided to meet the needs of the industry (a) when it is carried on as a whole-time occupation and (b) when it is carried on as a part-time occupation by fishermen with small farms on the seaboard or with other means of livelihood.

228. Witnesses were generally agreed that once fishermen had taken up the industry as a whole-time occupation, it was well nigh impossible to get them to attend schools and consequently little could be done for them in the way of definite courses of training. The problem must, therefore, be solved by training young boys who would later on take up the fishing industry as a whole-time occupation.

Recommendation 48.

229. We are of opinion that the best solution is provided not by residential fishery schools as suggested by certain witnesses but by non-residential continuation schools in selected areas, such as Arklow, where there is a well established connection with the industry. These schools, while following the lines already recommended for continuation schools in general, should have a definite bias towards the fishing industry and should provide instruction in such subjects as elementary navigation, care and repair of boat engines, and the mounting, mending and preservation of gear. In the syllabuses of instruction the commercial and economic aspects of the industry should have a recognised place.

230. The practical side of the industry will require to be dealt with by a special course of training on board ship, and we recommend that a suitable vessel be acquired for the purpose. The training should be based on the assumption that the industry will be carried on in large boats; to confine attention to the small boats at present in use would be to condemn the industry to its present position of inferiority. Admission to the course of practical training should be confined to boys who had completed the two years' course at the continuation school and had passed a qualifying examination as a result of which a number of scholarships could be awarded. Boys from the continuation schools around the coast would compete for admission and the vessel would frequent the different fishing grounds in the different seasons. This system has already proved successful in Belgium. On completion of the course of training on board ship, boys should pass examinations for certificates equivalent to those of Fishing Skipper or Second Hand under the Board of Trade and of Engineer for fishing vessels under the same authority.

231. In so far as the large number of part-time fishermen engaged in seasonal fishing around the coast are concerned, technical training can best be provided by itinerant instruction. One or two special lecturers appointed by the State could be sent to the more important fishing ports during the slack season, approximately from Christmas to March, to deal with such topics as navigation, the proper handling and repair of gear, and the handling of motor engines. Generally speaking, courses of 6 to 8 weeks would be adequate. *Recommendation 49.*

232. The provision of technical training for the fishing industry of the Saorstát is of national importance. The Report of the Gaeltacht Commission points out that 1,000 fishermen regard fishing as a whole-time occupation, whilst 12,000 fishermen are partly dependent on this industry for their livelihood. It was stated in evidence that with the industry in a normal position as many as 500 boys could be absorbed yearly. There is, therefore, no lack of material for the courses proposed.

(b) MERCANTILE MARINE.

233. Provision is made for theoretical instruction for apprentices and junior officers at the Irish Nautical

College and Training School, and the college is prepared to provide training for cadets should a sufficient number apply. No provision is made, however, for the training of boys as seamen.

Lancashire
and National
Sea Training
Home for
Boys.

234. Evidence was given by the general manager of the City of Cork Steam Packet Company, Limited, who expressed the view that the most suitable type of training for the Mercantile Marine in the Saorstát would be on the lines of that provided at the Lancashire and National Sea Training Home for Boys. This is a residential school for boys of 13½ to 15½ years of age, who have attained a standard of primary education equivalent to 6th standard. Whole-time instruction is given in the following subjects: mathematics, geography, English and history, elementary engineering, signalling and wireless, navigation and boat sailing, seamanship, physical training. Training lasts usually for a period of 18 months to 2 years, but the school keeps in touch with the boys for a few years after they enter the service. About 150 boys enter the school yearly, whilst about 130 are sent annually to sea. Generally one-fourth of the boys enter the Royal Navy, whilst three-fourths are absorbed by the Mercantile Marine. No difficulty is experienced in placing boys, the demand of the Liverpool Shipping Companies for them exceeding the supply.

235. The school receives from the Board of Education a grant of £10 per annum for every student who completes a year's training. The Admiralty pay £3 for every lad taken into the Navy. For boys sent from the Unions, the Board of Guardians pay a fee of £32 10s. per year. The school is also subsidised by the shipping companies. It is estimated that the average cost of running the school works out at £50 per boy per year.

236. It is evident that a school on these lines would prove of service in the Saorstát. "I believe such a Home established for the Saorstát," said the general manager of the City of Cork Steam Packet Company, Limited, in his evidence, "would be availed of by Irish Shipping Companies and other shipping companies using the Irish ports to the extent of 200 boys a year." We are of opinion that such a school should be established if, on further investigation, it were shewn that a substantial number of the boys so trained could be readily absorbed into the service. This would involve securing the co-operation of the

Recommendation 50.

shipping companies, and it might be anticipated that they would contribute to the support of the school as in England.

(i) TRAINING FOR NURSES.

237. Evidence was submitted to us with regard to the occupation of Nursing. We had some hesitation as to whether it came within our terms of reference, but decided to admit it as the occupation is one in which a considerable degree of skill is required and in which a large number of girls find employment.

238. It is stated that there are 3,449 trained nurses on the General Register of the Saorstát. It is not possible to say how many of these are actually working in the country, but the opinion has been expressed that the profession is considerably overcrowded. The number of girls entering for training each year in Dublin alone would be about 250.

239. Many of those who are accepted for training have not received an education beyond that of the primary school, and, according to the evidence submitted to us, the most pressing need of the profession is for the provision of a preliminary training between the primary school-leaving age of 14 and the age of 18 or 20 at which the probationers are admitted to the hospitals. The probationers are recruited from the country as a whole, and in any particular centre the number desirous of entering the profession would not be sufficient to justify the formation of a special class. Such young people must either attend the secondary schools, especially those in which domestic science is taught, or the whole-time continuation schools which we have recommended in Chapter IV. Further education of a general domestic character beyond the age of 16 is open to them at the one-year's courses in urban areas, recommended in paragraph 154 and also at the residential schools of Domestic Economy in rural areas (*vide* paragraph 122).

240. No difficulty arises with regard to the special instruction in anatomy, physiology, hygiene, etc., which according to the evidence is required by nurses during their hospital training. Such instruction can be assisted by grants from the Department of Education, and grants of this character have been paid for many years in respect of classes conducted in the Dublin Metropolitan Training School for Nurses.

CHAPTER VIII.

HIGHER TECHNICAL EDUCATION.

241. The preceding chapters of our Report have dealt with the lower forms of technical education. In this chapter we propose to consider the provision that should be made for Higher Technical Education, the importance of which has not in our opinion been sufficiently realised in the Saorstát.

242. Attention has been drawn in Chapter II (Survey of Existing Facilities for Technical Education) to the absence, in the Saorstát, of a general appreciation on the part of those engaged in trade and industry of the value of technical education, and to the failure to develop that systematic technical training which is recognised, in other countries, as an essential factor of industrial success. It will be readily agreed that this appreciation must come in the first place from those who have themselves received the highest forms of technical training. Moreover, on their efforts, will also depend to a large measure the successful industrial development of a country. Although others may contribute very materially to this development, the motive force in the economic advance of a country will be supplied by those who possess the highest scientific and technological qualifications.

243. In Switzerland, the universities and especially the Federal Institute of Technology (*Ecole Polytechnique Federale*) as well as the technical schools of the higher secondary type (*technicums*) were established long before the introduction of the modern forms of lower technical education, and the modern development of technical education in Switzerland is a consequence of the activities of graduates from these schools. Although Switzerland possesses no mineral resources of any kind, these activities have been responsible for introducing into the country many important industries, and the mechanical and electrical products of the Swiss factories, by reason of their higher quality, can compete successfully with those of foreign countries. The Federal Institute of Technology has twelve divisions in which courses are provided in architecture, civil engineering, mechanical and electrical engineering, rural engineering chemistry, forestry, agri-

culture and for teachers of mathematics, teachers of natural science for secondary schools, teachers of military science and for teachers of general or non-technical subjects. The minimum age limit for entrance to the Institute is 18 years. The average number of students is 1,500, and of these about 350 graduate each year. Apart from the number of matriculated students, many non-matriculated students are allowed to follow courses of study in single subjects, provided their educational standard is such as will enable them to follow the course with profit. This institute, which may be regarded as a technical University, costs the Swiss Government about £120,000 annually, in addition to a capital expenditure of nearly £1,000,000 provided from State funds since 1912 for the erection of buildings.

244. In Sweden, there are two institutes of university standard—the Royal Technical School in Stockholm and the Chalmers Institute of Technology in Gothenburg. The usual age of admission is 19 to 20 years, and the entrance qualification is the senior leaving certificate in the science course of the secondary schools. Courses are provided as indicated in paragraph 12 of the memorandum on the Swedish System of Education (Appendix IX). In 1925 approximately 1,100 students were in attendance at these institutions. As in the case of the Swiss Federal Institute of Technology, a limited number of non-matriculated students attend, but they are not included in these numbers. Many of the graduates emigrate to other countries, but as they form valuable trade connections with these countries their emigration is not regarded as a loss to the State.

245. In Switzerland and in Sweden, much importance is also attached to the work of the secondary technical and commercial schools. The minimum age of admission to these schools is 15–16 years and the qualification for entrance is a standard equivalent to that of the Intermediate certificate of the Secondary School. These schools have in Sweden a bias towards local industry—mechanical engineering, electrical engineering, textiles, building trades. Further information on the organisation of these schools is given in the memoranda on the Swedish and Swiss Systems of Education—Appendices IX. and X.

246. We wish to record our belief in the necessity for the continuance and wide development of the work that

Recommendation 51.

has hitherto been the function of the Royal College of Science in Ireland. Courses of university standard such as were formerly provided at that institute, as well as other necessary courses, will prepare students for positions of scientific and industrial importance and will produce leaders in technical education, more especially on the scientific side. Rural Engineering, Mechanical and Electrical Engineering and Applied Chemistry would form courses of major importance, but provision would also be made for the training of teachers of science and technology. Arrangements have already been made for the development of the Agricultural Faculty, but if technological courses such as were formerly provided in the Royal College of Science are not to be continued in future at the Universities, the re-establishment of a separate institute for the purpose will have to be seriously considered. It will be desirable to facilitate the attendance of non-matriculated students at ordinary technological courses and also to provide such special courses of university standard as may be of advantage to persons interested in the development of trade and industry.

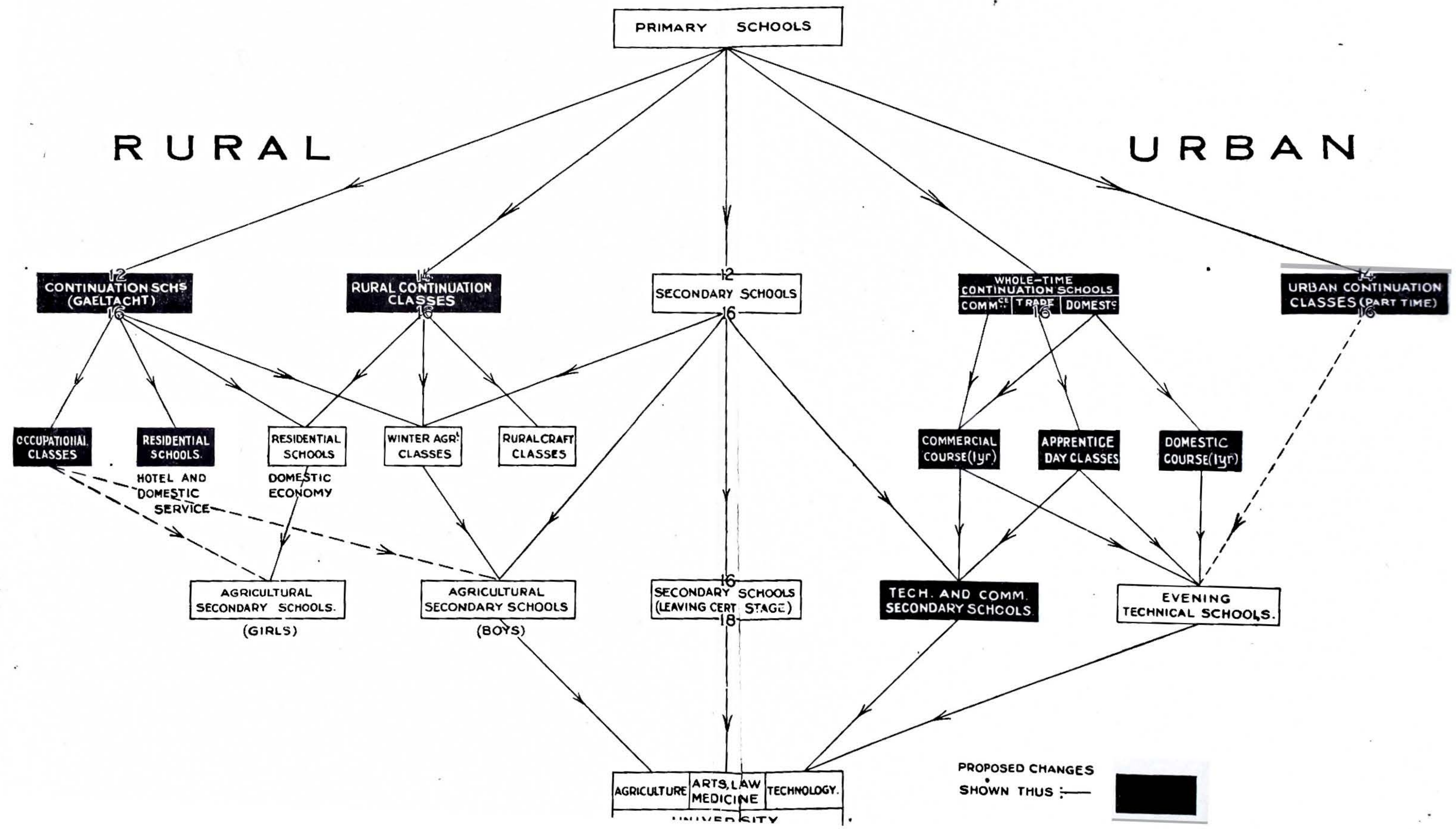
Recommendation 52.

247. We recommend the extension of the schemes of Technical Education in Dublin, Cork and Limerick, to include full-time day courses of secondary technical character. These courses should be of three years' duration and should be open to students who have followed a full-time continuation or secondary course up to the Intermediate certificate standard. The courses should have a strong technological character. At first the courses could be held in the existing technical schools, but if large numbers attend, separate school-buildings would be required. Such technical schools of higher secondary type would prepare the technical managers for mechanical and electrical undertakings and could be used for the purpose of training teachers.

Recommendation 53.

248. Furthermore, we recommend that the schemes of education in Cork and Rathmines be extended to include commercial courses of secondary character on the same plan as proposed for the technical courses.

EDUCATIONAL SYSTEM SHOWING PROPOSED CHANGES



CHAPTER IX.

**LOCALISATION OF SCHEMES, LOCAL CONTROL AND
RATING OBLIGATIONS.**

- (a) PROPOSED ADMINISTRATIVE GROUPS AND SCHEMES.
- (b) PROPOSED CONSTITUTION OF LOCAL COMMITTEES.
- (c) FUNCTIONS OF LOCAL EXECUTIVE OFFICER.
- (d) PROPOSED SYSTEM OF RATING.
- (e) REPEAL OF EXISTING LEGISLATION.

Proposed
Administra-
tive Groups.

Recommen-
dation 54.

249. We are of opinion that the schemes of continuation education and of technical education which we have suggested can be most efficiently worked by the division of the Saorstát into three administrative groups :—

- (a) the County Boroughs of Dublin (including the four adjoining urban districts), Cork, Limerick and Waterford ;
- (b) the larger Urban Districts (Galway, Dundalk, Drogheda, Wexford, Sligo, Tralee and possibly Kilkenny).
- (c) the rest of the Saorstát, as county areas, including within each such area, urban districts other than those enumerated above.

Nature of
Schemes in
County
Boroughs.

250. According to the Census of 1926, the total population of the four county boroughs, including in Dublin the population of the urban districts of Rathmines and Rathgar, Pembroke, Blackrock and Dun Laoghaire, was 563,960 out of a total of 2,972,802 for the Saorstát. This group containing approximately one-fifth of the total population includes a far larger proportion of the number of workers in the skilled trades. Consequently it is in these centres that provision is more urgently required for the training of apprentices and for the advanced technical training of skilled tradesmen and of those engaged in the more important departments of commerce. Schemes of continuation education must be based on the varied activities of each area and, in order to meet the need of the future skilled worker or business person, must have a strong practical bias.

Extension of
Educational
Boundaries.

Recommen-
dation 55.

251. The problem of technical education in the Metropolis calls for special consideration. We have already suggested the extension of the city boundaries for educational purposes by the inclusion of the four adjoining urban districts. Instruction inside this wider area—or indeed inside any area in the Saorstát—should be open to all students irrespective of their place of residence. Technical education is of national rather than of local importance and we deprecate the tendency of some committees to restrict instruction to students of their own locality. Were such a restriction general, it would inflict considerable hardship upon a large number of students in the Metropolis, as is evidenced by the fact that, for the session 1925/26, 31.8 per cent of the total number of students in attendance at the Municipal Technical Institute,

Rathmines, resided in the City of Dublin, whilst 25.7 per cent came from adjoining townships.

252. We are of opinion that the Metropolis would require four central technical institutes. For the time being the City of Dublin Technical Schools at Bolton Street could fill the place of a central technical institute for the trades. Trade and apprenticeship classes, at present scattered between Dublin and the adjoining townships, could with advantage be concentrated in this school. The needs of advanced commercial education can best be served by Rathmines Municipal Technical Institute. The Metropolitan School of Art is available for advanced technical training in the arts and crafts. For advanced training in domestic economy, use could be made of the City of Dublin Technical School at Parnell Square where facilities already exist. When in the near future the problem arises of providing in Dublin a school for the training of domestic economy teachers to replace Kilmacud, it would be desirable that the school should also be a higher technical institute for Domestic Science. There would thus be available in the Metropolis four central institutes which would be in a position to provide higher technical instruction not only for Dublin, but to some extent also for the country generally. At these institutes would be trained many of the teachers required for technical schools and classes (see Chapter XII).

Central
Technical
Schools
in the
Metropolis.

Recommendation 56.

253. In addition to these four higher technical institutes junior technical schools will be necessary. Besides functioning as continuation schools in the locality in which they are situated, the schools should provide technical education of a junior character so as to enable their students to take advantage of the more advanced courses in the central technical institutes. Many of the existing technical schools in Dublin and the adjoining townships are well suited for these purposes.

Junior
Technical
Schools
in the
Metropolis.

254. In the County Boroughs of Cork, Limerick and Waterford the schemes in operation should be similar to those proposed for the Metropolis but of necessity on a more restricted scale. As regards Cork, advanced technical training can continue to be provided by the existing schools of Commerce and of Art and by the Crawford Municipal Technical Institute in which instruction is given in Domestic Science as well as in the trades. It will be necessary, however, to provide more suitable premises for

County
Boroughs
of Cork,
Limerick,
and
Waterford.

Recommendation 57.

the School of Commerce and to increase the accommodation of the Technical Institute, especially in view of the necessity of re-organising the trades classes and providing full-time day courses of higher secondary character. The Technical Institutes in Limerick and Waterford should be able to meet the demand for advanced technical training that will result from schemes of continuation education.

Schemes for Separate Urban Centres.

255. It will be noted that the urban districts of Galway, Dundalk, Drogheda, Wexford, Sligo, Tralee and possibly Kilkenny, which constitute the second administrative group, are the most important centres of the population after the county boroughs. With a population exceeding 10,000, each of these districts should be able to form separate trades classes. It is realised, however, that the programme cannot be as extensive as in the county boroughs, and it is recommended that technical schools in these urban centres should concentrate on one or two trades in respect of which a strong nucleus of employment already exists in the locality and should provide such junior technical training as is required. With that end in view the full-time apprentice scholarships dealt with in paragraph 135 should be made tenable for specified trades at certain of these centres. Continuation education, as in the case of the county boroughs, should have a strong practical bias, dependent for its nature on the particular trade or trades on which the local school is concentrating.

Recommendation 58.

Schemes for County Areas.

256. For the bulk of the population of the Saorstát, exceeding 2,250,000 residing in other areas, the most effective manner of providing continuation and technical education will be through the medium of County units. The smaller urban centres which we propose to include in these units should in reality be regarded as "service centres" for the county as a whole. They have neither adequate financial resources nor a sufficient quota of students to exist independently. Moreover, it is of vital importance that continuation education in these areas should have a strong rural bias. Furthermore, education beyond the age of 16 should appertain more to rural than to urban conditions; the tendency of the smaller urban centres has hitherto been to adopt, on a modified scale, schemes of technical instruction in operation in the larger industrial towns. By merging in the county areas for purposes of administration these small urban centres we believe that there will result schemes of continuation and technical education suited to the needs of the agricultural

Recommendation 59.

community as a whole. The staffs now employed in the small urban centres and, more especially the teachers of practical subjects, could then be utilised in connection with classes throughout the county and, more particularly, during the portions of the year when classes are not conducted in small urban centres. This free interchange of staff as between urban and rural areas will facilitate the intensification of itinerant instruction in rural areas which we have already advocated in paragraphs 120 and 121.

257. We have now to consider the question of the control of schemes of continuation and technical education in respect of each of these three administrative groups. The general trend of the evidence tendered to the Commission favoured the retention of local control of schemes of technical education. It was admitted, however, that, in the majority of cases, committees were unwieldy, and despite large membership it was often difficult to obtain a quorum. Reference to Appendix V. shows the poor average attendance at meetings of local technical instruction committees during the academic year 1925/26. It has been pointed out to us also that in many cases persons conversant with the industrial and educational needs of the locality are not appointed on technical instruction committees. Moreover, it has been found that, where there is a combined county committee dealing with technical and agricultural schemes, the members of the committee are more naturally concerned with the economic side of the agricultural scheme, being keenly alive to the immediate material benefits accruing from the expenditure of agricultural funds. Consequently little attention is given to technical instruction.

Defects in Existing System of Local Control.

258. It is our opinion that management by local statutory committees remains the best system of control of technical education. We are in agreement with the evidence submitted to us in favour of placing control of continuation education also in the hands of the same authorities as it is desirable that post-primary training, to which a certain flavour of occupational guidance is given, should be associated as closely as possible with technical or occupational education. Under these circumstances, committees dealing with continuation and technical education will be required and this will necessitate the establishment of separate committees for counties where, at present, a combined committee of technical instruction and agriculture functions.

Proposed Constitution of Technical Instruction Committees.

Recommendation 60.

We recommend that technical instruction committees should consist of twelve members. Of these ten should be selected by the rating authority ; of whom two should be representatives of local Employers, and two representatives of Organised Labour. The Department of Education should nominate two members. Committees of this description would be suitable for schemes in county boroughs and separate urban centres. For county areas we propose to retain county joint committees (see paragraph 32 (3)) but to increase the total membership of twelve, by one member nominated by the council of each urban district embodied in the county scheme.

Tenure of Office.

Recommendation 61.

259. Continuity of policy is an essential requirement for the success of the schemes of continuation and technical education, and this can best be secured by ensuring to members of committees a reasonable term of office. We, therefore, recommend that the tenure of office in the case of technical instruction committees be the same as that of the local rating authority. We are of opinion that monthly meetings will be necessary for the effective discharge of their important educational duties, and we recommend that the provisions of Section 63 of the Local Government Act, 1925, should be modified so as to include payment of travelling expenses to members of all county committees of technical instruction. A return of the attendance of the members should be made annually to the appointing authority by the Executive Officer of the Committee. Members whose attendance in any academic year does not reach one-third of the total should be required to vacate automatically their positions, unless the appointing authority is satisfied that there are sufficient reasons for their continued absence.

Local Control of Minor Expenditure.

260. To committees thus remodelled, wider powers of control should be given, as it is unnecessarily vexatious that they should have to seek the previous approval of the Department for the purchase of minor equipment, or for such incidental expenditure as could not be reasonably foreseen. It should not be difficult for the Department from its experience to define the nature and extent of such ordinary expenditure in respect of which the committees should have discretionary powers.

Need for Executive Officer.

261. The efficiency of the work of technical instruction committees will be largely dependent upon the manner in which it is directed by the Executive Officer. We are in

agreement with the evidence submitted to us in support of the policy of the Department in urging the appointment of Principals who were also competent to carry on the secretarial work of the committee. In the schemes of continuation and technical education now proposed, it is most essential that the Principal should be in close and constant touch with the administration. We therefore recommend that in these new schemes there should be an Executive Officer who should fulfil the dual function of Principal of the scheme and Secretary of the technical instruction committee. **Recommendation 62.**

262. The Executive Officer should be required to give his whole time to the duties of his post and in pursuance thereof :— **Duties of Executive Officer.**

- (a) to supervise the work of the scheme and to take such part in the teaching as may be required ;
- (b) to consult with and advise students in regard to individual courses of study ;
- (c) to be responsible for the organisation, discipline, equipment, courses of instruction and the educational efficiency of the scheme of continuation and technical education ;
- (d) to make himself thoroughly familiar with the requirements of the area in relation to the work of the scheme, and to adapt the programmes accordingly ;
- (e) to ensure that the time of the subordinate staff in the employment of the technical instruction committee is fully and usefully employed, and that they duly discharge the duties for which they are appointed ;
- (f) to carry out the duties of Secretary and Accountant to the committee ;
- (g) to comply with the scheme of continuation and technical education approved for the time being by the Department of Education and also the regulations from time to time prescribed by the Department ;
- (h) to furnish the Committee and the Department at the end of each academic year with a report upon the operations of the scheme ;
- (i) to furnish to each member of the committee and to any new members, on their appointment, a memorandum to be drawn up by the Department explaining in detail the functions of committees.

the powers and obligations of the members, and such other material as will facilitate the operation of the scheme ;

- (j) to furnish such returns and carry out such administrative details in connection with the scheme of continuation and technical education, as may from time to time be required by the Department.

Defects in Existing System of Rating.

263. We propose to discuss here the nature and extent of the rating obligations of the local authorities under the proposed scheme of continuation and technical education. Evidence submitted to us by technical instruction committees has brought to light serious defects in the system of rating now in force. These may be summarised briefly as :—

- (a) In a rate-aid which is voluntary, there is no guarantee of continuity.
- (b) Where the maximum rate is levied, the local authority can place no further funds at the disposal of its technical instruction committee.
- (c) Where a composite rate is struck for technical instruction and agriculture, the portion usually allotted to technical instruction is inadequate.

The annual uncertainty as to whether the rate will be renewed in whole or in part has a detrimental effect on the working of the scheme, and it is undesirable that officers engaged under the schemes should be constrained to solicit local support for the continuance of the rate. Even in the many instances where maximum rates are being struck, these are inadequate to the immediate needs of the scheme, apart altogether from the no less important question of providing for future developments. Several technical instruction committees have complained that charges in respect of loans for buildings involve a serious depletion of the funds available for the working of local schemes. Yet once maximum rates have been levied, local rating authorities willing to increase their contribution are unable to do so, no matter how urgent the need may be. Maximum rates, in our opinion, are undesirable as they seek to place an arbitrary limit to educational progress. With regard to the third defect, it can be seen from Appendix I (columns 2 to 5) that where in the past a joint rate was struck by a county authority in respect of technical instruction and agriculture, the bulk of the money was devoted to schemes of agriculture, technical instruction receiving even less than one-fifth of a 1d. rate in some cases. This represents

an annual contribution of 3d. to 4d. in the case of a farmer whose holding is valued at from £15 to £20. Witnesses from some of these counties complained that such inadequate allocation of local aid did not permit the committees to put in operation schemes of technical instruction suited to the needs of the localities.

264. We have, therefore, come to the conclusion that a separate rate must be levied for continuation and technical education and that no permanently effective schemes can be devised which are not based on prescribed minimum rates.

Obligatory
Rate for
Continuation
and
Technical
Education.

265. Figures indicating the proceeds of existing rates are contained in Appendix I of our Report, and a reference to that Appendix will show that a 1d. rate yielded in the year 1925-26 in the following areas :—

Proposed
Minimum
Rates.

<i>Co. Boroughs—</i>			£
	Dublin	..	.. 4,260
	Cork ..	..	.. 756
	Limerick	..	.. 314
	Waterford	..	.. 180
<i>Urban Districts—</i> (with population over 10,000)			
	Galway [†] 114
	Dundalk	..	.. 125
	Drogheda	..	.. 112
	Wexford	..	.. 80
	Sligo ..	..	.. 85
	Tralee ..	..	.. 71
	Kilkenny	..	.. 80
<i>Urban Districts—</i> (adjoining Dublin Co. Borough)			
	Rathmines and Rathgar	..	813
	Pembroke	..	.. 589
	Dun Laoghaire	..	.. 324
	Blackrock	..	.. 200
<i>Co. Councils—</i>			
	Cork (largest yield)	..	4,238
	Leitrim (lowest yield)	..	582

Consideration of the foregoing figures leads inevitably to the conclusion that, if schemes of continuation and technical education adequate to fulfil the purposes of our suggested reforms are to be promoted, there must be a considerable increase in the contributions heretofore provided from rates. Whilst it is impossible for us at this

stage to state definitely what rate will be required in any particular area, it seems to us that—

- (a) in the County Boroughs of Dublin (including in that area the adjoining townships of Rathmines and Rathgar, Pembroke, Dun Laoghaire and Blackrock), Cork, Limerick and Waterford, a minimum rate of 3d. in the £1 should be levied;
- (b) in the following centres with a population of over 10,000, viz., Galway, Dundalk, Drogheda, Wexford, Sligo, Tralee, and possibly Kilkenny, a minimum rate of 3d. in the £1 should also be levied;
- (c) that in all other areas a minimum rate of 2d. in the £1 should be levied.

Recommendation 63.

We recommend that, on being notified that the Department of Education has approved of the Scheme of continuation and technical education formulated by the Technical Instruction Committee for the district, rates not less than those we have recommended should be levied by the rating authorities concerned.

Increased Rating Powers.

266. If a technical instruction committee in any locality seeks to develop its existing scheme of continuation and technical education, its proposals should also receive the approval of the Department. Application can then be made to the local rating authority for an increased contribution, but it should remain within the power of the local rating authority to refuse or modify such extra demand.

Loans for Building and Equipment.

267. The scheme of continuation and technical education, which we have recommended, is on a wider basis than schemes hitherto in operation and will necessitate more suitable and more adequate accommodation than is now available in most areas. In the past, loans for the erection or adaptation of buildings could be secured from the Commissioners of Public Works, but we understand that such facilities no longer exist. Even if they were still available, the re-payment charges would constitute, as has already been pointed out, an unreasonable burden on the annual funds at the disposal of local committees; whilst the maximum loan obtainable on the security of the rate would fall considerably short of the amount required for the erection of a suitable building.

We are in agreement with the proposal frequently advanced in evidence that the erection of buildings and the equipment of workshops and laboratories should be treated

as exceptional expenditure and should not be included as a charge on the ordinary revenue of the scheme. We recommend that there should be a resumption of such facilities to local authorities to raise loans for these purposes on favourable terms. *Recommendation 64.*

268. The proposals we have made with reference to the constitution of technical instruction committees and the rating powers of local authorities require the alteration of legislation now in force. We recommend, therefore, the repeal of all sections of the Acts enumerated below in as far as they deal with these matters :— *Repeal of Existing Legislation. Recommendation 65.*

Public Libraries Act, 1877.

Technical Instruction Act, 1889.

Agriculture and Technical Instruction (Ireland) Act, 1899.

We recommend also the repeal of the definition of Technical Instruction as contained in the Acts of 1889 and 1899, and the substitution therefor of a more general definition which will permit of instruction in the practice as well as in the principles of any trade.

CHAPTER X.

CENTRAL CONTROL AND FINANCE.

Control of
Finance.

269. In view of the increased expenditure which the proposed schemes of continuation and technical education necessitate, it is important that an efficient system of central control be maintained. It has already been recommended (see paragraph 265) that the obligatory minimum rate be struck, only after the Department's general approval of the proposed scheme had been lodged with the rating authority. The detailed scheme for any academic year* should be formulated by the Executive Officer in consultation with his committee and be submitted for the requisite approval of the Department not later than the 1st. June of the previous academic year.

Recommendation 66.

We are of opinion that the decision of the Minister for Education on all questions connected with schemes should be final. We have already advocated (see paragraph 262) that the Department should embody in detail in a memorandum the functions of local committees, the powers and obligations of members, the collection of fees, the sources of revenue, central and local, and such other material as will facilitate the operation of schemes. This memorandum should be supplied to the Executive Officer on appointment with an instruction to furnish a copy of it to each member of the Committee. In this manner the administrative control of schemes and of expenditure should be considerably simplified.

Power to
hold Inquiry.

Recommendation 67.

270. We recommend that the Minister for Education should be empowered at any time he thinks fit to institute an inquiry into the performance of duties by any technical instruction committee or its officers, and to take such action as he deems desirable as a result of the inquiry.

Central
Contributions.

271. Contributions made by the State in respect of technical instruction, as administered by local committees, fall into four main groups :—(a) the normal (or endowment) grant, (b) attendance grants, (c) cost of living bonus, and (d) equipment grant (see paragraph 28).

* The academic year begins on 1st August and terminates on 31st July.

272. The Agriculture and Technical Instruction (Ireland) Act, 1899, set aside a sum of £55,000 as an Endowment Fund to be applied all over Ireland for the purposes of technical instruction. Originally this amount was divided into three portions :—

- (1) £4,000 reserved for central purposes,
- (2) £25,000 allocated between the County Boroughs in proportion to their respective populations, and
- (3) £26,000 allocated to urban districts on the joint bases of rateable capacity and population.

In accordance with the provisions of the Act these divisions were made for periods of three years subject to revision on the expiration of each period. Subsequently the Endowment Fund was increased to £64,000 through the receipt of £9,000 from the Agricultural Board for instruction in Manual Work and Domestic Economy in rural areas. The sum of £4,000 was never sufficient to meet the expenditure of the Department on central purposes such as the maintenance of the Irish Training School of Domestic Economy, the Killarney School of Housewifery and industrial and other scholarships, but up to 1915 the Department had been able to meet the excess expenditure out of unexpended balances from the earlier years. The fall in the value of securities consequent upon the war eliminated these balances of the Endowment Fund both on the Technical and on the Agricultural sides. Accordingly the Department was obliged, in that year, to increase the amount reserved for central purposes from £4,000 to £7,000 and in consequence to reduce the amount allocated to local committees proportionately. At the same time the Agricultural Board found it necessary to reduce its grant from £9,000 to £7,000, and thus the amount available for technical instruction under local authorities was reduced from £60,000 to £55,000 per annum at a time when the running expenses of schemes were beginning to be increased. Under pressure from the Department, the British Treasury agreed in 1919 to make a special supplementary grant of £5,000 to compensate for the above reduction in the Endowment Fund in order to save the local schemes from financial breakdown. This grant was renewed annually up to the time of the establishment of the Saorstát. Subsequent to the passing of the Government of Ireland Act, 1920, the portion of the fixed Endowment Fund of £62,000 pertaining to the Saorstát was £39,356, and the portion of the special supplementary grant of £5,000 was £3,444. Of this total of £42,800,

£7,176 continued to be utilised for central purposes, the remainder being distributed on the lines already described.

273. From 1911, there was a special annual deduction from the portion of the Endowment Fund allocated to areas other than the County Boroughs. In that year the system of attendance grants was extended to include payment in respect of single subjects, unrelated to courses of study (see paragraph 26), and by this means increased funds were available for local schemes of technical instruction. At this date the Department, which was also seeking additional funds for central purposes, was unable to secure them from the British Treasury. Accordingly, with the consent of the Board of Technical Instruction, the Department decided to deduct from the Endowment appropriation to each scheme, outside county boroughs, an amount equivalent to one-half of the additional grants earned under this new regulation. This deduction continued to be made up to 1919 when it was stabilised at an amount representing the average of the three previous years. The total deduction in this connection varied from £3,500 to £4,500 per annum. Including the assigned portion of the special supplementary grant already referred to, the amount being distributed at present amongst the various schemes of technical instruction is £35,624. This corresponds to the former Endowment Fund less the Saorstát proportion (£2,022) of the above deduction.

274. By an Order of the Executive Council made on the 5th March, 1925, under the Ministers and Secretaries Act, 1924, the Endowment Fund for technical instruction was wound up and it was provided that the expenses of technical instruction should as from the 2nd June, 1924, be paid out of monies provided by the Oireachtas.

Defects in
the existing
Normal
Grant.

275. It has been represented to us in evidence that the amount received by technical instruction committees in respect of endowment fixed as at present is inequitable in existing circumstances. Complaints have been made that the distribution of the amount, such as it is, is inequitable. The Cork County Borough Technical Instruction Committee pointed out that, on the population basis, its endowment grant was approximately one-fourth of that given to the County Borough of Dublin, whereas the number of students attending technical schools in Cork was one-half the number attending at Dublin. It was

further pointed out that an extension of the county borough of Dublin would, on the present basis of distribution, involve a considerable depletion of the Endowment Grants of the other county boroughs.

276. In view of the changes in population and in rateable capacity since 1903, when the original allocation was devised, it is obvious that a division on the basis described is no longer appropriate. Furthermore, the systematic development of continuation education, and the extension of technical and trade instruction which we have recommended, represent a notable advance upon any system which could possibly have been contemplated under the Agriculture and Technical Instruction (Ireland) Act, 1899, and an increase in the amount of endowment seems to us a necessary and inevitable consequence. Whilst, therefore, we recommend an increase in the amount to be voted by way of "Normal Grant"—which, in conjunction with the substantial increase in contributions which we have recommended should be required from the Local Authorities, will form the assured financial basis which Local Committees must have to found their schemes of continuation and technical education—we feel that it would be impossible at the present stage, in view of the novel and complex nature of the reforms proposed, to attempt to fix the amount by which the State should extend its contribution under the head of Normal Grant. We confine ourselves, therefore, to the suggestion that a Committee should be appointed to examine the allocation of the present grant in relation to altered circumstances, and to make suitable recommendations for equitable modification or increase in accordance with the ascertained needs of each scheme.

Recommendation 68.

277. At present, attendance grants are payable under eight different categories. These are set out in Appendix III, but we propose to refer to them briefly :—

Attendance Grants.

(1) *Introductory Course* (see paragraph 50).

A grant of 2d. per attendance hour of each student is payable in respect of each subject of the course.

(2) *Specialised Courses of Study.*

Grants vary from 2d. per attendance hour in the first year for commercial subjects to 21d. in the fourth and subsequent years for science (pure and applied). Evening classes in established technical schools in the county boroughs and the urban

centres are paid mainly under this category. The grants paid to Trinity College, Royal College of Surgeons, and the Dublin Dental Hospital (see paragraph 84) also come under this head.

(3) *Single Subjects.*

Grants vary from 2d. per attendance hour for literary or commercial subjects to 4d. for science (pure and applied). All itinerant work earns grants under this category, into which also come the majority of the Day Schools of Commerce, all the Day Schools of Domestic Economy under private management, the Metropolitan Training School for Nurses, Alexandra College School of Housecraft and Secretarial Training. For the purposes of grants under this category, a variety of related subjects is grouped under the titles, Commerce and Domestic Science, and treated as a single subject.

(4) *Classes for Teachers..*

Grants vary from 4d. per attendance hour for commercial subjects to 12d. per hour for science (pure and applied). These classes are mainly availed of in respect of languages, the rate for which is 9d. per hour. Grants paid on summer courses and to Colleges of Irish fall under this category.

(5) *Day Schools for Apprentices and others engaged in business.*

Day Technical or Commercial Schools or Classes which are conducted by properly constituted managers either in conjunction with works, business houses or technical schools, with a view to improving the conditions of local industries and commerce, and to the further training of sub-managers, foremen, tradesmen or apprentices are eligible for grants under this category. The amount payable is not to exceed three-fourths of the certified annual expenditure on such schools or classes. At present this block grant is earned by the Day Apprentice School under the City of Dublin Technical Instruction Committee, and by the Dun Emer Guild and the Irish Nautical College and Training School which are under other management. Courses conducted in connection with the Department's Trade Scholar-

ships in technical schools fall also into this category.

(6) *Schools of Art.*

Grants are paid to the Schools of Art in Cork, Limerick and Waterford on the basis of a block grant not exceeding three-fourths of the certified annual expenditure. Grants in respect of Art classes in other technical schools are generally paid under categories (2) or (3).

(7) *Training Colleges.*

Grants vary from 2d. per attendance hour in the first year for mathematics to 4½d. in the second year for experimental science. The four training colleges enumerated in paragraph 85 come under this category.

(8) *Day Trades Preparatory Schools.*

Special regulations had to be devised to meet the case of the Day Trades Preparatory Schools. Ten of these exist in the Saorstát, located in Pembroke and Blackrock (Co. Dublin), Dundalk (Co. Louth), Kilkenny, Waterford, Clonmel (Co. Tipperary), Cork, Cobh (Co. Cork), Tralee, (Co. Kerry), Sligo. With the exception of the school at Cork, which is under the control of the Christian Brothers, these trades preparatory schools are under the management of technical instruction committees. Grants are paid to these schools on a dual basis, (a) attendance grants on experimental science, drawing and manual instruction (wood and metal), varying from 5/- per student per year for drawing in the first year to 15/- per student per year for experimental science in the third year, and (b) a maintenance grant not exceeding three-fourths of the certified annual expenditure after the above attendance grants and a sum regarded as equivalent to students' fees have been deducted.

278. In all the eight categories, grants may be increased by one-tenth for exceptional merit, or; upon grounds of inefficiency, can be decreased by one or more tenths. Furthermore, grants payable on the introductory and specialised courses are supplemented by an increment grant for continued attendance. This grant is payable on the total attendance hours at all subjects in the course and varies from 1d. per hour per student for each hour from

21 to 40 hours to 5d. per hour for each hour from 101 to 120 hours. The increment grant constitutes a large part of the amount received in respect of attendance grants in technical schools situated in the County Boroughs and large urban centres. Use has been made repeatedly of the power to increase or decrease grants for exceptional merit or persistent inefficiency.

Defects of
the system.

279. Technical Instruction Committees, who furnished evidence to the Commission, were unanimously of the opinion that the existing system of attendance grants is unsatisfactory. They complained that it was unnecessarily complicated and that it involved, especially in large schemes, excessive and meticulous clerical work in the local compilation of claims. This difficulty is experienced in a far greater degree by the Department's central office staff who are responsible for the elaborate and tedious investigation of these claims before they can be certified for payment, and the system involves heavy expense in staffs and seasonal overtime. During the long period which elapses between the close of the academic year and the final certification before payment, the grants thus earned are urgently needed by committees for purposes of their schemes.

280. Again it was complained that a system of attendance grants on a pre-war basis was insufficient to meet the needs of current expenditure, that it distinguished unreasonably between day and evening classes by reason of the lower grants paid in respect of day classes, and that it was too rigid in its application to the course system. Furthermore, the system failed to recognise adequately the more specialised work, since it is financially impossible to run small classes confined strictly to persons engaged in a particular trade or craft or requiring the services of specialists as teachers. At the same time a premium was put on the number enrolled. To quote the evidence of one witness, "The more we enrol at present, the more successful we are supposed to be, popularly and financially, irrespective of the type of technical instruction that is given, its quality or its suitability to the students or to the district."

Instruction
Hour
Grant.

281. We are of opinion that a less complicated and more equitable system of attendance grants is essential, and, in view of the element of compulsion in the proposed schemes of continuation and technical education, it is no longer necessary to place a premium on attendance. After careful

investigation, we have come to the conclusion that the soundest basis for the payment of grants on all classes is on the number of hours of instruction at a rate per hour determined by the nature of the work. Grant-payment on such a basis has the following distinct advantages:— (1) it is simple to operate, (2) it secures for the schools state-aid more in proportion to the expenditure involved in the instruction, (3) it removes the temptation to crowd classes unduly at the expense of educational efficiency, (4) it renders feasible the formation of small classes of a highly technical character and (5) it saves administrative expense in respect of the Department's central office staff. Payment on these lines renders unnecessary the continuance of the course system to which so many objections have been raised.

Recommendation 69.

282. We believe that the particular rates of grant, necessitated by our recommendation, can best be determined by the special financial committee whose appointment has already been suggested in connection with the proposed redistribution of the normal grant.

Recommendation 70.

283. In 1918, after prolonged pressure, the British Treasury agreed to sanction payment by local technical instruction committees of a "war" bonus to their whole-time staff in respect of the increased cost of living at the rates approved from time to time for whole-time civil servants, the amounts thus expended to be recouped by an annual Parliamentary grant. This bonus still continues to be paid but is now based on special Cost of Living figures compiled for the Saorstát.

Cost of Living Bonus.

284. It was not until 1919 that Treasury sanction was obtained for a bonus payment to part-time teachers. This took the form of an increase of 33½ per cent. of the basic rate of payment made to each teacher. Expenditure on this temporary additional remuneration, as it was called, was also recouped by means of an annual Parliamentary grant. In September, 1923, the Department of Finance decided that the rate of this temporary additional remuneration should vary in accordance with the Cost of Living Index Figure, subject to a maximum of 33½ per cent, and since that time the rate has varied from 26 to 32 per cent.

285. We suggest the continuance in its present form of the refund to the local Technical Instruction Committees of the payment of the Cost of Living Bonus to whole-time

Recommendation 71.

staffs and of the temporary additional remuneration to part-time teachers.

Equipment
Grant.

286. Prior to 1919 there was no special fund available as an Equipment Grant. In the earlier years of the Department of Agriculture and Technical Instruction unexpended balances were available annually out of the endowment fund, and sporadic grants for equipment were made from these sources. However, no definite policy was formulated and no definite sum was reserved for this purpose. After 1915, as already mentioned, the endowment fund was fully expended each year, and until 1919 no further grants of this description were available. In that year, in response to the urgent representations of the Department, a special grant of £5,000 was sanctioned by the Treasury on condition that it was confined to committees of areas in which the maximum statutory rate of 2d. in the £ was being levied. The amount was allocated annually amongst the schemes concerned in proportion to their immediate needs. After the passing of the Government of Ireland Act, 1920, the portion of this equipment grant pertaining to the Saorstát was £2,956, and this is at present the only sum from central funds available for this purpose.

Recommen-
dation 72.

287. Attention has already been directed to the complaints of technical instruction committees of the inadequacy of the arrangements made for subsidising buildings. Similar complaints have been received in connection with equipment. We recommend that where necessary the State should supplement by a grant the proceeds of the additional rates levied by local authorities for the erection of buildings and the provision of equipment of a permanent character. The extent of this State contribution as well as the manner in which it should be granted are also matters for the consideration of the special financial committee (see paragraph 276).

Advisory
Board.

Recommen-
dation 73.

288. The suggestion that has been made to re-establish a board such as was provided under the Agriculture and Technical Instruction (Ireland) Act, 1899, representative of extra-departmental opinion in the country as a whole, is favoured by the Commission. The Commission realises that, on many matters, such an advisory board could render valuable assistance to the Department.

CHAPTER XI.

THE GAELTACHT.

289. In any attempt to submit proposals for the solution of the educational problem in the Gaeltacht, in so far as a scheme of technical education can contribute to a solution, we feel that it is important to realise that the problem of the Gaeltacht is primarily an economic one. Conditions in the Gaeltacht, whilst varying much throughout the scattered area, are mainly uneconomic especially along the Western Seaboard.* Agriculture, in holdings of very low valuation, is the main industry. Fishing, largely a part-time occupation, comes second in importance. In addition there are certain rural industries, such as machine knitting and embroidery in which limited numbers are employed, but these industries are very precarious even as a source of part-time employment and could not survive without the liberal State subsidies at present afforded to them. Economic
Conditions.

290. Despite the large amount of emigration that takes place from the Gaeltacht, it seems clear that large numbers must continue to live there notwithstanding the difficulty of the conditions. The Gaeltacht at present is practically devoid of people skilled in any occupation. The mason, carpenter, harnessmaker, shoemaker, blacksmith, and to a great extent the weaver, have all gone, and mostly in the last two generations. There would appear to be no craftsmen, though there still exists a large amount of latent skill as is illustrated by the ready manner in which young and old of both sexes adapt themselves to such industries as weaving.

291. In view of the Report and Minutes of Evidence of the recent Gaeltacht Commission, we do not consider it necessary to enter into a detailed examination of the economic aspects of the area. We have had only a small amount of evidence relating to the Gaeltacht, but it has been very valuable, especially that submitted by the Mayo Industrial Organisation.

* By the " Gaeltacht " we mean in this Report those uneconomic areas mainly on the Western Seaboard in the Counties of Donegal, Mayo, Galway, and Kerry.

Need for special treatment.

292. From a study of the evidence furnished to the Gaeltacht Commission and to ourselves, we are convinced that inside this area, the educational problem is largely dominated by the uneconomic situation and that its solution, therefore, requires separate and special consideration. A scheme of technical education suited to any other area in the Saorstát might easily prove a failure in the Gaeltacht.

Education in the past.

293. Scarcely anything has been done in the past to meet the special circumstances that prevail. The county committees of technical education concerned have neglected the Gaeltacht and have devoted most of their activities to the more favourably situated districts in their administrative areas. This is especially true of Donegal and Mayo. Lack of participation in local schemes of technical instruction has accentuated to a very marked degree the absence of facilities for post-primary education available in other parts of the Saorstát. Even the position with regard to primary education is, according to our information, very unsatisfactory, for it would appear that the average attendance at the schools is extremely low and that difficulty is experienced in retaining pupils after they have reached the age of 12 years.

The problem to be solved.

294. In devising a scheme of technical education for the Gaeltacht we must reluctantly face the fact that the uneconomic conditions render early employment imperative. The problem is—how can technical education, interpreted in the broadest sense, equip the youth with such manual skill and resource as to render their home life more attractive and comfortable and their occupations more remunerative? After a careful examination of the report and minutes of evidence of the Gaeltacht Commission and after consultation with persons with a life-long knowledge of the problem, we are of opinion that the following extract from the evidence taken at the first sitting of the Gaeltacht Commission indicates the brief upon which technical education can contribute a solution :—

“ PROFESSOR TIERNEY :—Would you not think that it would be a better thing to start more practical schools—schools that would be more in contact with the everyday life of the people—and so give them a higher and better education, more in line with what they have to do daily in the Gaeltacht than the education now being imparted?

“**SEOIRSE MAC NIOCALL, M.A.** (Inspector of Schools) :—I quite agree that it would be advisable to have the education touching on the realities of everyday life of the people. Here is a complete list of subjects being taught in a certain school in the Gaeltacht where the people live by farming and fishing :—‘ English, Irish, Latin, mathematics, history and geography.’ It will be seen how little bearing it has on the actualities of life of these people. On the other hand we have a few schools in which another type of education is being taught, and in that connection a great deal more might be done. . . . The pupils are keeping books on finance, and they are learning woodwork, horse-shoeing, and other practical matters. They have a cultural education side by side with agricultural education. But those are very exceptional cases. The ordinary school in the Gaeltacht, like the ordinary school all over the country, is rather following the lines of tradition, than the consideration of what would be really valuable or vital to the pupils in after-life.”

295. We believe that the soundest educational policy for the Gaeltacht is to take the children at the ages of 12 to 13 into continuation schools, and whilst continuing their general education to give them instruction in practical subjects until they are 15 or 16. In this belief we are confirmed in the evidence presented to us as well by the findings of the Gaeltacht Commission—recommendations 22 and 26. The continuation schools with a definite practical bias should have far-reaching effects on those who remain in the Gaeltacht as well as on those whom circumstances still force to emigrate. For those who remain, the training will secure for them sufficient skill and resource in the manual crafts to enable them to alter the conditions of living to their benefit. For those who go away, especially those who emigrate to industrial centres, there will be the prospect of employment in the more remunerative occupations of a skilled or semi-skilled type.

Practical
Continuation
Schools.
Recommen-
dation 74.

296. There is no intention in the proposal to establish continuation schools to terminate the general education of the youth at the early age of 12 or 13. Obviously up to the age of 14 the pupils' general education would have to be continued and attendance on a whole-time basis would be required. It would not be possible to secure the desired type of practical education in the primary schools that

exist in the Gaeltacht. Such practical education is feasible only in a school with an objective definitely associated with the actualities of everyday life. Furthermore, the enforcement of the School Attendance Act with the resultant increase in attendance would necessitate the reconstruction or extension of very many of the existing primary schools. There is thus a favourable opportunity for the erection in selected areas of continuation schools which, while providing education of vital importance to the people of the Gaeltacht, would help to relieve the congestion in the primary schools.

297. For the period from 14 years onwards little, if any, difficulty would be experienced in retaining the youth at the proposed continuation schools for part-time instruction. Their preliminary practical training in the period between 12 and 14 should have laid such a foundation and established such an association with practical things that they will be unwilling to lose the opportunity of more specialised training in the later stage. In this period the work will be intensified with a view to improvement of home conditions and would be given the necessary modifications to suit the needs of the locality—in agriculture, fishing, rural industries.

Nature of
Instruction.

298. We do not propose to suggest a programme in detail for the continuation schools, but there is a wide range of subjects from which a selection can be made. In addition to general subjects, there may be mentioned as of special service to the Gaeltacht—Woodwork, work in concrete, light work in various metals, leatherwork, net-making, basket-making, weaving, knitting, rug-making, cookery, laundry and sewing. The programme of the continuation school should be adapted to the special needs of each locality. In some areas, there should be a bias towards agriculture, in some towards the fishing industry, and in others towards the forms of rural industry that are traditionally associated with the locality. The practical subjects taught in the preliminary period—12 to 14 years—must relate definitely to occupational training during the subsequent years. Thus woodwork which will naturally form part of the curriculum for boys will be taught by an instructor qualified to give not only the elementary instruction, but such adult instruction as will assist the people to make plain furniture for their homesteads and to carry out the simple construction in wood and concrete required on their holdings. The training provided in the

Recommendation 75.

continuation schools, especially if supplemented by subsequent instruction in evening classes, or by itinerant teachers, will lead to a revival of the type of tradesmen formerly to be found in the Gaeltacht. Furthermore, the better type of boy, who displays a distinct bias towards skilled work, will be in a position, owing to his training, to compete for Apprentice Scholarships akin to those mentioned in paragraph 135 of this report.

299. There is, we believe, a growing demand in domestic service for girls from the Gaeltacht, but there is at present no supply whatever of suitably trained girls. To provide facilities for such training we recommend that three or four residential schools should be set up in the Gaeltacht. Intensive courses of six months' duration should be conducted in these schools, the girls being selected from the continuation schools in which they have received preliminary instruction in domestic subjects. The residential schools would require to be in close contact with employment agencies in the principal urban areas of the Saorstát.

Training for
Domestic
Service.

Recommen-
dation 76.

300. It has been the policy for many years past to assist the people in the congested areas along the western coast by the development of various kinds of rural industries—lace-making, embroidery, knitting, weaving, toy-making. The method adopted in furthering the industries was to appoint an Instructress-Manager to train the workers in a district. This Instructress was responsible for finding orders, and for marketing the produce of her class. It cannot be said that the efforts of the Instructresses were successful on the whole, but this would appear to be due to difficulties over which they personally had no control. It could not be expected that, isolated as they were, they could keep in touch with the requirements of large purchasing centres or the changes in fashion. The result is, as can be seen from the returns furnished by the Department of Fisheries (see Appendix VI), that the volume of work and the wages paid to the workers are frequently so low that they fail to justify the continued operation of the classes.

Rural
Industries.

301. If these rural industries in the Gaeltacht are to be placed on a successful basis, the following essentials are required :—

Central
Industries
Bureau.

- (1) The work must be done on a larger scale ;
- (2) It must be of good design and distinctive ;

- (3) The seasonal demands of fashion and taste must be anticipated ;
- (4) Arrangements must be made for the proper marketing of the work ;
- (5) A higher standard of workmanship must be maintained and precaution taken to reject work if of inferior quality.

Recommendation 77.

302. We are of opinion that these requirements can best be secured by the establishment of a Central Industries Bureau responsible for securing and distributing orders and collecting the work for despatch to customers. The staff of such a bureau should include an inspector with an intimate knowledge of craft work who would act as a link between the bureau and the various workrooms.

303. It is anticipated that the continuation schools in centres where there is a tradition of rural industries will by their training render young people more adaptable to the changes of technique that may arise. The schools will provide a strong nucleus of young workers. If, in turn, there is a sound supervisory and distributive organisation to deal with the work, continuity of effort will be secured instead of the present hap-hazard way in which the industries classes are conducted.

CHAPTER XII.

THE TRAINING OF TEACHERS REQUIRED FOR CONTINUATION AND TECHNICAL SCHOOLS.

304. Hitherto there has not been adequate provision for the training of teachers and, particularly in recent years, the arrangements have been unsystematic and insufficient with the result that it is becoming increasingly difficult to secure well qualified persons for posts in technical schools. As already mentioned in Chapter II, provision was made for the award of five teacherships in Science and Technology at the Royal College of Science, of three Art teacherships in training at the Metropolitan School of Art, and of twelve scholarships at the Irish Training School of Domestic Economy. Between the years 1904 and 1921 provision was made for the higher training of Commercial teachers by the award of scholarships at the London School of Economics. The number of scholarships awarded during the period was 48. This scholarship scheme was discontinued in 1921. At irregular periods between 1902 and 1926, six courses were conducted for the training of Manual Instructors. The courses were of six to eight months' duration and the numbers trained at each course varied from 16 to 20. It is noteworthy to observe that of 91 instructors trained in the first five courses, only 37 are at present in employment under local schemes of technical instruction. Apart from "refresher" courses of three or four weeks, the facilities enumerated represent the total contribution of the central authority to the training of technical teachers.

305. Side by side with these meagre arrangements for the training of technical teachers, large sums of the monies allocated for technical instruction were and still are being spent on the training of primary and secondary teachers. We are of opinion that expenditure of this nature should be a charge on the votes for Primary and Secondary Education, as the case may be, and we, therefore, recommend that technical instruction funds be relieved of the following expenditure :—

Recommendation 78.

- (a) Grants paid to the primary training colleges for instruction in Science, Mathematics, and Drawing (Section VI. of the Programme for Technical Schools and Classes).

- (b) Grants paid for the supplementary training of teachers actually engaged in primary and secondary schools (Section III. of the above Programme).
- (c) Grants paid for the conduct of short summer courses in special subjects for primary and secondary school teachers. (Section III. of the above Programme.)

The grants paid under the foregoing heads amounted to approximately £10,000 in the academic year 1925-26.

Recommendation 79.

306. It is obvious that if technical instruction is to have in future a closer relation with trade and industry, there must be an adequate supply of competent technical teachers. Promising developments in technical school work, especially in trade subjects, have often been stopped by the failure to secure even one well-qualified applicant for an appointment. The demand for teachers of various types must be anticipated, and we recommend that a sum be set apart in the annual estimates for the expense of their training.

307. The expenditure to be met in the immediate future will be much above the average, if the recommendations of the Commission with regard to technical and continuation education are accepted. SCHEMES OF CONTINUATION EDUCATION MUST BE PRECEDED BY INTENSIVE TRAINING OF TEACHERS. IT WOULD BE FATAL TO EMBARK ON NEW EDUCATIONAL VENTURES WITH UNTRAINED AND INSUFFICIENT TEACHING STAFFS.

308. The teachers required for trade and industrial classes in technical schools fall into two main groups :—
 (a) those who have to deal primarily with scientific principles, and (b) those who have to deal primarily with the technique of a trade or craft. The former are required for such courses as mechanical and electrical engineering, applied chemistry and rural science, and should have completed the full course of a higher technological institute. In such an institute, in addition to the requisite technical training, subjects such as mathematics, physics and mechanics are treated in relation to the technical subjects. This practical treatment of ancillary subjects is of prime importance to the technical teacher and can best be secured when he is trained in conjunction with the industrial scientist. The Royal College of Science

performed, in the past, the function of a technological college, and it is assumed that under the aegis of the National University it will continue to discharge this function. It is more necessary than ever that this tradition of technological training be preserved, and it should be the aim of the Department of Education to ensure that the requisite facilities will still be provided. It is vital to the future of technical education that men with this technological training be available as teachers, just as it is no less vital to the future of industry that the Saorstát should continue to have at its disposal a nucleus of trained industrial scientists.

309. Teachers who have to deal primarily with the technique of any trade or craft are required in connection with all the skilled trades. They should be fully qualified tradesmen and should be trained for teaching by intensive courses at the Central Technical School, Dublin, or the Metropolitan School of Art. The centralising in the Metropolis of a technical institute for the trades, as advocated in paragraph 252, becomes still more essential in view of the necessity for securing an adequate and efficient teaching staff for this important group of teachers. **Recommendation 80.**

310. We now propose to state the provisions required for the training of the various types of teachers—:

MECHANICAL AND ELECTRICAL ENGINEERING AND APPLIED CHEMISTRY.

311. A nucleus of instruction staff will always be required in technical schools and in urban continuation schools. We recommend that provision should be made for the training of these teachers by the award of Scholarships similar to those held in the past at the Royal College of Science. The scholarships should be open to candidates both from the technical schools and secondary schools and opportunity should be provided in the course of training for practice in teaching. The qualifications required by the Department for the recognition of such teachers should be the degree of the University. **Recommendation 81.**

RURAL SCIENCE.

312. To supply the Rural Science instructors who will be urgently required for continuation work, we recommend that the Department should offer a number of scholarships. Scholarship-holders should be given a course of one, two, **Recommendation 82.**

three or four years according to their proficiency. Their training should follow the lines adopted in the Teachers' Course—Natural Science Group—conducted formerly at the Royal College of Science, and should centre round the sciences underlying and applying to life in rural areas, viz., botany, chemistry, physics, geology, economic geography and economics. There should be a definite provision for instruction and practice in teaching. In the award of scholarships, preference should be given to candidates having an intimate association with rural conditions from early years.

PHYSICAL AND MECHANICAL SCIENCE.

313. A small number of teachers will be required for urban continuation schools, but in general the instructors qualified in mechanical and electrical engineering and applied chemistry will be in a position to undertake this work.

COMMERCE.

314. Actual experience of business conditions should, in our opinion, underlie the training of all whole-time commercial teachers. With a view to enabling young people with such experience to qualify for whole-time posts as commercial teachers, we recommend that courses of training of one year's duration should be conducted from time to time at the Rathmines Municipal Technical Institute. In awarding scholarships, preference should be given to candidates who have been successful in evening technical school examinations. For the teaching of higher commercial subjects, however, candidates should have a wider and more general experience, and we recommend that the Department should for this purpose resume the scheme of commercial scholarships tenable at the London School of Economics.

Recommendation 83.

GENERAL SUBJECTS IN CONTINUATION CLASSES.

315. In addition to the various forms of practical subjects suggested for continuation classes, provision must also be made for the teaching of such subjects as Irish, English, history (local and general), geography and arithmetic. We see no difficulty in securing from the Universities persons qualified to teach these subjects. We recommend, however, that the existing staff of teachers of Irish employed whole-time under the terms of the Local

Recommendation 84.

Government (Temporary Provisions) Act, 1923, be utilised in schemes of continuation education. We understand that the activities of these teachers at present relate largely to pupils of a continuation school age. From the educational point of view, it would be better to include their activities definitely in a general programme of continuation education than to confine them to one subject only, as at present. We recommend, therefore, that special courses of training be organised for such teachers of Irish to supplement their qualifications for the general and special purposes of continuation education.

MANUAL INSTRUCTION.

316. There will be an increased demand for Manual Instructors especially in view of the schemes of continuation education. Courses of training should be conducted at intervals governed by the demand. Instructors should be selected as in the past from the ranks of young tradesmen — carpenters and joiners— preferably those who have followed a full course in a technical school. The training should be of one year's duration at least and might best be given at the Central Technical School, Dublin. There is, however, a definite limit to the amount that can be accomplished in a year's course and many aspects of the training have perforce to be omitted, but it will be possible to supplement the training of the instructors by summer courses. The candidate-instructor should be examined at the end of his course of training and, if successful, should receive a certificate entitling him to provisional recognition as a teacher.

Recommendation 85.

MOTOR GARAGE AND GENERAL WORKSHOP PRACTICE.

317. During the past few years there has been a rapid growth in the demand for instruction in motor car engineering but there have been no instructors available to meet the demand. There are plenty of mechanical and electrical engineers from the colleges who can teach the principles of the subject, but it is unusual for them to possess the intimate knowledge and experience of motor-car work which are needed to secure the confidence of their students. The "practical" man, who is available occasionally, lacks the fundamental training in engineering needed for devising a progressive educational plan, and his lessons develop into an unconnected series of workshop hints.

Recommendation 86.

318. We understand that the arrangements have been made to hold a course for the training of instructors in motor garage work, but we anticipate that further courses will be needed from time to time. The training should be intensely practical in character and should aim at producing instructors with a sound knowledge of workshop practice, engine, chassis and body design, motor car mechanism and electrical equipment. The course of training should be of one year's duration and should be held at the Central Technical School. Certificates entitling successful candidates to provisional recognition as teachers should be awarded at the conclusion of the course.

OTHER TRADE SUBJECTS.

Recommendation 87.

319. There has been general complaint that technical instruction in trade subjects has been handicapped by the lack of qualified teachers, and it is necessary to devise adequate facilities for training. Instruction in such subjects as carpentry and joinery, plumbing, plastering, smithwork, painters' and decorators' work and cabinet-making will be carried on mostly by part-time instructors, but as schemes for the compulsory training of apprentices develop, the tendency will be towards the employment of whole-time instructors. The former should be chosen from men skilled in the trade, preferably those who have gone through a full technical course and have obtained an advanced certificate in the trade subject and allied subjects. Provision should be made periodically to conduct short central courses of four to six weeks' duration. These courses should be attended not only by prospective part-time instructors but also by tradesmen who have no immediate intention of engaging in teaching. Instruction in the course should be of such a character as to be valuable from the point of view of the trade alone. At the same time the State will thus have at its disposal a number of potential teachers in different localities.

320. If occasion requires the training of whole-time instructors in a trade subject, it would be best to follow the procedure suggested for Manual Instruction and Motor Garage and General Workshop Practice.

DOMESTIC ECONOMY.

321. Instructresses are trained at the Irish Training School of Domestic Economy, Kilmacud (see paragraph 79), but the School could not hope to meet the demand that will

result from the schemes of continuation education. The premises of the School at Kilmacud, County Dublin, were leased to the Department of Agriculture and Technical Instruction in 1909, and the tenancy expires in 1928. Having been designed as a private residence, the rooms are unsuitable for class purposes but the grave defects that we see in the School are traceable to its isolated position in rural surroundings, five miles from the city. The students are in consequence left practically devoid of experience in marketing, and are cut off from lectures and demonstrations outside the School and from access to libraries or educational institutions. But the greatest drawback of all, from the point of view of teachers in training, is that they are deprived of the possibility of teaching in Schools. It is true that they receive some practice in teaching in the Training School, but that is confined to teaching classes composed of their fellow students—a wholly artificial system in which the constant necessity for maintaining discipline and the obligation to capture and retain the attention of less mature minds find no place.

322. We recommend that when the present lease expires, the school at Kilmacud should be vacated and a large and better building should be secured in the city for the purposes of a modern school of domestic economy. Arrangements could then be made to provide students with practice of teaching in schools of different types. The school should have accommodation for at least 40 residential pupils and class room accommodation for an additional number of day or non-residential pupils attending a course in household management only. We feel that there is a wide demand for the instruction provided in such a course from people who do not intend to become teachers, but seek employment as manageresses of hotels and matrons of institutions. The new school will thus serve the dual purpose of training teachers and of giving highly specialised instruction in household management.

Recommendation 88.

323. We are of opinion that ultimately, if our recommendations in regard to continuation schools, etc., are accepted, a course of shorter duration than the existing course of three years should suffice for the training of teachers of Domestic Economy. We therefore recommend a two years' course of training. In the first year, students would attend a course in household management, to which non-residential fee-paying students could also be admitted.

Recommendation 89.

In the second year, there would be an intensive course confined to the teachers-in-training. Entrance scholarships should be continued on the present lines. The increased accommodation available will enable the Department to admit, also for training, students who are prepared to pay fees. The fees paid by these and by students enrolling for the household management course only will help to reduce materially the cost per pupil, which is at present very high. No additional teaching staff will be required and the increase in overhead charges will be comparatively small.

“ REFRESHER ” COURSES.

Recommendation 90.

324. The policy of conducting “ refresher ” summer courses should be resumed. These are of great importance, especially to trade and craft teachers. The courses should serve a two-fold purpose, (a) to supplement trade or craft training in order to maintain contact with the development of industry, and (b) to provide instruction ancillary to the trade subject with a view to widening the teachers’ qualifications.

325. In this connection there is a necessity for the adoption of some departmental method of keeping in touch with the qualifications of each individual teacher employed under local schemes, of arranging means for the improvement of his qualifications, and of devising courses and syllabuses to suit his needs. In other words, there should be an annual “ stocktaking ” of teaching resources and some departmental machinery to counteract “ depreciation ” by carefully devised schemes of supplementary training.

CHAPTER XIII.

SALARIES AND CONDITIONS OF SERVICE OF WHOLE-TIME CONTINUATION AND TECHNICAL TEACHERS.

326. In their evidence before the Commission, representatives of the technical instruction committees and of the teachers complained that there were no fixed scales of salary, with the result that the salaries paid for similar appointments in different schemes varied considerably. It was pointed out that existing scales, as in the case of Manual Instructors and Domestic Economy Instructresses, were merely permissive and consequently were not in general operation. Not only was there this difference in basic salaries but there was also no definite policy in regard to increments. Witnesses of the Agricultural and Technical Instruction Officers' Organisation asserted that in some cases teachers have remained on the initial salary for over fifteen years. Such increases as were granted had to be sought annually by teachers, who were often constrained to solicit the support of individual members of local committees. It was also complained that the travelling expenses and subsistence allowances granted by local committees to officers whose teaching duties necessitated absence from headquarters were far from adequate. Unmarried officers doing itinerant work were in some cases paid no expenses.

Financial
Grievances
of Teachers.

327. We are of opinion that these grievances tend to reduce the efficiency of the teaching staffs and to deplete their numbers, and that it is unreasonable to expect well qualified teachers to give their best efforts to their work in such circumstances. Remuneration of technical teachers should be such as to attract and retain persons of good training and character, and to induce a healthy spirit of competition for the posts offered. Experience shows that it has been increasingly difficult, in the past, to keep at home on graduation highly qualified men such as engineers, whose tendency has been in general to go abroad as soon as they had passed out from the schools.

328. We recommend that definite scales of salary and scales of travelling and subsistence expenses should be drawn up by the Department and prescribed as obligatory on the local committees employing whole-time teachers,

Recommendation 91.

required under the approved schemes of technical and continuation education, and we recommend that, in the absence of any cause for complaint on grounds of conduct, the increment included in the salary scale be granted automatically on receipt of a satisfactory report from the Department's Inspector. We have already recommended (see paragraph 285) the continued payment of the cost of living bonus on the salaries of whole-time officers.

Proposed
Conditions of
Appointment

329. As all whole-time teachers employed under the approved schemes of technical and continuation education will be eligible under certain conditions for superannuation or gratuity under the Local Government Act, 1925, it is most important to ensure that the technical instruction committees will not be encumbered with indifferent officers, for whose pensions the local rating authority would be responsible. We recommend, therefore, that the Department should draft standard conditions governing the appointment and duties of whole-time officers. Under these conditions all whole-time teachers, before they are eligible for permanent recognition, should be required to serve at least two full academic years on probation. We believe, moreover, that a total estimate of less than 800 hours' instruction in the academic year should not normally be regarded as sufficient to warrant the appointment of a teacher on a whole-time basis.

Recommendation 92.

CHAPTER XIV.

SUMMARY OF PRINCIPAL RECOMMENDATIONS AND CONCLUSIONS.

For convenience of reference our several **principal recommendations** are set out in the following Summary grouped under the general headings of the Chapter of our Report in which they each occur.

The figures in brackets refer to paragraphs in the Report.

We recommend that :—

CHAPTER III.—*Primary Education in relation to Technical Education.*

1. All sixth standard pupils of primary schools should be tested in an examination prescribed by the Department, and that success in this examination should entitle the pupil to the award of a School-leaving certificate. (90).

3. Drawing should be reinstated as portion of the obligatory curriculum for all pupils in primary schools up to and including sixth standard. (92).

4. Arrangements should be made in urban areas to send groups of the more mature pupils of primary schools to the local technical schools for instruction in Domestic Science and Woodwork, and that the technical schools should be authorised to conduct special classes to meet their requirements. (93).

CHAPTER IV.—*Continuation Education.*

6. A system of practical continuation schools and classes should be established to educate young people between the ages of 14 and 16. (97).

7. The programme for continuation schools and classes should be distinct from the programme for technical schools and classes and should be set out in two main groups for rural and urban areas. (98).

10. Pending the provision of new schools continuation classes should be held in technical school or primary school buildings. (104)

14. The curricula of many secondary schools should be altered to meet the special needs of young people entering employment at the age of 16 and should include as *obligatory* subjects : science, drawing, manual instruction and domestic economy. (111).

18. As soon as the necessary accommodation and staff are provided, attendance at continuation classes should be made compulsory in any locality in the following manner :—

- (a) *whole-time attendance in urban areas* for all young people between 14 and 16 who are not in employment, only those in approved employment to be exempted.
- (b) *part-time attendance in urban areas* for a minimum of 180 hours in each year of the period for all young people between 14 and 16 in approved employment.
- (c) *part-time attendance in rural areas* for a minimum of 180 hours in each year of the period for all young people between 14 and 16. (115).

CHAPTER V.—*Technical Education in relation to Employment.*

24. In a centre where the requisite educational facilities are available, an apprentice to a skilled trade should not be engaged until he has reached the standard of proficiency that should be attained by completion of a course at a whole-time continuation school. (127).

25. In order to induce some of the best products of the rural primary schools to enter the skilled trades, some of the existing scholarships from primary schools to secondary schools should be made tenable in continuation schools with a trade bias. (128).

26. Attendance at a technical school should be made compulsory in the first two years of apprenticeship to skilled trades and that attendance should be of not less than 180 hours of day-time instruction in each year. (130).

27. The advice of a committee representative of the employer and employees in each trade should determine whether the compulsory training should be through whole-time instruction in organised apprentice schools or through part-time classes. (130).

30. Apprentice scholarships should be instituted to enable apprentices outside the main urban centres to undergo a full year's course of training in a selected centre. (135).

36. Outside the county boroughs and the larger urban centres, the present extensive facilities for commercial instruction should not be continued. (151).

37. Wherever evening commercial classes are provided, admission should be more strictly confined to students over 16 already in occupations. (152).

CHAPTER VI.—*Apprentice Committees.*

39. Legislation on the lines of the South African and Queensland Apprenticeship Acts is the best method of dealing with the problem of industrial training in the Saorstát ; that the legislation should provide for the scheduling of trades, the registration of apprentices and the appointment of statutory committees for each trade or group of trades to advise on all matters relating to apprenticeship, industrial training and means of entry to industry ; that the functions of a committee should include advice on such matters as the proportion of juveniles to adults, the length of the period of apprenticeship or learnership, the prescribed form of indenture, the age of entry, the standard of education on entry, the opportunities in the workshop or factory for learning a trade, the arrangements for attendance at technical classes and the special type of education that would appear to be most suitable. (172).

40. The apprentice committees should be appointed by the State and should consist of equal numbers of representatives of employers and of workers, should have an independent Chairman, and should have, as members, Officers of the Department of Education and of the Department of Industry and Commerce. (173).

CHAPTER VII.—*Technical Education in relation to Specified Trades and Occupations.*

Apprentice committees should be constituted in the first instance for the following trades :—

41. Building and allied trades. (184).

42. Mechanical Engineering. (189).
Electrical Engineering.

44. Motor Garage Work. (202).

45. Printing Trade. (209).

46. Hotel and Restaurant Work. (221).

47. Residential schools should be established in centres such as Kerry, Mayo or Connemara, and Donegal for the intensive training of girls between the ages of 16 and 18, as waitresses and cooks. (223).

48. Whole-time continuation schools in centres such as Arklow should be given a definite bias towards the fishing industry and that a suitable vessel should be acquired for the practical training of boys for the fishing industry. (229-230).

50. A school for the training of boys for the Mercantile Marine should be established, if on investigation it appears that a substantial number of boys so trained can be readily absorbed into the service. (236).

CHAPTER VIII.—*Higher Technical Education.*

51. There is a necessity for the continuance and wide development of the technological work that has been in the past the function of the Royal College of Science, and that if such technological courses are not to be developed in the future at the Universities, the re-establishment of a separate institute for the purpose will have to be seriously considered. (246).

52. The schemes of technical education in Dublin, Cork and Limerick should be extended to include full-time day courses of secondary technical character. (247).

53. The schemes of education in Cork and Rathmines should be extended to include commercial courses of a secondary character on the same plan as proposed for the technical courses. (248).

CHAPTER IX.—*Localisation of Schemes, Local Control and Rating Obligations.*

54. For purposes of educational efficiency the Saorstát should be divided into three administrative groups :—

- (a) the County Boroughs of Dublin (including the four adjoining urban districts), Cork, Limerick and Waterford ;
- (b) the larger Urban Districts (Galway, Dundalk, Drogheda, Wexford, Sligo, Tralee and possibly Kilkenny) ;
- (c) the rest of the Saorstát as County Areas, including within each such area urban districts other than those enumerated above. (249).

60. The control of continuation and technical education should be vested in the local statutory committees of technical instruction ; that these committees consist in future of twelve members, two nominated by the Department of Education and ten selected by the rating authority, of whom two should be representatives of employers and two of organised labour, and that for County Areas the membership should be increased by one member nominated by the Council of each urban district participating in the county scheme. (258).

62. An Executive Officer should be appointed to fulfil the dual function of Principal and Secretary in connection with the new schemes of continuation and technical education. (261).

63. Obligatory minimum rates for continuation and technical education should be raised as follows :—

- (a) three pence in the pound in the county boroughs ;
- (b) three pence in the pound in the larger urban districts ;
- (c) two pence in the pound in all other areas. (265).

65. All legislation now in force relating to technical education should be repealed, in so far as it interferes with the proposals made with reference to the constitution of technical instruction committees and the rating powers of local authorities. (268).

CHAPTER X.—*Central Control and Finance.*

68. The funds at present allocated to technical instruction by way of "Normal Grant" should be increased and that a committee should be appointed to advise on the amount required and its allocation. (276).

69. Payment of grants per instruction-hour should replace the existing system of attendance grants. (281).

72. The State should supplement by a grant the funds raised by additional rates levied by local authorities for the erection of buildings and the provision of equipment of a permanent character. (287).

CHAPTER XI.—*The Gaeltacht.*

74. Practical continuation schools should be established in the Gaeltacht for children of 12 years of age and upwards. (295).

76. Residential Schools should be established in the Gaeltacht for the training of girls for domestic service. (299).

77. A Central Industries Bureau should be established to deal with rural industries. (302).

CHAPTER XII.—*The Training of Teachers required for Continuation and Technical Schools.*

79. The proposed new schemes of continuation and technical education should be preceded by intensive training of teachers and that a sum be set apart in the annual estimates of the Department of Education for the expense of their training. (306-307).

80-90. The State should establish scholarships for the training of teachers as enumerated in paragraphs 309 to 324.

CHAPTER XIII.—*Salaries and Conditions of Service of whole-time Continuation and Technical Teachers.*

91. Definite scales of salaries and of travelling and subsistence expenses should be drawn up by the Department of Education and prescribed as obligatory on local committees employing whole-time teachers. (328).

92. The Department should draft standard conditions governing the appointment and duties of whole-time officers of the committees. (329).

We have investigated the facilities for technical education in Saorstát Eireann and have come to the conclusion that radical changes are necessary to meet the existing and probable requirements of trade and industry. These requirements have been clearly presented to us in evidence submitted by employers and workers in the more important trade groups of the country, and the large measure of agreement in the views of witnesses, representative of varied interests, has helped us materially in our efforts to arrive at definite conclusions.

We desire in the first place to draw attention to the need for securing a sound and uniform foundation for the system of technical education. This foundation must be laid in the primary school, and it is essential that the youth of the country should have completed in the sixth standard a definite minimum programme on which subsequent instruction can be based.

Early in our proceedings we were convinced that many of the faults of the existing system of technical education in the Saorstát resulted from the absence of a general system of continuation schools and classes. We make recommendations for the introduction of such schools and classes, attendance at which—whole-time or part-time according to circumstances—should be compulsory up to the age of sixteen years. The programme of the schools should be distinct from the programme of technical schools and should take into account the special circumstances of town and country life.

In general, Technical Education should start after the continuation school period and should take various forms, part-time, whole-time, etc., according to the specific conditions of apprenticeship in a trade. It should not be the general policy of the Department of Education to provide for technical training prior to employment at sixteen years of age. In our view the best form of pre-employment training is obtained in the continuation school with a practical bias.

We have examined the legislation that has been enacted in other countries in relation to apprenticeship, and have come to the conclusion that the adoption of similar legislative measures is urgently required in the Saorstát. These measures should be secured in an Apprenticeship Act providing for the appointment of apprentice committees for each trade or group of trades, who would advise on all matters relating to apprenticeship, industrial training and means of entry to the trades concerned. The Committees should consist of equal numbers of employers and workers with an independent Chairman. The Departments of State concerned should also have representation.

A principal duty of the proposed apprentice committees would be

to advise as to the extent to which attendance at a technical school should be compulsory and the age at which it should commence. In our view all apprentices in scheduled trades should attend a technical school for a minimum of 180 hours in each of the first two years of apprenticeship. The amount and duration of attendance beyond this compulsory minimum should be regulated for each trade after consultation with the apprentice committee of the trade.

If the State is to secure the much-needed national development in which the Shannon Electricity Scheme and other enterprises will form a prominent part, it is of paramount importance that there should be persons of the highest scientific and technological qualifications to fill "key" positions. If, therefore, courses designed to produce persons to fill "key" positions will not be provided in the Universities, it will be necessary to have in the Saorstát a higher technological institute. Whole-time schools of secondary technical character will also be required.

The advantages of technical education must be more thoroughly realised in industry, commerce and trade. Without the active interest and support both of the employer and the worker, no form of technical education can survive.

We recommend the continuance of the present system of control of technical education by local statutory committees. Proposals are advanced, however, for changes in the constitution of the committees and for limitation of their membership.

The proposed schemes of continuation and technical education will involve considerable expenditure to the State as well as to the local rating authorities, but we are convinced that such expenditure is necessary for the raising of the level of education of the people and for the development of trade and industry in the country. We have assumed, however, and more particularly so as regards continuation education, that the schemes we have proposed would be put into operation, at first on a limited scale, that the experience thus gained would indicate the manner in which such schemes might subsequently be extended and developed and that, for many reasons, a considerable period must elapse before they can be adopted generally throughout the country.

The extent to which the State and the local authorities should assume liability for the cost of technical education where it is compulsory, and the extent to which they should respectively assume liability outside the compulsory limits are matters on which there is not sufficient experience to base definite conclusions. We recommend the appointment of a committee to explore this matter and also to investigate and make recommendations as to the amount and allocation of the increased State grants that will be required. We recommend, however, that payment of grants for instruction on the

general basis of instruction-hours should be adopted instead of the present system.

As the success of the schemes of education will depend to a very great degree on the qualifications of the teachers and their interest in their work, adequate arrangements should be made for their training and fixed minimum scales of salaries should be adopted.

We desire to place on record our appreciation of the valuable evidence which has been placed before us. A detailed list of the witnesses who gave evidence and of the many other associations and individuals who presented valuable data and memoranda will be found in Appendix XI.

In concluding our Report, we wish to express our special sense of the debt of gratitude we owe to our Secretary, Mr. R. O'Connor, whose intimate knowledge of the subject of our investigations and untiring devotion to duty has helped materially to lighten the work of the Commission.

JOHN INGRAM (*Chairman*).

ROHN.

NILS FREDRIKSSON.

JOHN GOOD.*

HUGH COLOHAN.

J. J. O'CONNOR.

B. STAFFORD.

W. DOOLIN.**

T. O'CONNELL.

ROBERT O'CONNOR (*Secretary*).

5th October, 1927.

* Subject to the reservations set out in [the accompanying Statement. (Page 153).

** Subject to the reservations set out in the accompanying Statement. (Page 155).

STATEMENT BY MR. JOHN GOOD.

While I am in wholehearted agreement generally with the conclusions and recommendations embodied in the foregoing Report, I am disappointed that the Commission has not dealt at greater length with Primary Education and the relationship between Education and Industry, as factors of prime importance in the promotion of a successful system of Technical Education.

I. PRIMARY EDUCATION.—Almost every witness who appeared before the Commission laid stress on the low standard of education found amongst boys and girls leaving the primary schools and pointed out the urgent need for raising the general standard, if our Technical Schools were to achieve a larger measure of success in the future.

The stringent clauses in the School Attendance Act, 1926, and the recommendations of the Commission will doubtless effect some improvement, but they do not go far enough to meet the problem as we find it in Industry to-day; the curriculum of our National Schools will need drastic alteration if we really desire to equip our young people in such a manner that those entering on Industrial careers may be able to compete successfully against the better educated and more highly skilled workers from other countries. Educationally we are almost half a century behind, and we are losing our grip on the markets, while the products of other countries are forging ahead. A sound primary education for our young people is the first step in building up a successful State, and I hope that our Government will wake up and realise the shortcomings of our young people in this matter before it is too late. It is my view also that the minimum fixed for the official school-week is too low, and that the necessary improvement in primary education cannot be obtained without increasing the length of the school-day.

The following statement shows that out of 119 boys leaving the National Schools in the city of Dublin and registering at the Labour Exchange for employment between June and September, 1927, 60 per cent. had not got beyond the 5th standard, and of these 9 per cent. had reached the 3rd standard only and may therefore be regarded as illiterates. Out of the 94 girl applicants for employment during the same period, 47 per cent. had not passed beyond the 5th standard, and 9 per cent. had not got beyond the 3rd standard.

No. of Juveniles registered.	Interme- diate Schools.	Primary Schools.						
		Standards.						
		VIII.	VII.	VI.*	V.	IV.	III.	II.
<i>Boys</i> 119	1	1	13	32	38	23	11	—
<i>Girls</i> 94	—	2	25	23	24	11	8	1

* Until a boy or girl has passed the 6th standard but little progress can be made in the Technical School.

II. RELATIONSHIP BETWEEN EDUCATION AND INDUSTRY.—This should be of a closer and more practical kind in the future. Under our present system, while the State educates the youth it ceases to interest itself in them at the most critical period of their lives when they are seeking employment. Boys and girls of poor parents, without influence or friends to help them, are in consequence tempted to a too easy acceptance of any employment that offers, quite irrespective of their education and aptitudes. Frequently it is an occupation, such as that of messenger, which provides employment for only a few years. When they outgrow such an occupation, they are obliged to join the ranks of the unemployed without having been afforded the opportunity of making use of the talents they possess, or of deriving advantage from the education which the State has given them at considerable expense.

We have, it is true, Labour Exchanges where our juveniles may register for employment, and we have also Advisory Committees to help them, but as these agencies are unable to find employment for one-tenth of the juveniles who register, they cannot be looked upon as efficient instruments for dealing with the problem.

A writer in a recent issue of a prominent English newspaper said of Great Britain what is equally true of the Saorstát :

“ We spend huge sums of money on the elementary and secondary education of our children, but up to the present time we have spent very little on marketing the produce of our schools.”

This is an aspect of our Educational System that has been sadly neglected in the past, and I was anxious that the Commission should have dealt with the subject more fully in view of its importance.

JOHN GOOD.

STATEMENT BY MR. W. DOOLIN.

While I have concurred generally in the recommendations made by the Commission, and particularly in the assumption stated in one of the concluding paragraphs of its Report that the new schemes proposed would be put into operation at first experimentally and only on a limited scale, and that a number of years must elapse before the stage of general acceptance and enforcement of the complete programme of continuation and technical education envisaged by the Commission is reached, I desire at the same time to add the following observations:—

(1) I contemplate that the financial committee, the appointment of which is foreshadowed in Recommendation 68 (paragraph 276) and referred to elsewhere in the Report, should likewise function over a number of years, that in some cases its recommendations must be provisional and experimental according to the stage of development reached at the time, and that it will be afforded opportunities of reviewing its recommendations from time to time in the light of the ascertained results of previous suggestions made by it.

(2) I consider, moreover, that the functions of the financial committee, in addition to those mentioned in the Report, should include power to inquire and report as to the fees payable for various types of instruction. At present there is the greatest variation in the amounts payable, and from the evidence presented it is not clear to me that sufficient is being contributed by or on behalf of pupils receiving instruction or that Technical Instruction committees are fully alive to the possibility of augmenting their local revenue by an increase in fees.

(3) I am not satisfied that all the moneys at present being administered by the Technical Instruction Branch of the Department of Education and by the local Committees of Technical Instruction are being spent on schemes that are really profitable for the education of the nation, and I consider that, in view of the increased provision actually made by the State in recent years for other educational services and of the increase in expenditure on continuation and technical education contemplated in this Report, any development on the lines suggested therein should be accompanied by a rigorous pruning of every element of expenditure that is unfruitful in its results, or that cannot be strictly regarded as coming within the definition of continuation or technical education.

(4) I wish to emphasise the desirability of taking into account the prospective requirements of schemes of continuation education when consideration is being given to any general reconstruction of primary school buildings.

W. DOOLIN.

COMMISSION ON TECHNICAL EDUCATION.

APPENDICES TO THE REPORT.

	Page
APPENDIX I.	
Return showing the contributions derived from rates towards the support of local schemes of technical instruction for the Academic Year 1925-26.	157
APPENDIX II.	
Table showing for the Academic Year ended 31st July, 1925, the number of students enrolled in classes in Technical Schools.	161
APPENDIX III.	
Extracts from the Official Programme for Technical Schools and Classes.	162
APPENDIX IV.	
Table showing for the Academic Year ended 31st July, 1925, the number of students enrolled in classes conducted under County Schemes of Technical Instruction elsewhere than in established Technical Schools.	167
APPENDIX V.	
Return showing the numbers and constitution of Technical Instruction Committees and attendance at meetings during the Academic Year 1925-26.	168
APPENDIX VI.	
Rural Industries under the Department of Fisheries for the year ended 31st March, 1926.	170
APPENDIX VII.	
Union of South Africa : Some conditions of Apprenticeship.	172
APPENDIX VIII.	
Union of South Africa : Apprenticeship Act, 1922.	174
APPENDIX IX.	
Memorandum on the Swedish System of Education.	187
APPENDIX X.	
Memorandum on the Swiss System of Education.	199
APPENDIX XI.	
List (a) of Witnesses who appeared before the Commission,	204
(b) of Organisations and Persons who supplied Written Evidence and other Data for the use of the Commission. . . . .	.. ..

APPENDIX I.

RETURN showing the contributions derived from rates towards the support of local schemes of technical instruction for the Academic Year 1925-26.

Technical Instruction Committees and their Administrative Areas.	Rate levied for Agricultural and Technical Instruction purposes.		Proportion set aside for Technical Instruction.		Special Rate for Irish.		Total Contribution to Technical Instruction
	Poundage.	Yield.	Poundage.	Yield.	Poundage.	Yield.	
(1).	(2).	(3).	(4).	(5).	(6).	(7).	(8).
	d.	£	d.	£	d.	£	£
COUNTY BOROUGH COMMITTEES.							
Cork	2	1,513	2	1,513	$\frac{1}{2}$	378	1,891
Dublin	1,188	5,050	1,188	5,050	—	—	5,050
Limerick	1	314	1	314	1	314	628
Waterford	2	360	2	360	1	180	540
URBAN DISTRICT COMMITTEES.							
Athlone	2	100	2	100	—	—	100
Birr	1 $\frac{1}{2}$	45	1 $\frac{1}{2}$	45	$\frac{1}{2}$	15	60
Blackrock	2	400	2	400	—	—	400
Bri Chualann	1	120	1	120	—	—	120
Clonmel	2	161	2	161	—	—	161
Cobh	1	92	1	92	—	—	92
Dalkey	1	76	1	76	—	—	76
Drogheda	2	224	2	224	—	—	224
Dun Laoghaire	1 $\frac{1}{2}$	486	1 $\frac{1}{2}$	486	—	—	486
Enniscorthy	2	72	2	72	1	36	108
Galway	2	228	2	228	—	—	228
New Ross	2	67	2	67	1	33	100
Pembroke	2	1,179	2	1,179	—	—	1,179
Rathmines and Rathgar	2	1,626	2	1,626	—	—	1,626
Sligo	2	170	2	170	—	—	170
Tralee	2	141	2	141	1	71	212
Wexford	1	80	1	80	—	—	80
COUNTY JOINT COMMITTEES FOR TECHNICAL INSTRUCTION.							
<i>County Carlow:—</i>							
(1) Co. Council	2	1,324	1	662	—	—	662
(2) Carlow Urban District	2	92	2	92	—	—	92
<i>County Cavan:—</i>							
(1) Co. Council	1	1,106	.271	300	—	—	300
(2) Cavan Urban District	2	50	2	50	—	—	50
(3) Belturbet Urban District	1	15	1	15	—	—	15
(4) Cootehill Urban District	2	32	2	32	—	—	32

APPENDIX I.—*continued.*

Technical Instruction Committees and their Administrative Areas. (1).	Rate levied for Agricultural and Technical Instruction purposes.		Proportion set aside for Technical Instruction.		Special Rate for Irish.		Total Contribu- tion to Technical Instruction (8).
	Poundage.	Yield.	Poundage.	Yield.	Poundage.	Yield.	
	(2).	(3).	(4).	(5).	(6).	(7).	
	d.	£	d.	£	d.	£	£
<i>County Clare</i> :—							
(1) Co. Council	1½	1,624	.192	250	1	1,354	1,604
(2) Ennis Urban District ..	1	29	1	29	—	—	29
(3) Kilrush Urban District ..	1	17	1	17	—	—	17
<i>County Cork</i> :—							
(1) Co. Council ..	1½	6,356	¼	3,178	1	4,238	7,416
(2) Clonakilty Urban District	1	20	1	20	—	—	20
(3) Fermoy Urban District	1	46	1	46	1	46	92
(4) Kinsale Urban District	1	23	1	23	1	23	46
(5) Macroom Urban District	1	18	1	18	1	18	36
(6) Mallow Urban District	1	39	1	39	1	39	78
(7) Middleton Urban District	1	26	1	26	1	26	52
(8) Passage West Urban District	2	67	2	67	1	33	100
(9) Skibbereen Urban District	1	23	1	23	1	23	46
(10) Youghal Urban District	2	84	2	84	1	42	126
<i>County Donegal</i> :—							
(1) Co. Council ..	1	1,277	.235	300	—	—	300
(2) Letterkenny Urban District	1	19	1	19	—	—	19
(3) Buncrana .. Urban District	1	19	1	19	—	—	19
<i>County Dublin</i> :—							
(1) Co. Council ..	1½	2,442	.621	1,012	1	1,633	2,645
(2) Howth Urban District	2	150	2	150	1	75	225
<i>County Galway</i> :—							
(1) Co. Council ..	1½	2,700	½	900	1	1,800	2,700
(2) Ballinasloe Urban District	1	26	1	26	—	—	26
<i>County Kerry</i> :—							
(1) Co. Council ..	1½	1,462	¼	390	½	585	975
(2) Killarney Urban District	2	60	2	60	—	—	60
(3) Listowel Urban District	2	35	2	35	—	—	35

APPENDIX I—*continued.*

Technical Instruction Committees and their Administrative Areas. (1).	Rate levied for Agricultural and Technical Instruction purposes.		Proportion set aside for Technical Instruction.		Special Rate for Irish.		Total Contribution to Technical Instruction (8).
	Poundage. (2).	Yield. (3).	Poundage. (4).	Yield. (5).	Poundage. (6).	Yield. (7).	
	d.	£	d.	£	d.	£	£
<i>County Kildare</i> —							
(1) Co. Council ..	1½	1,861	.362	449	.422	523	972
(2) Athy Urban District	1	18	1	18	—	—	18
(3) Naas Urban District	1	47	1	47	—	—	47
<i>County Kilkenny</i> :—							
(1) Co. Council ..	1½	2,175	.372	540	.608	882	1,422
(2) Kilkenny Urban District	1	80	1	80	—	—	80
<i>County Longford</i> :—							
(1) Co. Council ..	2	1,184	.875	518	—	—	518
(2) Granard Urban District	1	15	1	15	—	—	15
(3) Longford Urban District	1	26	1	26	—	—	26
<i>County Louth</i> :—							
(1) Co. Council ..	1	800	.188	150	—	—	150
(2) Dundalk Urban District	2	250	2	250	—	—	250
<i>County Mayo</i> :—							
(1) Co. Council ..	1	1,313	.267	350	1	1,210	1,660
(2) Ballina Urban District	1	33	1	33	—	—	33
(3) Castlebar Urban District	1	19	1	19	—	—	19
(4) Westport Urban District	1	23	1	23	—	—	23
<i>County Meath</i> :—							
(1) Co. Council ..	1,216	2,750	.332	750	½	1,130	1,880
(2) Kells Urban District	—	—	—	—	—	—	—
(3) Navan Urban District	1	32	1	32	—	—	32
(4) Trim Urban District	1	18	1	18	—	—	18
<i>County Monaghan</i> :—							
(1) Co. Council ..	2	2,130	.986	1,050	—	—	1,050
(2) Carrickmacross Urban District	1	16	1	16	1	16	32
(3) Castleblayney Urban District	1	18	1	18	1	18	36
(4) Clones Urban District	1	27	1	27	1	27	54
(5) Monaghan Urban District	1	29	1	29	1	29	58

APPENDIX I.—*continued.*

Technical Instruction Committees and their Administrative Areas. (1).	Rate levied for Agricultural and Technical Instruction purposes.		Contribution for Technical Instruction.		Special Rate for Irish.		Total Contribution to Technical Instruction (8).
	Poundage.	Yield.	Poundage.	Yield.	Poundage.	Yield.	
	(2).	(3).	(4).	(5).	(6).	(7).	
	d.	£	d.	£	d.	£	£
<i>Offaly:—</i>							
(1) Co. Council ..	1½	1,680	.693	665	1	960	1,625
(2) Tullamore Urban District	2	60	2	60	—	—	60
<i>Co. Tipperary (N. R.)</i>							
(1) Co. Council ..	1	1,072	.229	245	½	581	826
(2) Nenagh Urban District	1	30	1	30	—	—	30
(3) Templemore Urban District	1	12	1	12	—	—	12
(4) Thurles Urban District	1	28	1	28	—	—	28
<i>Co. Tipperary (S. R.)</i>							
(1) Co. Council ..	1½	1,909	.321	350	1	1,091	1,441
(2) Carrick-on-Suir Urban District	1	34	1	34	1	34	68
(3) Cashel Urban District	1	15	1	15	1	15	30
<i>Tipperary (Joint Urban and Rural)</i>							
(1) Tipperary (No. 1) Rural District	1½	765	½	218	1	437	655
(2) Tipperary Urban District	1	46	1	46	1	46	92
<i>Co. Waterford:—</i>							
(1) Co. Council ..	1½	1,357	½	543	1	1,086	1,629
(2) Dungarvan Urban District	1½	44	1½	44	1	29	73
<i>Co. Wicklow:—</i>							
(1) Co. Council ..	1½	1,426	.688	654	1	1,032	1,686
(2) Arklow Urban District	1	26	1	26	1	26	52
(3) Wicklow Urban District	1	27	1	27	1	27	54
COUNTY COMMITTEES OF AGRICULTURE AND TECHNICAL INSTRUCTION.							
Laoighis ..	1	1,070	.458	490	1	1,080	1,570
Leitrim ..	1½	875	.342	200	1	582	782
Limerick ..	1	1,980	.217	430	1	1,979	2,409
Roscommon ..	1½	1,908	.354	450	1	1,272	1,722
Sligo ..	1½	1,200	.275	220	1	800	1,020
Westmeath ..	2	2,560	.656	839	½	642	1,481
Wexford ..	1	1,490	.268	400	1	1,490	1,890

APPENDIX II.

Table showing for the Academic Year ended 31st July, 1925, the number of Students enrolled in classes in Technical Schools.

Names of COUNTY BOROUGHS, URBAN DISTRICTS and COUNTIES.	Number of Students.	NUMBER OF STUDENTS ENROLLED IN CLASSES IN							
		Introductory Course.	Commerce.	Science (Pure and Applied).	Handicraft.	Domestic Science.	Art.	Other Subjects.	
COUNTY BOROUGHS:									
Cork	2,433	309	459	472	61	742	275	115	
Dublin	3,993	316	1,190	1,772	74	588	53	—	
Limerick	711	66	295	183	—	106	74	—	
Waterford	777	45	309	103	—	260	50	—	
URBAN DISTRICTS:									
Athlone	218	—	128	—	—	90	—	—	
Birr	100	—	42	53	5	—	—	—	
Blackrock	277	23	76	44	20	131	—	—	
Bri Chualann	214	82	49	21	—	62	—	—	
Clonmel	454	17	133	59	103	87	79	21	
Cobh	139	16	87	40	17	—	17	—	
Dalkey	96	—	48	—	—	48	—	—	
Drogheda	438	23	144	58	—	195	18	—	
Dun Laoghaire	489	33	124	17	—	315	—	—	
Enniscorthy	285	33	172	32	—	42	6	—	
Galway	502	91	271	45	18	57	20	—	
New Ross	257	26	112	46	19	67	17	—	
Pembroke	515	24	161	153	20	157	—	—	
Rathmines and Rathgar	1,619	103	1,067	—	—	449	—	—	
Sligo	345	41	177	21	22	102	26	—	
Tralee	514	64	355	36	—	89	57	—	
Wexford	325	32	184	57	—	72	15	—	
COUNTIES:									
Carlow	294	—	173	—	—	121	—	—	
Cavan	464	12	288	—	40	124	—	—	
Clare			(No Technical School under County Scheme.)						
Cork	510	—	175	115	159	—	61	—	
Donegal	486	—	192	—	63	163	—	68	
Dublin	422	—	171	—	96	131	48	—	
Galway	115	28	38	—	6	43	—	—	
Kerry	301	64	152	—	59	36	16	—	
Kildare	267	40	86	61	—	69	11	—	
Kilkenny	425	—	225	35	—	180	—	—	
Laoighis	185	26	150	—	—	37	—	—	
Leitrim			(No Technical School under County Scheme.)						
Limerick			(No Technical School under County Scheme.)						
Longford	193	—	46	—	36	47	—	—	
Louth	610	69	205	138	58	124	47	—	
Mayo	222	—	68	—	—	90	—	—	
Meath	259	—	193	30	—	51	11	—	
Monaghan	602	15	264	—	—	46	—	—	
Offaly	209	40	109	—	23	46	—	—	
Roscommon			(No Technical School under County Scheme.)						
Sligo			(No Technical School under County Scheme.)						
Tipperary N.R.	58	15	22	16	—	—	—	—	
Tipperary S.R.			(No Technical School under County Scheme.)						
Tipperary, Jt. U. and R. Dists.	356	—	265	—	20	108	—	—	
Waterford	231	23	114	—	21	58	15	—	
Westmeath	243	—	117	36	56	117	—	—	
Wexford			(No Technical School under County Scheme.)						
Wicklow	484	81	175	114	13	104	—	—	
TOTALS	—	1,757	8,811	3,757	1,009	5,354	916	204	

NOTE.—The total number of enrolments at classes in Irish (mainly in the Introductory and Commercial Courses) was 5,918.

APPENDIX III.

EXTRACTS FROM THE OFFICIAL PROGRAMME FOR
TECHNICAL SCHOOLS AND CLASSES.III.—REGULATIONS FOR THE ADMINISTRATION AND
DISTRIBUTION OF GRANTS TO SCHOOLS OTHER THAN
DAY SECONDARY SCHOOLS.

II. (a)—TECHNICAL SCHOOLS.

12. An evening class is one in which instruction begins at or after 4 p.m. throughout the week, or at or after 1 p.m. on Saturday.

In cases, however, in which the Department are satisfied that it is necessary or advisable that classes in Commercial subjects should be held in the afternoon, any such classes meeting at or after 3 p.m. may, for the purposes of attendance grants, be regarded as evening classes on condition that not more than three hours of instruction be given in one afternoon.

Proposals for such classes should be specially submitted for approval.

13. A day class is one in which instruction begins before 4 p.m. throughout the week, or before 1 p.m. on Saturdays.

(i)—*Regulations applying especially to the Introductory Course.*

14. Introductory Course classes should be of such a nature as to fit students to take up a specialised course of technical instruction. These classes must be distinct from those organised under (ii) below, and must be taught separately.

15. The subjects of instruction in respect of which payments are made under this division are :—

(a) English.

(b) Mathematics.

(c) One or more of the following :—

Experimental Science, Drawing, Manual Training in Wood or Metal, Domestic Economy.

(d) Irish may be taken as an additional subject.

16. Students on whom grants are claimed must have received such an education as would entitle them to be placed in the sixth class of a school under the National Education Office.

17. All students under instruction in the Introductory Course must attend instruction in each of the sections (a), (b), and (c) of paragraph 15 above.

(ii)—*Regulations applying especially to the Specialised Courses.*

19. A specialised course of instruction for any student on whom

payment may be claimed shall consist of a scheme of study in two or more subjects of a course approved by the Department, and extending over three or more years.

In the first year of specialisation students must take up at least two and not more than three subjects, and in subsequent years not more than three subjects.

The Department will require, as a rule, that one main subject will be continued throughout each student's course of study. The instruction received in this main subject, as well as in other subjects approved as part of the course, will be eligible for grants at the rates appropriate to the year of specialisation of the student.

In the courses for women, where a student adopts a course of study in which the main subject is a subject other than in Domestic Science, and which complies with the minimum requirements as to the number of subjects to be taken, the Department will allow grants in respect of instruction in Domestic Science, provided that not more than three subjects in all are taken in any year.

22. Students registered in this section must—

- (a) have satisfactorily followed the Introductory Course ; or,
- (b) have passed any of the examinations held under the direction of the Commissioners of Intermediate Education.
- (c) be certified by the Principal or responsible teacher to have reached an equivalent satisfactory standard of education ; or

23. In the case of students registered under 22 (c), the following particulars must be submitted in writing to the Department's Inspector for his approval :—

- (i) any examinations passed which are regarded as equivalent to (b) ; or
- (ii) the marks obtained at entrance examinations held in the Technical School. (The worked papers should be retained on the school premises) ; or
- (iii) any special reasons for admitting students to specialised courses.

24. For the purposes of grants the subjects which may be included in specialised courses of study, and on which payment may be made, are grouped as follows, but courses of study may be made up of subjects taken from different groups.

Group A.—Commercial Subjects (Section A.).

Group B.—(1) Commercial Subjects (Section B.).

(2) Languages.

(3) Mathematics.

Group C.—Science (Pure and Applied.).

Group D.—(1) Handicraft.

(2) Domestic Science.

Group E.—Art Subjects.

(iii)—*Rates of Grants for Evening Classes.*

25. Grants will be made upon the total number of hours of attendance of fully qualified pupils, at the following rates per attendance-hour :—

Introductory Course, 2d.

SPECIALISED COURSES—

Year of Course.	GROUP A. Commer- cial subjects (Section A).	GROUP B. (1) Commer- cial subjects (Section B.). (2) Languages (3) Mathema- tics.	GROUP C. Science- (Pure and Applied).	GROUP D. Handicraft and Domestic Science.	GROUP E. Art Subjects.
First Year ..	d. 2	d. 4	d. 6	d. 4	d. 4
Second Year ..	3	6	9	5	6
Third Year ..	4	9	12	6	9
Fourth and subsequent years ..	5	15	21	6	12

27. An increment for continued attendance at instruction in the case of individual students will be paid on the total attendance hours at all subjects of an approved course, in the introductory or in the specialised courses.

Rate of Increment for Continued Attendance.

For each hour from 21 to 40 hours, 1d. per hour.

“ “ 41 to 60 “ 2d. “

“ “ 61 to 80 “ 3d. “

“ “ 81 to 100 “ 4d. “

“ “ 101 to 120 “ 5d. “

No increment will be paid on attendance-hours exceeding 120.

(iv)—Rates of Grants for Day Classes.

28. Grants to Day Classes will be made at half the above rates and no increment on account of instruction given in these classes will be payable. Not more than 400 hours' attendance in all in any one session may be claimed upon in respect of any student attending a day class.

II. (b)—TECHNICAL CLASSES.

37. The rates of payment will be :—

(1) For Literary or Commercial Subjects .. 2d. per hour.

(2) For Art, Handicraft and Domestic Science
Subjects 3d. per hour.

(3) For Science (Pure and Applied) Subjects .. 4d. per hour.

38. Grants under this section will not be paid in respect of more than one subject for each student.

42. The arrangements regulating the admission of students must be such as to exclude from a class any student who from want of sufficient preliminary training, or other cause, is not qualified to take advantage of the instruction given in it. The grant may be withheld on account of any students whom the Inspector reports to be thus unqualified.

III.—TEACHER'S CLASSES.

45. Where special classes or courses are established by a Technical Instruction Committee or other responsible body of Managers, other than the Managers of a Training College, for the instruction of teachers

of Primary or Secondary Schools in the subjects of this Programme, in accordance with a scheme approved by the Department, grants may be paid at the rates prescribed for the third year of specialisation under Section II. 25 of this Programme.

53. Grants will not be paid in respect of the attendance at these classes of students other than teachers actually engaged in Primary or Secondary Schools. Monitors, and Pupil Teachers in National Schools are not regarded as "teachers" for this purpose.

IV.—DAY SCHOOLS FOR APPRENTICES AND OTHERS ENGAGED IN BUSINESS.

55. Such schools or classes must be open on one, or more days of the week, not later than six o'clock in the evening, or than 1 p.m. on Saturdays.

56. Grants not exceeding three-fourths of the certified annual expenditure for the conduct of such schools or classes may be made by the Department in respect of students for whom an employer's certificate can be produced, showing that the students have been engaged during the session in a business, trade, or industry, or that they are indentured or properly engaged as apprentices to a firm or to an individual.

57. The expenditure must be set forth in properly audited accounts, to be accompanied by vouchers.

60. The practical work must be so arranged as to be illustrative of the principles taught, and should not be directed to developing dexterity in the practice of trade processes.

V.—SCHOOLS OF ART.

62. Schools of Art which provide for students, the majority of whom are industrial, courses extending continuously over two or three years, according to a scheme approved by the Department, may be paid grants not exceeding three-fourths of the actual annual expenditure incurred in the conduct of such courses.

67. For the purposes of this section a School of Art must satisfy the following conditions :—

- (a) The rooms and equipment must be approved by the Department, and must be wholly devoted to elementary and advanced instruction in art.
- (b) Provision must be made for drawing from life and modelling and for instruction in ornamental and decorative art.
- (c) The principal Teacher must hold an art master's certificate or an equivalent qualification.
- (d) Assistant Teachers must possess qualifications recognised by the Department.
- (e) Both day and evening classes must be held. The evening class must meet under the instruction of the Principal Teacher for two hours for at least three evenings per week during the forty weeks of the year and the day class for the same period for at least three hours per day on two days of the week.

VI.—TRAINING COLLEGES.

69. Grants may be made for the instruction of students in training colleges in mathematics, experimental science, and drawing.

70. The rates per attendance-hour at which grants will be paid are as follows:—

	First Year.	Second Year.
	d.	d.
Mathematics	2	3
Experimental Science	3	4½
Drawing	2	3

73. Grants in respect of any student may be claimed once only in the first year course, and once only in the second year course.

Table showing for the Academic Year ended 31st July, 1925, the number of Students enrolled in Classes conducted under County Schemes of Technical Instruction elsewhere than in Established Technical Schools.

COUNTY.	Manual Instruction.			Domestic Economy.			Home Spinning, etc.			Lace and Sprigging and Knitting.			Irish.			Commerce.			Other Subjects.		
	Number of Centres.	Total Students.	Average Enrolment per Centre.	Number of Centres.	Total Students.	Average Enrolment per Centre.	Number of Centres.	Total Students.	Average Enrolment per Centre.	Number of Centres.	Total Students.	Average Enrolment per Centre.	Number of Centres.	Total Students.	Average Enrolment per Centre.	Number of Centres.	Total Students.	Average Enrolment per Centre.	Number of Centres.	Total Students.	Average Enrolment per Centre.
Carlow	5	151	30	6	172	29	—	—	—	—	—	—	7	220	31	—	—	—	—	—	—
Cavan	1	25	25	4	148	37	—	—	—	—	—	—	46	1,114	24	—	—	—	—	—	—
Clare	3	90	30	6	144	24	5	99	20	—	—	—	28	1,411	50	3	107	36	—	—	—
Cork	16	426	27	6	401	67	1	20	20	4	102	26	79	3,098	39	6	293	49	6	142	24
Donegal	2	61	31	12	326	27	—	—	—	9	226	25	7	128	18	—	—	—	—	—	—
Dublin	5	88	18	8	119	15	—	—	—	—	—	—	15	385	26	1	32	32	2	111	56
Galway	6	98	16	18	409	23	—	—	—	—	—	—	24	891	37	—	—	—	5	108	22
Kerry	—	—	—	1	25	25	—	—	—	1	6	6	17	485	28	—	—	—	1	10	10
Kildare	3	50	17	3	82	17	4	87	22	—	—	—	26	415	16	1	23	23	—	—	—
Kilkenny	5	120	24	9	237	26	—	—	—	—	—	—	32	746	23	—	—	—	—	—	—
Laoighis	5	80	16	3	90	30	—	—	—	—	—	—	18	442	25	1	8	8	—	—	—
Leitrim	4	96	24	4	131	33	8	137	17	—	—	—	14	375	27	—	—	—	—	—	—
Limerick	3	133	44	8	379	47	—	—	—	—	—	—	45	2,101	47	—	—	—	—	—	—
Longford	1	36	36	2	106	53	—	—	—	—	—	—	11	297	27	1	46	46	—	—	—
Louth	—	—	—	1	25	25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mayo	—	—	—	5	263	53	—	—	—	—	—	—	38	1,798	47	4	234	59	—	—	—
Meath	2	38	19	2	34	17	—	—	—	—	—	—	15	327	22	1	17	17	—	—	—
Monaghan	4	173	43	—	—	—	1	23	23	—	—	—	16	604	38	—	—	—	14	588	42
Offaly	2	68	34	1	15	15	3	53	18	—	—	—	10	190	19	—	—	—	—	—	—
Roscommon	2	47	24	4	168	42	6	156	26	—	—	—	47	1,099	23	—	—	—	6	162	27
Sligo	2	65	33	4	169	42	—	—	—	—	—	—	24	1,251	52	—	—	—	—	—	—
Tipperary N.R.	13	104	8	13	353	27	—	—	—	2	29	15	16	315	20	2	37	19	3	92	31
Tipperary S.R.	3	61	20	8	265	33	—	—	—	—	—	—	37	1,241	34	—	—	—	—	—	—
Tipperary Joint Urban and Rural Districts	3	38	13	2	72	36	—	—	—	—	—	—	17	788	46	—	—	—	—	—	—
Waterford	6	121	20	4	131	33	—	—	—	—	—	—	38	1,106	29	3	63	21	4	37	9
Westmeath	2	45	23	1	42	42	2	30	15	—	—	—	27	821	30	1	24	24	—	—	—
Wexford	5	151	30	6	185	31	—	—	—	—	—	—	35	1,244	36	—	—	—	4	88	22
Wicklow	4	95	24	6	140	23	—	—	—	—	—	—	23	438	19	—	—	—	2	14	7
TOTALS	107	2,460	23	147	4,631	32	30	605	20	16	363	23	712	23,330	33	24	884	37	47	1,352	29

APPENDIX V.

Return showing the numbers and constitution of Technical Instruction Committees, and attendance at meetings during the Academic Year 1925-26.

Technical Instruction Committees.	No. of Ordinary Meetings	No. of Councilors.	No. of added Members	Total Membership.	Average Attendance.
COUNTY BOROUGH COMMITTEES.					
Cork	24	18	13	31	10
Dublin	Commissioner acting for Committee.				
Limerick	16	21	20	41	11
Waterford	11	11	22	33	11
URBAN DISTRICT COMMITTEES.					
Athlone	5	9	8	17	9.4
Birr	12	5	4	9	8
Blackrock	13	7	6	13	5.6
Bri Chualann	11	6	7	13	5
Clonmel	10	12	5	17	7
Cobh	12	6	6	12	3
Dalkey	8	5	6	11	3.6
Drogheda	10	7	6	13	5.3
Dun Laoghaire	12	13	10	23	11.5
Enniscorthy	11	6	5	11	4
Galway	10	8	6	14	5.5
New Ross	12	6	5	11	5
Pembroke	9	15	9	24	8.5
Rathmines and Rathgar	10	7	6	13	5.8
Sligo	10	24	6	30	10.9
Tralee	12	8	5	13	5
Wexford	12	8	5	13	6
COUNTY JOINT COMMITTEES.					
Co. Carlow	8	32	20	52	12
.. Cavan	2	13	30	43	9
.. Clare	11	44	9	53	7
.. Cork	12	24	24	48	11
.. Donegal	7	25	10	35	15.2
.. Dublin	10	8	15	23	10.3
.. Galway	4	7	25	32	12.2
.. Kerry	14	5	44	49	16
.. Kildare	12	11	10	21	9
.. Kilkenny	10	19	11	30	12
.. Longford	11	8	12	20	5.8
.. Louth	7	10	6	16	5.2
.. Mayo	12	17	17	34	8.2

APPENDIX V.—*continued.*

Technical Instruction Committees.	No. of Ordinary Meetings	No. of Councilors.	No. of added Members	Total Membership.	Average Attendance.
COUNTY JOINT COMMITTEES					
—Continued.					
Co. Meath	12	21	23	44	16.7
.. Monaghan	7	19	13	32	11
.. Offaly	15	1	22	23	4
.. Tipperary (N.R.) ..	4	13	14	27	2
.. Tipperary (S.R.) ..	13	11	11	22	5
.. Tipperary (Joint Urban and Rural Districts) ..	11	—	15(a)	15	6
.. Waterford	12	8	16	24	7
.. Wicklow	12	18	6	24	8
COUNTY COMMITTEES OF AGRICULTURE AND TECHNICAL INSTRUCTION.					
Co. Laoighis	12	31	31	62	14
.. Lettrim	11	—	43 (a)	43	13.3
.. Limerick	11	28	8	36	12
.. Roscommon	4	31	32	63	Nos. present not available
.. Sligo	9	30	12	42	18.3
.. Westmeath	5	25	40	65	30.8
.. Wexford	12	8	10	18	12

(a) Members of Committee nominated by Commissioner.

APPENDIX VI.

Rural Industries under the Department of Fisheries for the Year ended 31st March, 1926.

Name of Centre.	Nature of Work.	No. of workers.	Total Wages paid to the workers.			Amount retained by the State in respect of its outlay.			Total net cost to the State.			Observations.
			£	s.	d.	£	s.	d.	£	s.	d.	
Co. DONEGAL												
Ardara	Crochet and hand-knitting ..	53*	246	16	3	91	2	7	118	2	5	* Includes learners.
Ardara	Embroidery	30	725	14	1	37	4	1	115	1	9	
Bruckless	Crochet Lace Embroidery ..	80*	504	6	7	131	8	3	101	4	1	* Includes learners.
Carndonagh	Machine-knitting and Crochet	23	546	7	6	221	0	0	684	15	10†	† Includes £104 for knitting machines purchased
Creeslough	do. do.	30*	229	9	3	35	4	7	304	9	8	* Mainly learners.
Downings	do. do.	20	331	12	9	206	5	4	433	8	8	
Gortahork and Falcarragh	Hand-knitting and Crochet ..	—	615	4	3	202	12	3	100	6	4	
Termon	do. do.	30	466	0	1	239	11	3	151	17	4	
Co. MAYO.												
Ballycroy	do. do.	59*	—			—			61	2	9	* Learners only.
Bangor Erris	Machine-knitting and Crochet	40	713	3	3	813	2	4	103	3	11	
Belmullet	Crochet and Lace	25	519	14	1	253	0	0	31	17	4	
Carratigue	Crochet	15	166	6	2	68	9	8	148	14	9	
Corclough and Shanahee ..	Crochet and Lace	45	730	0	4	275	11	0	84	16	7	
Derrypark	Crochet	15	153	19	4	62	3	4	130	1	9	
Geesala	Crochet and Knitting	38	160	9	0	107	5	3	227	9	10	
Keel	Machine-knitting	35	1,323	18	9	3,080	0	0	609	17	9‡	‡ Shows excess of Receipts over expenditure.
Killogeary and Kilcummin	Lace	17 } 14 }	294	18	2	84	6	9	177	8	3	
Muings	Machine-knitting, Crochet and Lace.	120	1,278	13	8	924	3	6	78	0	3‡	‡ Shows excess of Receipts over Expenditure.
Pulathomas	do. do.	120	2,076	10	6	805	16	5	716	10	2‡	‡ Includes £161 paid for new machines in year.

APPENDIX VI.—*continued.*

Name of Centre.	Nature of Work.	No. of workers.	Total Wages paid to the workers.			Amount retained by the State in respect of its outlay.			Total net cost to the State.			Observations.	
			£	s.	d.	£	s.	d.	£	s.	d.		
Co. SLIGO.													
Cliffoney	Crochet and Embroidery ..	30	153	2	6	93	19	0	123	1	2		
Co. GALWAY.													
Ballynahown	Crochet and Hand-knitting ..	20	256	14	4	111	4	9	97	13	0		
Camus	Crochet	11	90	6	7	49	7	5	157	15	2		
Carraroe	Machine-knitting	19	374	10	2	952	11	8	131	15	4†	† Shows excess of Receipts over Expenditure.	
Clifden	Crochet and Hand-knitting ..	14	435	14	8	184	0	9	145	16	2		
Galway Toy Factory ..	Wooden Toys	109*	1,776	5	8	402	0	10	1,317	11	10	* Includes learners and apprentices.	
Inishbofin	Crochet and Knitting	20	99	11	4	80	7	10	128	2	1		
Lettermore	Machine Knitting	42	309	13	6	200	0	0	527	2	0		
Moycullen	do.	23	849	5	8	1,845	9	8	154	15	0†	† Shows excess of Receipts over Expenditure.	
Oughterard	Crochet Lace	42*	212	6	9	91	19	9	119	12	4	* Includes learners.	
Rosscahill	Crochet	12*	54	12	10	26	0	2	105	1	5	* Beginners only.	
Rossmuck	Crochet	12	45	17	6	52	17	9	50	10	5		
Roundstone	Machine-knitting and Crochet ..	20	509	8	9	665	15	5	203	5	5		
Co. CORK.													
Ballydehob	Crochet	17	182	9	11	115	16	4	128	9	6		
Glengarriff	Crochet, Lace and Machine-knitting.	17	296	8	2	313	16	11	167	3	9		
		1,217	16,729	12	4	12,823	14	10	6,961	15	8		
	Deduct for surplus receipts over expenditure A.								974	8	4		
			Total Net			Cost ..			£	5,987	7	4	

A
609 17 9
78 0 3
131 15 4
154 15 0
974 8 4

APPENDIX VII.
UNION OF SOUTH AFRICA.
OPERATION OF APPRENTICESHIP ACT, 1922.
SOME CONDITIONS OF APPRENTICESHIP.

(Extract from *The Social and Industrial Review* issued by the Union Department of Labour.)

Committee.	Minimum Commencing Qualifications.	Number of Apprentices Allowed.	Period of Apprenticeship.	Attendance at Technical Classes.
BUILDING COMMITTEES:—				
Pretoria	Age and Standard. 15 or VI.	Not fixed.	5 years.	Six hours weekly.
Witwatersrand	15 or legally exempt from school attendance.	Not more than can be efficiently trained	do.	Six hours weekly.
Cape Division	16 and VI.	do.	do.	Three classes per week.
Pietermaritzburg	15 and VI.	do.	do.	Not less than six hours weekly, and also one afternoon of employer's time during first two years.
Durban	15 and VI.	do.	do.	First two years: four hours in own and four hours in employer's time; thereafter not less than six hours.
Port Elizabeth	15 and VI.	do.	do.	For first two years after date of registration of contract, one afternoon per week in employer's time and two evenings in own time. Thereafter not less than six hours per week.
East London	15 years of age or any legal school leaver.	do.	do.	Six hours.
Queenstown	do.	do.	do.	Six hours (afternoon in employer's time).
BUILDING AND ENGINEERING:—				
Kimberley	16 and VII.	do.	do.	Four hours per week.
Bloemfontein	15 or VI.	do.	do.	Six hours per week.
ENGINEERING:—				
Cape Division	16 and VII.	do.	do.	Four hours in apprentices and four in employer's time, weekly.
Transvaal	15 years, or any legal school leaver.	do.	do.	One afternoon in employer's time and two evenings (minimum of six hours).
Natal	15 and VI.	do.	do.	do. do.

APPENDIX VII.—continued.

Committee.	Minimum Commencing Qualifications.	Number of Apprentices Allowed.	Period of Apprenticeship.	Attendance at Technical Classes.
Port Elizabeth	15 and VI. ..	Not more than can be efficiently trained	5 Years.	As for P.E. Building.
East London	15 and VI. ..	do.	do.	Six hours weekly.
FURNITURE:—				
Cape Division	16 or VI. ..	do.	5, 4, and 3*.	Not yet fixed.
Witwatersrand and Pretoria ..	16 or VI. ..	do.	5 and 4† years.	P.T.C. ; N.T.C. ; A.T.C.
Natal	15 and VI. or 16 and VI. ..	do.	5 and 4* years.	Not fixed.
East London	15 and VI. ..	do.	do.	Six hours weekly.
Port Elizabeth and Uitenhage ..	16 or VI. ..	do.	5 and 4† years.	Not less than six hours weekly ; one afternoon per week in employer's time for first two years.
BUILDING, MECHANICAL ENGINEERING AND ELECTRICAL ENGINEERING:—				
Transvaal mines	Legal school leaver, or 15 and Standard V. (where no attendance law is applicable).	do.	5 years.	Six hours weekly : one afternoon a week during employer's, and two evenings during apprentice's time.
PRINTING:—				
National	Standard VII. ..	Not fixed.	7 years.	Six hours weekly.‡
GOVERNMENT:				
	15 and VI. ..	do.	5 years.	Three hours in Employer's and three in own time.
RAILWAY				
	Special entrance examination.	do.	do.	Not fixed. Staff regulations apply.
BOOTMAKING AND LEATHER WORKING:—				
Port Elizabeth	15 and VI. or 16 and V. ..	Number that can be efficiently trained.	5 to 6 years.	Not fixed.
BAKING AND CONFECTIONERY:—				
Witwatersrand	16 years. ..	do.	5 years.	Not fixed.

* Four years cabinet polishing ; three years bedding making ; five years other trades.

† Four years for cabinet polishing.

‡ Cape Town and Johannesburg only.

NOTE.—Most of the above conditions are subject to exemption by the Minister, on the recommendation of the Committee, in exceptional individual cases.

APPENDIX VIII.

UNION OF SOUTH AFRICA.

ACT

TO REGULATE APPRENTICESHIP TO CERTAIN TRADES AND THE CARRYING OUT OF CONTRACTS OF APPRENTICESHIP OF PERSONS THERETO ; TO PROVIDE FOR THE ESTABLISHMENT, POWERS AND FUNCTIONS OF COMMITTEES TO REGULATE SUCH MATTERS ; TO MAKE PROVISION FOR MATTERS CONNECTED WITH THE TRAINING OF APPRENTICES AND AS TO OTHER MATTERS INCIDENTAL TO CONTRACTS OF APPRENTICESHIP.

BE IT ENACTED by the King's Most Excellent Majesty, the Senate and the House of Assembly of the Union of South Africa, as follows :—

INTRODUCTORY.

Application
of this Act.

1. The provisions of this Act shall only apply in respect of apprenticeship to any trade or branch of trade designated by the Minister after consultation with an apprenticeship committee appointed under this Act in any industry (hereinafter referred to as a scheduled industry) specified in the First Schedule to this Act. Any such trade or branch of trade is hereinafter referred to as a " designated trade."

Saving as to
application
of Act.

2. Nothing in this Act contained shall be constructed as—

- (a) applying or enabling to be applied the provisions thereof in any area in which the Minister has not established an apprenticeship committee ;
- (b) applying or enabling to be applied the provisions thereof to apprenticeship in farming or agricultural pursuits or apprenticeship in domestic service ;
- (c) applying or enabling to be applied the provisions thereof to any apprentice who is employed by the Government in any air service ;
- (d) applying to any university or university college, or any normal, industrial, technical or trades school wholly or partly maintained out of public funds ;
- (e) applying to any person who, having obtained a diploma or degree approved by the Minister, is serving or desirous of serving in any works in order to obtain practical experience in qualifying as an engineer, or who is a registered student in engineering at a university or university college ;

- (f) repealing or modifying any provision relating to apprenticeship contained in the Prisons and Reformatories Act, 1911; the Children's Protection Act, 1913; or the Criminal Procedure and Evidence Act, 1917;
- (g) repealing or modifying any law relating to the apprenticeship of children otherwise than in a designated trade.

3. The Governor-General may from time to time appoint an officer to be called the "inspector of apprenticeship" who shall, subject to the orders and directions of the Minister, carry out the powers conferred and the duties imposed by this Act or any other law on the inspector and shall exercise such other functions as the Governor-General may from time to time lawfully assign to him. The Governor-General may also appoint such other officers as may be necessary to assist in carrying out this Act.

Inspector of apprenticeship.

CONTRACTS OF APPRENTICESHIP.

4. (1) No person shall, after the commencement of this Act, enter into any contract of apprenticeship in respect of a designated trade except in accordance with the provisions of this Act.

Apprenticeship and employment of minors to be in accordance with this Act.

(2) After the commencement of this Act no person shall save as specially provided in sub-section (3), or without the written consent of the inspector employ in any designated trade for a longer period than six months any minor otherwise than under contract of apprenticeship entered into in accordance with this Act or otherwise than in the form, as nearly as circumstances will permit, set out in the Second Schedule to this Act:

Provided that the Minister may, upon application, authorize the variation of such form to suit the special circumstances of particular designated trades:

Provided, further, that this sub-section shall not apply in respect of a minor, who has already completed the period of apprenticeship customary in the designated trade.

(3) In the case of a person who, immediately prior to the designation of any trade under this Act, is employing a minor in any such trade—

- (a) if the minor is employed under a written contract of apprenticeship, such contract shall, within three months thereafter, be registered at the office of the inspector, but such contract shall in other respects be regarded as if this Act had not been passed; or
- (b) if the minor is not employed under a written contract of apprenticeship the provisions of this Act shall, in relation to any unexpired period of such contract, apply as from the expiry of six months thereafter;
- c) a minor who, without any contract, has been regularly employed in any designated trade, may

become apprenticed in such trade in terms of this Act, and the period during which he was so employed may, with the approval of the inspector, be allowed to be reckoned as part of the time required under the provisions of section *thirteen* for service in that particular trade to entitle him to a certificate.

(4) Any person who acts in contravention of any provision of this section shall be guilty of an offence.

(5) Any party to a contract of apprenticeship under this Act who makes default in carrying out any provisions of such contract which he has thereby undertaken to carry out shall be guilty of an offence.

Investigation of breaches of contract by inspector.

5. If the Minister is satisfied that there are reasonable grounds for believing that an employer or an apprentice has made default in carrying out any provision of a contract of apprenticeship under this Act which it is his duty to carry out, he may instruct the inspector to cause investigation to be made with a view to legal proceedings being taken against the person in default.

Registration of contracts of apprenticeship.

6. (1) No contract of apprenticeship made after the commencement of this Act shall be valid unless—

- (a) at the time of its being made it has been reduced to writing and signed by or on behalf of and with the name of the employer, and by and in the name of the apprentice and the apprentice's guardian ;
- (b) the contract has been registered by the employer at the office of the inspector within a period of three months after the date when the written contract was signed by the party who last executed it.

(2) The inspector may refuse to register any contract of apprenticeship which is not in his opinion for the benefit of the apprentice :

Provided that—

the inspector shall not refuse to register a contract of apprenticeship unless and until his refusal is approved by the committee for the area in which the contract is to be performed.

(3) The registration of a contract of apprenticeship shall not be regarded as a guarantee that all the provisions of the contract are valid or that any provision thereof is not in conflict with the provisions of this Act.

Premiums and bonuses to be unlawful.

7. (1) It shall be an offence against this Act for any person without the written consent of the Minister directly or indirectly to require or permit any person to pay or give or to receive from any person any consideration, premium or bonus in respect of the engagement or employment of an apprentice.

(2) Any person who has in contravention of the preceding sub-section paid or given such consideration, premium or bonus may recover the same in a magistrate's court, and such court if it has convicted any person of an offence

under this section may summarily and without pleadings but in the presence of such person and on proof of the amount, give judgment therefor against the person so convicted, and such judgment shall be of the same force and effect and be executable in the same manner as if it had been given in a civil action duly instituted in that court.

(3) In any proceedings in respect of a contravention of sub-section (1) it shall be presumed, until the contrary is proved, that the Minister has not given such consent as is referred to in that sub-section.

8. (1) Save as is otherwise provided in the law relating to factories, any minor who is over the age or standard up to which compulsory attendance at a school is prescribed by law applicable to him or if there is no such law applicable to him any minor who has attained the age of fifteen, may, with the assistance of his guardian and subject to the provisions of this Act, bind himself as an apprentice to any designated trade.

Who may bind himself as an apprentice.

(2) Subject to the provisions of sub-section (1), any such minor may so bind himself as an apprentice to any designated trade so as to complete the period prescribed in that particular trade :

Provided that, except with the approval of the Minister, a minor shall not so bind himself if before the termination of the contract he would be over the age of twenty-six years.

(3) Any such minor who has no guardian capable of assisting him may be assisted in the execution of the contract by the magistrate of the district in which the contract is to be executed by him and in such case the magistrate for the time being of such district shall throughout the period of the contract, or until such minor attains the age of twenty-one years (whichever is the shorter period), be regarded as *ex officio* the guardian of such minor.

9. (1) Any contract of apprenticeship may, if the Minister approves, be terminated by mutual agreement of all parties thereto.

Cancellation of contract.

(2) The inspector may, with the approval of the Minister and subject to good and sufficient reason adduced by the employer or apprentice or his guardian, cancel a contract of apprenticeship.

(3) The fact of cancellation shall be endorsed by the inspector upon the copy of the contract filed in his office.

10. If owing to the death or insolvency of the employer or for any other reason which the inspector deems satisfactory, the terms of any contract of apprenticeship cannot be fulfilled, or if the parties to the contract mutually agree, the inspector may arrange for the transfer of the contract to another employer. The transfer shall not be regarded as completely effected until it has been approved by the inspector and registered under this Act.

Transfer of contracts of apprenticeship.

APPRENTICESHIP COMMITTEES.

Appoint-
ment of
apprentice-
ship com-
mittees.

11. (1) Subject to the provisions of this section, the Minister may establish for any defined area an apprenticeship committee to advise him in accordance with this Act on all matters connected with the conditions governing apprenticeship in any scheduled industry within that area.

(2) Every apprenticeship committee so established shall be constituted as follows :—

- (a) The number of members shall not be less than five. There shall be an equal number of representatives of employers and employees chosen by the organizations, associations or trade unions of employers and employees concerned and any such organization, association or trade union may also choose alternative representatives.

If at any time any such organization, association or trade union considers that any representative chosen by it is no longer a suitable representative on the committee it shall notify the Minister and the chairman to this effect in writing and at the same time the name of his successor. The notice shall become operative fourteen days after its receipt by the Minister and the new representative shall hold office for the unexpired period for which the former representative was chosen.

- (b) Each member of the committee shall, subject to the provisions of paragraph (a), hold office for a period of three years and shall be eligible for re-appointment.
- (c) In case of sickness or absence of any member the alternate appointed may sit as a member of the committee for the period of such absence.
- (d) Where there is no organization, association or trade union, which in the opinion of the Minister, is sufficiently representative in any scheduled industry to elect members of the apprenticeship committee in such scheduled industry, he may appoint such number of representatives from the rest of the scheduled industry in addition to those appointed by such organization, association or trade union, or in lieu thereof, as he may consider necessary.
- (e) The chairman shall be an independent person appointed by the Minister and in case of equality of votes on any subject he shall have a casting vote on that matter but he shall have no deliberate vote.

(3) No act of or notice by an apprenticeship committee and no proceedings of any meeting thereof shall be invalid by reason only that there is a defect in the appointment of any member or that a vacancy exists amongst the members.

(4) The Minister may assign an officer in his department to act as secretary to an apprenticeship committee.

(5) Notwithstanding anything in this Act contained where the employer is the railways and harbours administration or any Government department, the apprenticeship committee to be established to advise the Minister on all matters connected with the conditions governing apprenticeship in such administration or department in any scheduled industry shall be such persons as the Minister may appoint.

12. (1) The meetings of an apprenticeship committee shall be held at such intervals and at such hours and places as the committee may from time to time determine. Procedure of an apprenticeship committee.

(2) The quorum of the committee shall be a majority of the total number of representative members.

(3) If the chairman is absent from a meeting of the committee the members present shall choose from among themselves a person to act as chairman at that meeting and he shall have a deliberative but no casting vote.

(4) Minutes of the proceedings of every meeting shall be kept and shall be submitted at the next ensuing meeting and if passed thereat as correct shall be confirmed by the person presiding thereat, and the minutes so confirmed shall, without further proof, be *prima facie* evidence of the proceedings of the meeting to which they relate.

(5) The minutes of the proceedings of an apprenticeship committee shall be open to inspection at all reasonable times by an officer designated by the Minister and such officer may also attend any such meeting, but shall not take part therein unless requested to do so by the chairman.

13. (1) The period or periods of apprenticeship, the number of apprentices who may be employed, the rates of wages of apprentices, the qualifications upon which apprenticeship shall commence, the nature and number of the educational classes to be attended by the apprentice and the course of training to be prescribed in a designated trade shall be fixed by the Minister after consultation with the apprenticeship committee or committees concerned and his decision shall be notified in the *Gazette* as in section *fifteen* is provided. The Minister may, in like manner alter, amend, vary or withdraw any decisions under this section : Provided that the sub-section shall not apply to the fixing of the rates of wages of apprentices employed in the railways and harbours administration or in any Government department. Period of apprenticeship.

(2) In fixing the period of apprenticeship the Minister may take into consideration the age, education, experience and vocational training of the apprentices and may fix different periods according to the fact so considered.

(3) In fixing the rates of wages under sub-section (1) of this section, the Minister may take into consideration the age, experience and vocational training of the apprentices and may lay down different rates of wages according to

their age and experience. In no case shall the rates of wages be based upon quantity or output of work done.

(4) The Minister may, after consultation with the committee vary the number of apprentices determined under sub-section (1) of this section in respect of any district or area in so far as any individual workshop is concerned and may make special provision for cases where no journeymen are employed.

(5) The Minister may require and direct that every apprentice shall be provided by his employer with a book to be called the wages book in which shall be entered by the employer every payment of wages made by him to the apprentice from time to time as the payments are made. Such wages book shall be the property of and remain in the custody of the apprentice.

Powers and functions of apprenticeship committees.

14. An apprenticeship committee established under this Act shall perform the duties and functions and possess the powers following :—

- (a) It may recommend to the Minister the designation of the trade or branch of trade in any industry specified in the First Schedule to this Act to which the provisions of this Act in respect of apprenticeship shall become applicable ;
- (b) it may recommend to the Minister the qualifications upon which apprenticeship may commence in any designated trade provided that the age and standard of education shall not be lower than is described in sub-section (1) of section *eight*, and provided, further, that if in any designated trade the customary qualification differ in different areas, the Minister may make regulations with a view to arriving at a uniform qualification ;
- (c) it shall recommend to the Minister from time to time the number of apprentices who may be employed in any workshop or industrial establishment : Provided that the number of apprentices shall not be restricted with the object of limiting the future number of journeymen ;
- (d) it shall recommend to the Minister the rates of wages of apprentices, except in the case of those employed in the railways and harbours administration or in any Government department ;
- (e) it may investigate any matter of dispute arising out of a contract of apprenticeship referred to it by one of the parties to such contract or the Minister and shall endeavour to settle amicably any such dispute, and if it fails so to settle such dispute the provisions of sections *five* and *nine* shall apply ;
- (f) it may, after consultation with the educational authority, recommend to the Minister the nature and number of educational classes to be attended by an apprentice in terms of his contract of apprenticeship ;

- (g) it shall report on any matter concerning apprenticeship referred to it by the Minister.

15. (1) The Minister shall publish a notice in the *Gazette* and in one or more newspapers circulating in the district or area concerned, of the trades or branches of trades in the industry which, after consultation with the apprenticeship committee he proposes in accordance with section *one* to designate as a trade or branch of trade to which the provisions of this Act in respect of apprenticeship shall apply. Any objections thereto may be lodged with the apprenticeship committee within fourteen days of such notice and the committee shall hear any such objections and report thereon to the Minister. If no objections are lodged within the said period or, if after objections have been lodged and considered, the Minister has come to a decision, he shall publish the same by like notice, and the trade or branch of trade designated in such notice shall thereafter be the designated trade for the purposes of this Act.

Publication
of notices by
Minister.

(2) Before giving the decisions described in sub-section (1) of section *thirteen*, the Minister shall publish a like notice of his proposals; and the procedure with regard to publication and the hearing of objections shall be as described in the last preceding sub-section. The decision of the Minister so published in regard to any of the matters described in sub-section (1) of section *thirteen* shall apply for the purposes of this Act throughout the designated trade concerned.

(3) The Minister may, upon application by an organization of employers or of employees concerned after further enquiry or after consultation with the apprenticeship committee and after further enquiry and by like publication, amend, vary or withdraw any decision made by him in accordance with this section.

16. (1) An apprenticeship committee may take evidence for the purpose of enquiring into any matter falling within its power, duties and functions, and for this purpose the committee may under the hand of its chairman subpoena witnesses if necessary, and may through the person presiding at a meeting administer an oath to any witness, and it may examine the wages book in relation to the rates of wages paid by employers and shall report fully to the Minister on the matters which come before it in the course of its enquiry.

Evidence on
oath and
witnesses
before
apprentice-
ship
committees.

(2) A subpoena for the attendance before an apprenticeship committee, of any person or for the production to it of the wages book and documents shall be as nearly as practicable in the form set out in the Third Schedule to this Act, shall be signed by the chairman of the committee and shall be served in the same manner as it would be served, if it were a subpoena issued by the magistrate's court of the district in which the committee is sitting.

(3) Every person subpoenaed to attend and give evidence before an apprenticeship committee at any of its sittings

shall be bound to obey the subpoena served on him. Any person who refuses, or fails without sufficient cause, to attend and give evidence relevant to the committee's enquiry at the time and place specified in the subpoena or who refuses to be sworn when the chairman desires to administer an oath to him, shall be guilty of an offence and liable on conviction to a fine not exceeding twenty-five pounds :

Provided that every person so subpoenaed shall be entitled to all the privileges to which a witness subpoenaed to give evidence before a provincial division of the Supreme Court is entitled.

(4) Any witness who, after being duly sworn, gives false evidence before an apprenticeship committee on any matter relevant to the enquiry, knowing such evidence to be false, shall be guilty of an offence and liable on conviction to the punishment prescribed by law for the crime of perjury.

(5) Every witness who attends before an apprenticeship committee and refuses to answer or to answer fully and satisfactorily to the best of his knowledge and belief all questions lawfully put to him by the committee, and every person who at any sitting of an apprenticeship committee, wilfully interrupts the proceedings at such sitting shall be guilty of an offence and liable on conviction to a fine not exceeding twenty-five pounds.

(6) Any officer or member of an apprenticeship committee who shall disclose, except for the purposes of this Act, any information acquired by the committee in the exercise of its powers under sub-section (1) of this section, shall be guilty of an offence and shall be liable on conviction to a fine not exceeding fifty pounds.

GENERAL.

Penalties. 17. Any person who is guilty of an offence against this Act in respect of which no penalty is specially provided, shall be liable upon conviction to a fine not exceeding twenty-five pounds or in default of payment to imprisonment for a period not exceeding three months, or in case of a continuing offence, to a fine not exceeding five pounds for every day during which the offence continues.

Special jurisdiction of magistrates' courts as to area. 18. Anything to the contrary notwithstanding in the law relating to magistrates' courts, a magistrate's court may exercise any civil or criminal jurisdiction in respect of matters which under this Act would be dealt with by a magistrate's court notwithstanding that the act, omission or offence from which such matter has arisen occurred outside the area of jurisdiction of such court.

Regulations. 19. The Governor-General may make regulations not inconsistent with this Act for the better carrying out of the objects and purposes thereof.

20. In this Act, unless inconsistent with the context—
- “ apprentice ” means any person bound in accordance with this Act by contract of apprenticeship ;
 - “ employer ” means in relation to an apprentice any person to whom the apprentice is or is proposed to be bound in accordance with this Act by contract of apprenticeship ; and shall include the railways and harbours administration or any other Government department in which a scheduled industry is carried on ;
 - “ inspector ” means the inspector of apprenticeship appointed under this Act ;
 - “ Minister ” means the Minister of Mines and Industries or any other Minister to whom the administration of this Act may be assigned by the Governor-General ;
 - “ regulation ” means a regulation made and in force under this Act ;
 - “ this Act ” includes the regulations and schedules.

Interpreta-
tion of terms.

21. So much of the Regulation of Wages, Apprentices and Improvers Act, 1918, as relates to apprenticeship or to the number of apprentices who may be employed or to wages or conditions of employment of apprentices shall not apply in respect of any designated trade.

Non-
application
to appren-
ticeship of
Act No. 29 of
1918.

22. This Act may be cited for all purposes as the Apprenticeship Act, 1922, and shall commence and come into operation on a date to be fixed by the Governor-General by proclamation in the *Gazette*.

Short title.

FIRST SCHEDULE.**INDUSTRIES TO WHICH THE ACT APPLIES.**

THE BOOTMAKING INDUSTRY.
 THE BUILDING INDUSTRY.
 THE CLOTHING INDUSTRY.
 THE CARRIAGE BUILDING INDUSTRY.
 THE ELECTRICAL ENGINEERING INDUSTRY.
 THE FOOD (baking, butchery, milling) INDUSTRY.
 THE FURNITURE INDUSTRY.
 THE LEATHER WORKING INDUSTRY.
 THE MECHANICAL ENGINEERING INDUSTRY.
 THE PRINTING INDUSTRY

SECOND SCHEDULE.**FORM OF CONTRACT OF APPRENTICESHIP.**

THIS CONTRACT OF APPRENTICESHIP made and entered into the.....day of....., 19..... between..... (hereinafter called the Employer) of the one part, and..... a minor of the age of..... years (hereinafter called the Apprentice), assisted herein by his or her parent or guardian..... on the other part.

WITNESSETH :

1. THAT the Apprentice, having been found medically fit, does of his own free will and with the consent of his father or guardian by these presents agree :—

- (a) To bind himself as an Apprentice to the said Employer in the trade or occupation of..... for a period of.....years, commencing on the.....day of.....19.....
- (b) To serve faithfully, honestly and diligently the Employer and to obey all lawful and reasonable commands and requirements of the Employer or those duly placed in authority over him.
- (c) Not to disclose or communicate to any person whomsoever any information relating to the business of the Employer.
- (d) Not to be interested directly or indirectly, either as a paid agent or servant, in any business or undertaking other than that of the Employer, and not to belong to any Trades Union, *
- (e) To attend, in accordance with the requirements of the Minister, such classes as may be decided upon by him for the purpose of receiving technical or other education.

2. THAT the Employer does by these presents agree :—

- (a) To bind himself to receive the said Apprentice for the period stated and to teach efficiently or cause to be taught efficiently the said apprentice in the trade or occupation specified.
- (b) To refund to the said Apprentice the reasonable class fees expended on technical instruction, where free instruction is not available, provided that the Apprentice has made not less than 75% of the full number of attendances at the technical course, and provided that the Principal of the technical institution has reported that satisfactory diligence has been shown by the Apprentice.

* Section 3 of an amending Act (No. 15, 1924) amended this clause by " the deletion therefrom of the words ' belong to any Trades Union,' and the substitution therefor of the words ' absent himself from his employment without the sanction of the Inspector.' "

- (c) To pay to the said Apprentice wages at the following rates viz. :—
 - For the first year the sum of..... per
 - For the second year the sum of..... „
 - For the third year the sum of..... „
 - For the fourth year the sum of..... „
 - For the fifth or any subsequent year
the sum of..... „
 or at such other rates as may be decided upon from time to time by the Minister.
- (d) To furnish annually a report on the progress and conduct of the Apprentice to the Apprenticeship Committee.
- (e) To endorse and sign this contract on completion of the period of apprenticeship and to hand it over to the Apprentice as his property.

3. THAT it is further agreed between all the parties to the contract that :—

- (a) Any military service which the Apprentice who is bound for five years or longer may be called upon to perform at any time during the period of this Apprenticeship shall be held to be part of the term of the Apprenticeship, provided that the total period of such military service shall not in the aggregate amount to over 12 months, and any period which shall have exceeded 12 months shall entail such extra period being served by the Apprentice before the terms of this contract shall have been complied with. Where the duration of the contract is for less than five years the period of military service as allowed shall be equal to one-fifth of the duration of the contract. The Employer shall not be required to pay wages to the Apprentice whilst he is absent from work on such military service.
- (b) This contract may with the mutual consent of all parties be transferred to another Employer in the same trade, provided that the Employer or the Apprentice shows cause why he should not complete the contract, and provided that the Inspector assents to such transfer, and such transfer shall be effected by endorsement thereof on this contract signed by the parties thereto and endorsed on the copy of this contract filed in the office of registration, and upon such transfer taking place all parties thereto shall be bound by all the terms of this contract for the unexpired portion thereof.
- (c) If the Employer has good grounds for belief that the Apprentice has committed a serious breach of the terms of this contract or that the Apprentice has or is conducting himself in an unseemly manner and contrary to good discipline, he may forthwith suspend the Apprentice and shall immediately report the matter to the Minister to be dealt with under the Act.
- (d) If the Employer shall commit any serious breach of the terms of this contract the Apprentice may with the consent of his parent or guardian report the matter to the Minister to be dealt with under the Act.
- (e) The Minister shall be notified by both parties to this contract in the event of any alteration to the contract such as provided for in the last four preceding paragraphs.

IN WITNESS WHEREOF the contracting parties hereto have hereunder set their hands the day and year aforewritten.

AS WITNESSES :

1.....

2.....

Employer.

1.....
 2..... Parent or Guardian.
 1.....
 2..... Apprentice.

REGISTERED at the Office of the Inspector of Apprenticeship this
day of.....19.....

 Inspector of Apprenticeship.

TO BE FILLED IN IF APPRENTICE TRANSFERS TO ANOTHER EMPLOYER.

With the consent of all the parties to this contract the services of
 the Apprentice and the responsibilities of the Employer are hereby
 transferred to.....this.....
 day of.....19.....

AS WITNESSES :

1.....
 2..... Employer.
 1.....
 2..... Employer.
 1.....
 2..... Parent or Guardian.
 1.....
 2..... Apprentice.

REGISTERED at the Office of the Inspector of Apprenticeship this
day of.....19.....

 Inspector of Apprenticeship.

**TO BE FILLED IN ON COMPLETION OF THE TERM OF APPRENTICESHIP
 UNDER THIS CONTRACT.**

THIS IS TO CERTIFY THAT the within named.....
 has completed his apprenticeship under this contract, this.....
 day of.....19.....

 Employer.

THIRD SCHEDULE.

**FORM OF SUBPOENA TO APPEAR BEFORE APPRENTICESHIP
 COMMITTEE.**

To A.B. (name of person summoned, and his calling and residence.)
 You are hereby summoned to appear at.....(place)
 upon the.....day of.....19.....
 at.....o'clock, before the.....
 apprenticeship committee established under the Apprenticeship
 Act, 1922, to give evidence respecting.....
 (if the person summoned is to produce any documents, add), and
 you are required to bring with you.....
 (specify the wages book and documents required).
 Given under the hand of the chairman of the committee
 this.....day of.....19.....

APPENDIX IX.

MEMORANDUM ON THE SWEDISH SYSTEM OF EDUCATION.

(From information supplied by Mr. Nils Fredriksson of Stockholm, a member of the Commission).

The kingdom of Sweden embodies an area of about 410,600 square kilometres of land, the length from north to south being nearly 1,600 kilometres.

In the north of Sweden the climate in winter is very hard, with a temperature often 30–40°C. below zero and deep snow lasting from September to May. In the south of Sweden the climate is more temperate, as in Denmark or in the north of Germany.

The population, amounting to a little more than 6 millions, represents about 35 per square kilometre in the southern part and only 4.4 per square kilometre in the northern part of the country.

There are 113 towns (the biggest being Stockholm with some 450,000 inhabitants, Gothenburg with 230,000, and Malmö with 120,000) 39 separate boroughs and 2,373 county communities.

The total income is calculated to be an average of 1,019 kronor (£56) per inhabitant, and the value of the property 2,403 kronor (£133) per inhabitant.

As to occupations: 44 per cent of the population are connected with agriculture, 35 per cent with different industries, including mining and handicrafts, 15 per cent with commerce and communications, and 6 per cent with civil service and other occupations.

The value of the annual production of the industries (agriculture and handicraft excluded) amounts to 4–5 milliards kronor (220 to 270 million £).

The power used in the industries represents a primary motor capacity of nearly 2 million h.p. Most of the power is obtained from hydraulic plants, the total capacity of such plants in Sweden representing about 1,500,000 h.p.

The State income is: from taxation about 220 million kronor, from customs and excise 290 millions, from different contributions 14 millions, from post, telegraphs and railways, etc., about 100 millions net, interests, etc., 22 millions.

The State expenditure includes about 125 million kronor for educational purposes. In this sum is calculated about 64 millions for primary education and continuation schools, 15 millions for secondary education, 4.6 millions for pure technical and commercial schools. In addition to that comes 1.6 millions for pure agricultural schools. Cost of living bonus on teachers' salaries is paid from other funds not included in these figures.

Sweden has a very comprehensive system of education. Adequate facilities are afforded for primary, continuation, secondary and technical education. The nature and extent of these facilities can best be seen by the following diagram in conjunction with the accompanying information.

1. ELEMENTARY SCHOOLS (FULL-TIME).

Elementary education has been compulsory since 1842.

Attendance is compulsory from 7 to 13 years, or 14 years if necessary for attaining the prescribed standard. A general education is provided free to all pupils. The Schools are obligatory on the local authorities and are managed by them.

Attendance is very regular in most of the schools, averaging 95 per cent to 98 per cent.

Leaving certificates are awarded as the result of an examination. On account of the different conditions in the different parts of the country there are different types of primary schools with different types of syllabuses. In all schools a subject which might be described as "Environment Knowledge" is taught. This includes a simple course in Nature Study, in Civics, and in general local intelligence.

The local authority has to provide the necessary buildings, including school garden and apartments for the teacher. It has in addition to meet all outlay in connection with fuel, and the salary and expenses of the teacher. Grants from the State cover 90 per cent of the minimum salary of the teacher and in some cases part of the cost of the equipment. In poor districts, the State is prepared to give a grant in aid for building and fuel.

In 1923, there were 685,800 pupils in attendance at the State elementary schools and only some 23,000 in private elementary schools. These private schools were, however, open to State inspection.

In the same year, State expenditure amounted to 58,316,424 kronor (£3,208,000). Local expenditure amounted to 76,978,636 kronor (£4,240,000).

2. CONTINUATION SCHOOLS (PART-TIME).

These schools were first suggested in 1842, but not until 1918 were students compelled to attend them, and it was only in 1926 that it was made compulsory on the local authorities to supply them.

Attendance is compulsory from 13 to 15 years and even to 18 years if the prescribed standard has not been previously reached. All children are obliged to attend these schools unless in attendance at some other recognised school, and employers are obliged to give them free time to do so. Students are required to attend for a minimum of 180 hours in the year. The hours of attendance can be arranged to suit local circumstances, and if desired, may be taken partly in the summer and partly in the winter.

There are two types of schools, (a) a general continuation school, and (b) a specialised school with a vocational bias. In the former school the subjects taught are : Applied Science (mostly rural), Civics and Swedish (literature, book-keeping, etc.). Subjects taught in the latter school are : Applied Science combined with Manual Training or Business Methods, Civics and Swedish (as before) : Domestic Science for girls. Teachers of continuation schools in the towns are often also teachers in the technical schools.

On the completion of the two years' course, certificates are issued as the result of a qualifying examination. This certificate is necessary for entrance to higher schools and has also to be shown to employers as proof that the continuation course is completed. (In this connection it is interesting to note that students are not permitted to take up regular employment before 14 years in any industry or trade).

Average age at the beginning of the School-year

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

Workshop or Practical work of Employers.
Schools

Apprentice Schools. Trade Schools

Continuation Schools

Commercial Schools & Schools of Housekeeping. Technical Trades Schools.

Intermediate Schools Intermediate Leaving Certificate

Higher Elementary Schools.

Folk High Schools Training Colleges

Elementary Schools
Infant School

Technical Gymnasia Technical High Schools.

Commercial Gymnasia Universities and

Intermediate Leaving Certificate. Different High Schools.

Secondary Junior Courses

Senior Courses Secondary Schools. Leaving Certificate.

Private Preparatory Courses.

Girls Secondary Schools.

Girls Senior Courses.

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

Average age at the beginning of the School-year

Denotes Part-time Schools.
Denotes Full-time Schools.

In 1923-24 over 90,000 students were enrolled in these schools, over 70,000 being in rural districts. Children in the towns go, as a rule, to the higher elementary schools. In 1925-26 the number enrolled had increased to 130,000 students.

The schools are managed by the local authorities who have to provide the buildings, where required. The expenditure is met in the same manner as for the primary schools with the exception that the State pays the full minimum salaries of the teachers. In 1923-24 State expenditure amounted to 2,400,000 kronor (£132,000).

3. WORKSHOP SCHOOLS (FULL-TIME).

These schools were established to provide practical training as a preparation for entrance to the trades for young people who had left the elementary schools but who were unable to get regular work. As might be expected, these schools are mainly situated in towns such as Stockholm and Gothenburg. They are not, however, confined to the cities as there are many smaller places having workshop schools. As an example, a school for glass engraving is in existence in a country district in connection with a local glass works. There is also a country school for blacksmiths and ornamental iron-work. Students are obliged to attend continuation schools also unless provision is made for the necessary instruction in the workshop schools.

Each school has a small advisory committee, consisting of the headmaster and one representative of the employers and one of the workers with a view to supervise the work of the school and to see that the students will afterwards be absorbed into the various trades concerned. The teachers are all qualified tradesmen with teaching experience. The schools are conducted like real workshops, keeping the same number of working hours as prevails in the particular trade or industry. There is no unfair competition between the school and the worker, as the school must take the same price for its output as the tradesman. Furthermore the boys receive as premiums part of the proceeds of the sale of articles made by them.

Generally, there would be 1,000 to 1,200 students in these schools, of whom about 500 would be in Stockholm.

Schools may be either municipal or private. Several have been established by craftsmen's associations. The principals or owners of the schools have to provide buildings, heating and lighting. The State pays two-thirds of the teachers' salaries and from one-half to two-thirds of the cost of equipment and of the losses on material. These schools are somewhat expensive. The glass engraving school with a total of twelve students costs £33 per student of which the State provides £22. The blacksmiths' school with 25 students costs £24 per student, of which the State provides £18.

4. " APPRENTICE " SCHOOLS (PART-TIME).

A municipality establishing such schools may decide that attendance shall be compulsory for young persons employed in the trade concerned. Employers are obliged by law to give employees between the ages of 14 and 18 free time to attend the classes. Provision is made for a course of study extending over two years. Training for each year lasts for a period of eight to nine months, with some six to twelve hours per week which are arranged, as a rule, so as not to affect the earning capacity of the students. The minimum attendance required in the year is 200 hours, and there is a maximum of 450 hours.

These schools may be erected for all kinds of trades, industries, commerce and domestic work. The object of the school is to complete the practical training of the students in their employment. Instruction therefore, both theoretical and practical, is entirely professional. For entrance, students must have passed a continuation school or be equally qualified.

The local authority elects a special board to nominate the students and to suggest the syllabus. It is also responsible for the provision of the building, equipment and heating. Special grants are paid by the State, in addition to two-thirds of the fixed average of the minimum salaries of the teachers. It is proposed that each school should also receive for purposes of administration a fixed sum dependent upon the size and kind of the school.

The number of students in attendance at these schools is generally about 4,000 to 5,000.

5. TRADE SCHOOLS (PART-TIME).

These are voluntary schools intended for those who, having passed through the apprentice school, wish to increase their occupational knowledge.

Education can be arranged either in the form of :—

- (i) *Trade Courses* for a whole trade, or
- (ii) *Subject courses* in regard to a certain branch of the trade, or
- (iii) *Master Courses*, for adults, skilled labourers, etc., who are foremen or independent employers or wish to train themselves as such.

Instruction in these schools is practically of the same standard as the corresponding third and fourth year courses in the Technical Schools in the Saorstát.

The number of students in these schools is estimated at 1,100.

Schools may be municipal or private and the owners must provide the buildings and equipment. The State grants amount to two-thirds of the teachers' minimum salaries with extra grants for special lectures, and one-half to two-thirds of the expenditure on teaching materials and equipment.

The annual State grants for workshop schools, apprentice schools and trade schools amount to about 1,500,000 kronor (£82,500 approximately), municipal expenditure about 1,500,000 kronor (£82,500), whilst fees amount to some 50,000 kronor (£2,750). The amount of private expenditure is not known.

6. TECHNICAL TRADES' SCHOOLS (FULL-TIME).

The minimum age for admission is 17 years, the average age from 20 to 22 years.

The entrance qualification is the practice of a trade for at least two years in such a manner that it may be considered a good preparation for the studies to be undertaken ; in addition, a certain minimum of knowledge in mathematics and other subjects (excluding foreign languages) as shown by the Intermediate Leaving Certificate, or an equivalent which is obtainable in the Apprentice School.

The courses last for two years, each school year being of 40 weeks. The syllabuses are prepared by the Central Board of Education in co-operation with local bodies, industrial corporations and the board of the school concerned. The students proceed subsequently to

prominent positions in different industries such as assistants to superintendents of works, foremen and to higher positions in smaller industries.

The schools are controlled by a local board consisting generally of five members, two of whom are appointed by the Central Government, two by the local authority with the Headmaster of the school as the fifth member. The main function of the board is to consider local conditions and the general conditions of industry in order to recommend the most suitable syllabuses for the school.

There are two schools connected with the mechanical industries, one with the electrical industry, one with the chemical industry, one with the wood industry, and one with the building industry. These are all State schools. There are in addition two private schools for mining and metallurgy aided by the State.

In 1925 there were about 300 students in attendance at these schools, but in years when industry was flourishing, the number has been as high as 500.

7. TECHNICAL GYMNASIA (FULL-TIME).

The minimum age for admission is 16 years, the average age being 18 years.

The entrance qualification is a requisite knowledge corresponding in the main to the Intermediate Leaving Certificate (including some foreign language) but only a short period of practical work.

The course is for 3 years, each school-year being of 38 weeks. Six months must be given to practical work before leaving the school.

These schools are all State schools and controlled in the same way as the Technical Trade Schools but the instruction is not as specialised, the work corresponding more closely to a senior course in the ordinary secondary schools. (See 11).

There are five of these schools. The school in Malmö has a mechanical engineering bias. In Härnösand the bias is also towards mechanical engineering, but with special reference to timber and pulping machinery. In Örebro, provision is made for mechanical engineering, electrical engineering, chemistry and commercial subjects. The school in Borås has a textile bias and in Norrköping a building trade bias. The number of students in attendance at these schools is generally about 450.

The students find subsequent employment in different industries, State railways, and in the mercantile marine and architects' offices as technical experts in machinery. They also fill technical posts to a large extent in the different trades and also in connection with the Customs.

The annual State expenditure on Technical Trade Schools and Technical Gymnasias is about 500,000 kronor (£27,500) exclusive of the State grant to the two private Technical Trade Schools which amounts to 45,000 kronor (£2,500). For both types of schools the local authority has to provide the necessary school buildings, furniture and fuel, and also apartments for the Headmaster, whilst the State is responsible generally for the equipment.

8. COMMERCIAL GYMNASIA (FULL-TIME).

These are really commercial secondary schools, the courses being parallel to the senior courses in the secondary schools.

The age of entry is 16 years, and the qualifications for admission are similar to those required for the Technical Gymnasias. The course extends over a period of two to three years and is designed to prepare students for intermediate positions in commerce, in the shipping trade, in insurance companies, in banks and in the civil service.

The syllabus is prepared by the teachers and the local board. There are only six such schools and they are all privately supported by trustees with assistance from the State and the local authorities. The fees charged are amongst the highest in Sweden, ranging from £11 to £14 per student per annum, but there are many free places.

The total number of students in attendance at these schools is generally about 700, of whom one-half would be girls.

State grants are calculated from three-fourths of the expenditure—buildings, etc., not included—and for a recent year amounted to 255,000 kronor (£14,000) per annum.

9. HIGHER ELEMENTARY SCHOOLS (FULL TIME).

The Higher Elementary School is parallel to the continuation school. It is a full-time day school under local control but not compulsory. Its function is to give an education similar to, but more complete than that given in the continuation school, including one or two foreign languages.

The entrance qualification is the sixth standard of an elementary school, as proved by an entrance examination. The duration of the course may vary from one to four years.

Schools are of two types, general and specialised. Some of the general type have an agricultural bias. The specialised type may be technical or commercial or with domestic instruction.

In all schools the girls may be engaged in domestic work when the boys are at manual instruction. For each school there is a special board elected by the local authority.

In 1925 there were 66 of these schools with a total of about 6,200 students of whom 3,500 were girls.

The local authority has to provide the necessary school buildings, equipment and apartments. The State pays a block grant in respect of the classes held and also contributes towards the salaries of the teachers.

The annual State expenditure amounts to nearly 1,500,000 kronor (£82,500) whilst local expenditure reaches 1,400,000 kronor (£79,000).

10. INTERMEDIATE SCHOOLS (FULL-TIME).

These are mostly municipal but not compulsory. The entrance qualification is the sixth standard of the elementary school, as tested by entrance examination.

The course of study extends over four years and the subjects are mainly the same as in the higher elementary schools, stress being laid on the learning of two foreign languages instead of technical and commercial subjects. Provision is, however, made for the inclusion as an extra subject of domestic training for girls.

The purpose of the schools is to prepare for intermediate positions in the civil service, for business and also for more specialised education in some of the higher schools. At the conclusion of the course a State examination is held as a result of which leaving certificates are issued, which are required for subsequent admission to employment in the Post Office, Civil Service and State railways.

In 1924-25 the number of these schools was 82 with a total enrolment of 9,627 students, of whom 5,009 were girls.

Students' fees may not be charged unless sanctioned by the Government.

The State pays a block grant for each class and a contribution towards the salaries of the teachers. The local authority has to provide school buildings, furniture and fuel and also free apartments for all the teachers.

The annual State expenditure is about 2,900,000 kronor (£159,500), and local expenditure some 1,800,000 kronor (£99,000).

11. SECONDARY SCHOOLS (FULL-TIME).

These are mainly State Schools. The entrance qualification is the third standard of the elementary school. The State schools' senior courses are for boys only, but since 1924, girls are allowed to attend if there is sufficient accommodation. Local authorities still retain power to exclude girls from these schools. There is, strictly speaking, no State Secondary school exclusively for girls in Sweden, except a special one which is an adjunct to the State training college for female secondary school teachers.

The secondary schools are managed by a local board composed of the teachers and the Headmaster. The full course extends over nine years, the first five years comprising the junior course and the last four years, the senior course. On the top of the five years' course there is an extra course of one year leading to the intermediate leaving certificate. In addition to the intermediate leaving certificate, the State awards senior leaving certificates as the result of a very severe examination. The certificate entitles the holder to entrance to the University or other high schools.

There are at present 38 pure State schools, 7 municipal schools, 18 mixed schools and 14 experimental secondary schools for boys, that is a total of 77 complete secondary schools having junior and senior courses. Furthermore, there are 83 private State-aided secondary schools of special type for girls. In all secondary schools there are more or less considerable fees, but many free places and also a number of scholarships are awarded.

According to the new scheme accepted in 1927 a number of private girls' secondary schools will be taken over by the State, and, as a rule, the entrance qualifications for all secondary schools will be the sixth standard of the elementary school.

In 1925 there were in the 59 boys' secondary schools 21,146 students in junior courses and 8,246 in senior courses, whilst in the 83 girls' secondary schools there were 28,098 students, and in the 18 mixed and other schools 5,800 students.

In 1924-25 the expenditure by the State on the 77 secondary schools totalled 13,900,000 kronor (£764,500); the expenditure by the local authorities is not known, as it is not separated in the municipal accounts. State grants to the 83 girls' secondary schools amounted to 4,064,000 kronor (£223,500). These schools in addition receive an income of 1,610,000 kronor (£88,500) from local authorities and other sources.

12. TECHNICAL HIGH SCHOOLS.

There are in Sweden two institutions that could be considered Technical High Schools or Technical Universities—the Royal Technical

High School in Stockholm, and Chalmers Institute of Technology in Gothenburg.

The entrance qualifications are the senior leaving certificate of the secondary school in respect of science courses, or students may be admitted from the Technical Gymnasias. The normal age of students on admission would be 19 or 20 years. Varied courses of study are provided extending over a period of four to five years. The course in Mechanics is divided into two sections, one dealing with the production of machinery and the other with steam and internal combustion motors. The electrical course is also divided so as to deal with high tension and low tension. The chemical course deals with pure chemistry and with technical chemistry. There is also a course in mining, metallurgy and metal manufacture. The shipbuilding has two branches, the first concentrating on the construction of the body of the ship, and the second on machinery. Furthermore there are branches for civil engineering and for architecture. At the conclusion of the course students may be required to prepare a thesis. The Royal Technical School in Stockholm has recently been empowered to grant the degree of Doctor of Technology.

The Chalmers Institute at Gothenburg has somewhat similar lectures, but provision is not made for architecture and metallurgy, the shipbuilding being the predominant feature. The different courses are not, however, as complete as in Stockholm, most of them extending over three years only.

Both these schools prepare students for positions as leaders of scientific and industrial research and for higher civil service positions where technical qualifications are essential. Students also avail of the training to become teachers in technical trade schools and gymnasias, and, in exceptional cases, in the high schools themselves.

In 1925 there were 666 students in Stockholm and 421 in Gothenburg. The annual cost to the State of these two institutions is about 1,500,000 kronor (£82,500).

13. TRAINING COLLEGES.

Elementary school teachers must all have passed through Training Colleges. Training colleges for teachers in infant schools are generally county schools, the others are all State institutions.

Infant school teachers have to undergo a course of training for two years. On entrance to the college, they must be eighteen years of age and must have a knowledge of religion, of Swedish, of arithmetic, and of other subjects equivalent to the continuation school standard as certified by entrance examination.

Teachers in the elementary schools proper must take a four years' course. Entrance qualifications are: a knowledge of religion, of Swedish, of arithmetic, of geography and some other subjects partly of the Intermediate School Leaving Certificate standard as verified by an entrance examination. The age of entrance is generally not below 18.

The years between 15 and 18—from that at which an Intermediate School Leaving Certificate can be obtained to the age at which the students enter the training college—are intended for the purpose of acquiring practical experience in any trade, such as agriculture, handicrafts or domestic economy. This is regarded as a most important period in the life of the potential teacher, who has opportunities in these years of getting into close contact with practical

life, and also of acquiring experience of industrial life. Only very few students of matriculation standard are admitted to the training colleges. These students, having passed the senior course of a secondary school, may complete the training college course in one year. However it is contrary to the policy of the State to draw potential teachers direct from the schools.

Where, as in the case of rural districts it, is necessary to utilise the services of selected elementary teachers in the continuation schools, special courses are provided to equip them for this purpose. Similar courses are provided for tradesmen and for specialists in particular subjects to qualify them as teachers. There are a great number of courses for teachers in the continuation schools, held generally for a period of six weeks in the summer. In 1926 total expenditure in connection with these summer courses (including scholarships) amounted to 142,000 kronor (£7,810). There were 854 students in attendance in the same year.

The State expenditure for the training colleges amounts annually to some 3,300,000 kronor (£181,500). In the year 1925, there were sent out from the training colleges 725 infant school teachers (women), 470 men teachers, and 449 women teachers for the elementary schools.

In order to provide suitable teachers for the apprentice and trade schools, the Board of Education has a special staff which is sent to various centres, as required ; courses, as a rule, vary from two to eight weeks but may be longer. Generally the student-teachers have the necessary knowledge of their subjects and require only instruction in the right principles of teaching. Occasionally it is found necessary to arrange courses in special subjects.

The teachers in higher elementary schools require additional qualifications to those in the elementary schools. Generally they are required to matriculate and to take some of the University examinations. To teach technical subjects they must have practical experience and many have passed through a technical gymnasia or technical high school.

Teachers in the secondary schools must have a University degree and at least two years' teaching experience.

Teachers in the technical or commercial gymnasia require similar qualifications to those teaching the senior course in the secondary schools, but in the requisite technical direction. They must also have practical experience of industrial or commercial work.

14. FOLK HIGH SCHOOLS.

The purpose of these schools is to give a good general education in civics, literature and similar subjects. Domestic Economy is often included for girls. The schools have generally a bias towards agriculture. Candidates on admission must be (if boys) 18, and (if girls) 16 years of age, and have reached a continuation school standard of education. The length of the course is generally 24 weeks. To this may be added a second year course of the same length. In most of the schools special summer courses are arranged for girls. The annual State grants for these schools amount to about 1,500,000 kronor (£82,500).

15. COMMERCIAL SCHOOLS AND SCHOOLS OF HOUSE-KEEPING.

In some centres, mainly in rural districts, there is no prospect of erecting apprentice or trade schools. To enable young people engaged

in trade and commerce in such districts to obtain the instruction they require, central day schools are established at which the same subjects are taught as in apprentice and trade schools. They are called Commercial Schools and Schools of House-keeping. Students must have attained seventeen years on admission, have had two years' practical employment and an educational qualification equivalent to the continuation school standard. The course of study extends over one year.

Hitherto the local authorities have not shown any interest in these schools with the result that there is only one school under local control, as compared with 50 private schools of which 35 to 40 are concerned with domestic economy work and house-keeping. The others have a commercial bias. These private schools are all State-aided.

16. MISCELLANEOUS INSTITUTIONS (not all included in Diagram).

(a) *Trades Masters' Institute.*

This special institution in Stockholm is organised by the Trades Masters' Association which has 12,000 members all over Sweden. The institute arranges for specialised courses for trades masters in new methods. The courses last from two weeks to two months.

The Board of Education gives grants for instruction, amounting annually to about 60,000 kronor (£3,300), whilst the sum of some 20,000 kronor (£1,100) is given by the Board of Industry and Commerce for propaganda and general administration. In addition to its ordinary courses the Institute is prepared to promote and help industry and trade in all directions. It is prepared to deal with technical enquiries by correspondence and will send out experts to assist local tradesmen who have difficulties with their machinery, etc. In return for the financial assistance given by the Board of Education, the Institute is always available for the Board's courses for the training of trade teachers.

(b) *State Technical School for Artistic Crafts.*

This is a school peculiar to Stockholm, and deals mainly with industrial art. It has day and evening classes. The number of students in attendance is approximately 1,000. Combined with the school is a training college for teachers of drawing in secondary schools and in the training colleges.

State expenditure amounts to 142,000 kronor (£7,800) whilst the Municipal Council of Stockholm contributes some 40,000 kronor (£2,200).

(c) *Other Institutions.*

Sweden has two Universities, one in Uppsala attended by nearly 3,000 students, the other in Lund with nearly 2,000 students. There are also two other institutions functioning as Universities, but generally regarded as High Schools. The institution in Stockholm caters for Law and Humanities and has a total of about 1,200 students. In Gothenburg provision is made for the Humanities only and there are some 320 students in attendance.

There is in Stockholm a High School for Music attended by about 180 students, and a High School for Fine Arts with 100-120 students.

There are four Schools of Navigation with a total enrolment of about 450 students. Marine engineering forms part of the curriculum.

The Schools are under the control of the Board of Industry and Commerce. Students must have served at sea for several years before admission. Men engaged in the mercantile Marine must have passed successfully through a school of navigation before they are allowed to command a steamer.

Agricultural High Schools are established in Ultuna (near Uppsala), and Alnarp (near Malmö). There are generally 110 students at these institutions. Students must be eighteen years before admission, hold the senior leaving certificate of the secondary school and have at least one year's practical experience in agriculture. There are also intermediate agricultural schools attended by some 350 students and agricultural schools of a more elementary type attended by about 1,000 students. For admission to these schools, students must have had several years' practical experience of farming and a theoretical knowledge acquired in the continuation school.

There are special schools in the rural districts dealing with agricultural work for women. Provision is made for creamery, poultry, gardening and domestic work. These schools are attended by an average of 1,000 students. Courses as a rule extend over five months.

All these agricultural schools are under the control of the Board of Agriculture.

There is for Forestry a high school with about 100 students and three intermediate schools with say, 70 students. The Veterinary High School has a four years' course followed by 90-100 students.

In Stockholm there is a Commercial High School whose function is to provide higher commercial education on lines parallel to the work of the Technical High Schools. It has generally about 170 students and receives from the State an annual subsidy of 50,000 kronor (£2,700). There is a private Commercial High School in Gothenburg.

The State provides special technical courses for the staff of the Military, Government-owned Railway, Postal, Telegraph and Coastal services.

Within recent years there has been a remarkable development of vocational education in Sweden. This development has been most pronounced in Stockholm, the metropolis, (a city with a population almost similar to that of Dublin and its four adjoining townships). Vocational education in Stockholm now provides both for full-time education or, alternatively for part-time education for those boys and girls who have already entered an employment; some form of further education after the age of 12 or 13 is compulsory on all young people under the terms of the Education Act of 1918. The higher elementary school gives full-time instruction. The continuation school provides part-time instruction, mostly of a vocational character. The workshop school provides full-time vocational instruction for young persons who wish to enter a chosen trade and cannot find an employment in which they would receive the necessary training. Apprentice schools are run on similar lines, but only part-time instruction is here given, as they are intended for those already engaged by an employer and working for him; in these schools special courses are also arranged for older workers. Trade schools give technical instruction courses, but their arrangements as to hours, etc., are more elastic, with a view to special subjects, special skill, and the requirements of workers

already trained or partly trained. Attendance at apprentice and continuation schools is compulsory ; at higher elementary, workshop and trades schools, voluntary.

In the school year 1925-26 Stockholm expended on vocational education (continuation schools and higher elementary schools not included) nearly 600,000 kronor (£33,000) and the State aid amounted to little more than one-half, or nearly 300,000 kronor. The number of students in the different schools and courses was in the same year about 3,200.

The central management of the Stockholm vocational schools is in the hands of a board of nine persons, the chairman of which is a municipal councillor. The Director of Vocational Schools is an *ex officio* member of the Board. More than half of the members of the Board represent different trades. The Board is elected by the Municipal Council. Fifteen Committees, one for each trade, each consisting of four persons, are appointed to supervise instruction in the different schools. The Chairmen of these Committees are appointed by the Board, and the Director of Vocational Schools is an *ex-officio* member of all of them.

The other two members of each committee are appointed by the employers' organisation and the trade union concerned.

Several statements as to the value of the schools and desirable reforms have been made during the ten years for which the apprentice and trade schools have been in existence. At first members of the trades were somewhat suspicious of the system of one-day instruction and were disinclined to allow their apprentices free time (one day per week) to attend the apprentice schools. By degrees, as the schools became better known, their use was more fully appreciated, although employers were unable to allow all their apprentices to attend school. It is the unanimous opinion of the employers that the training given at the schools is excellent. In particular, they have realised that the workshop schools are of great value in laying the foundation for technical training and they have followed the work with great interest. The appointment of a committee for each school makes it possible both for employers and workers to follow in detail the work done, and they often make use of the opportunity thus afforded to introduce improvements in the work or in the regulation of the recruiting of labour. The workers are favourably disposed towards the schools, although a few express fears that the supply of apprentices for a given trade may become too large.

APPENDIX X.

MEMORANDUM ON THE SWISS SYSTEM OF EDUCATION.

(From information supplied by Professor Dr. A. Rohn of Zurich, a member of the Commission.)

Switzerland is a country situated between four large States of different races with different languages. It comprises 22 districts or cantons, each having a separate government with very wide powers. The population is about 4,000,000, and one-third of the country is not habitable. For centuries past, the cantons have been developing independently along lines determined mainly by the geographical position, size, race and religion. Consequently the Federal Government of Switzerland does not include to-day a Ministry for Education. School management is not centralised, and responsibility for education as a whole devolves on the different cantons. All primary and secondary schools are cantonal institutions. Furthermore seven cantons have universities, four in the French-Swiss part, and three in the German-Swiss part of the country. So strong is the feeling in favour of cantonal control of education that, when about 1850, the Federal Parliament proposed to establish a Swiss University and a Swiss Technical University, it was only possible to proceed with the second institution; the cantons would not approve of a central university in competition with their local institutions. Again in 1882, the proposal to introduce a centralised school system was defeated by a large majority.

The Federal Institute of Technology, established in Zurich in 1855, is the only State High School in Switzerland to-day. It is controlled by the Swiss Council for Education which is connected with the Department of the Interior and which gives advice to the Swiss Government on all matters of education.

The Federal Government is in a position to exercise a certain degree of financial control over education in the cantons through the medium of grants which it pays for primary, continuation and special trade education. It can thus ensure that primary education in the cantons is free to all children, irrespective of their religion, and that sufficient primary education is available.

Nearly all cantons have made primary education compulsory between the ages of 6 and 14. All communes, even the smallest, have primary schools. Geographical and other conditions in Switzerland, as elsewhere, occasion some variations in the standard of education of school-leaving pupils. Thus, in a few mountainous parts of the country, schools can be open only for a period of six to eight months in the year; but in these cases, continuation education is provided generally to the age of 16. The efficiency of primary education is influenced by two factors. Each canton is anxious that its candidates for military service should secure a high position in the examination for recruits. Furthermore, a large number of the pupils leaving the primary schools proceed to secondary and other schools which often do not exist in the same locality. Therefore it is the aim of all principals and teachers in primary schools to impart to the students an education which will not be considered inferior to the average

standard for the whole country. The same remarks apply to the transfer of pupils from the secondary to higher schools. This feeling of local pride helps to secure for the cantonal system of education a degree of efficiency which in other countries is the result of central control.

Secondary education is also under the direct control of the cantons. Uniformity in the programmes of the varied types of secondary schools is ensured through the Federal Regulation for leaving certificates. The schools are seldom under private management, being generally municipal or cantonal public institutions. Instruction is often free of charge, and in other cases the school fees are very low. Courses in the ordinary secondary schools extend over two or three years and include instruction in Latin and Greek or in modern languages. Very few of the pupils proceed to the higher secondary schools as a preparation for the universities; the majority, on leaving the schools, become apprentices.

Continuation schools are provided for pupils who have left school to take up a trade or enter business. Education in these schools is partly general and partly technical. The general education comprises instruction in arithmetic, the native language, book-keeping, drawing and civics. The technical training is based on the future career of the student and special courses are provided in the different trades in commerce, agriculture or housekeeping. Attendance is often compulsory for apprentices over a period of one to three years, generally for evening classes and one-half day per week. These continuation schools for trade and commerce, which are really technical schools, are managed by public bodies and a theoretical and practical examination of apprentices is held at the conclusion of the course. In many places special courses for commercial students are organised by the Swiss Commercial Societies.

Special whole-time technical schools have been established in connection with leading trades in different parts of Switzerland. There is, for example, a school for embroideries in the eastern part (St. Gall) and one for silk weaving in Zurich, whilst schools for watch making are in operation in Geneva and in other places in the western part of the country. In addition, there are some 36 whole-time agricultural schools with courses extending over two years or over two winter terms.

Whole-time technical schools of a general character have been organised in centres such as Winterthur, Burgdorf, Bienne, Fribourg and Geneva. They may be regarded as higher secondary schools. Students come to them from the ordinary secondary schools and follow courses of study for two or three years. The schools are also attended by adults already in employment who desire to supplement their practical knowledge by theoretical training. They are not, however, regarded as a training ground for the Federal Institute of Technology.

For the training of primary school teachers, each canton has one or more special schools. The certificate secured by teachers on qualification is equivalent to the leaving certificate of the higher secondary schools. Teachers for secondary schools are obtained mainly through the universities.

The training schools for the universities and the Federal Institute of Technology are the "gymnasias," more commonly called "cantonal schools," because they are controlled by the cantonal governments.

They have three or four divisions, (a) for classical studies with Latin and Greek, (b) for classical studies with Latin and modern languages, (c) for technical studies, and (d) for commercial studies. Courses extend over four to seven years according as students come from the secondary or primary schools. There is a leaving examination which can be taken at the age of 19.

Switzerland has, as already mentioned, seven cantonal universities. There is in addition a commercial university in St. Gall. Above all, there is the Federal Institute of Technology. This State High School has twelve divisions making separate provision for architecture, civil engineering, mechanical and electrical engineering, rural engineering, chemistry, forestry, agriculture, teachers of mathematics, teachers of natural science, military science and for general lectures on non-technical subjects. The minimum age-limit for entrance is 18 years and the number of matriculated students is about 1,500.

This Technical University costs the Swiss Government some £120,000 annually. Fees paid by students vary from £12 to £15 a year. Expenditure by the State on buildings erected since 1912 amounted to approximately £1,000,000. All divisions award diplomas and doctorate degrees and the standard of attainment is the same as that for the universities.

The canton of Zurich with its population of 550,000 is to-day the most industrial canton with the best developed trade in Switzerland. This development of trade and industry in a country without any natural resources is one of the outstanding results of this large-scale development of technical education.

The manner in which the Swiss system functions is best illustrated by the following enumeration of the educational facilities afforded in three selected cantons, representative of the country as a whole.

- (1) The Canton of Zurich (German part of Switzerland with the largest town of the country).
- (2) The Canton of Fribourg (a typical rural canton in Switzerland having only small towns, essentially Catholic and two-thirds French-speaking).
- (3) The Canton of Tessin (a very mountainous area, having only small towns, Italian language).

1. CANTON ZURICH—

550,000 inhabitants.

City of Zurich, 210,000 inhabitants.

University in Zurich, higher secondary schools in Zurich and Winterthur, three training schools for teachers, agricultural school, special schools for blind, deaf and dumb pupils, etc.

Primary education, eight years compulsory between 6 and 14 years.

Secondary education, 103 secondary schools, with two or three years' courses, after the sixth primary class.

Gymnasias with three divisions for classical, technical and commercial instruction from 4 to 6½ years' classes, terminating with leaving certificate.

Higher secondary schools for girls in Zurich and Winterthur with three divisions and leaving certificate, entrance after 15 years of age, four years' classes.

School for agriculture, near Zurich, two years' classes, after secondary school and practice in rural work.

School for Music.

Technicum in Winterthur with three years' classes, entrance age 15 years, six divisions (building, mechanical and electrical engineering, chemistry, civil engineering, commerce).

Trade schools in Zurich and Winterthur, compulsory for apprentices, with divisions for all kinds of arts and trades, also for feminine trades, and housekeeping.

Continuation trade schools in 38 places, schools for housekeeping in 90 places.

School for social instruction for women in Zurich.

About 14 Institutes for the instruction of attendants and nurses, and about 40 Institutes for primary or secondary education for pupils in special conditions, and many private schools with primary, secondary and higher secondary education with preparation for the universities.

The Folk High School—a private undertaking—with evening courses, has developed instruction in the towns and villages. It is a higher form of continuation education for people who left primary or secondary schools.

The University of Zurich with all faculties, entrance with leaving certificate of higher secondary schools, entrance after 18 years of age.*

2. CANTON OF FRIBOURG—

150,000 inhabitants.

City of Fribourg, 21,000 inhabitants.

The University of Fribourg is the centre of the Catholic culture in Switzerland, also well known in foreign countries, but only with theological, philosophical, mathematical, natural sciences and juridical faculties. The lectures are given in French, German, Italian and Latin.

Primary education: eight years compulsory between 7 and 15 years, the management is lay, but ecclesiastics also are employed as teachers.

Six primary schools are adapted to the special necessities of agriculture, for pupils between 14 and 16 years of age.

Six secondary schools, in six small towns, with four years' classes receive pupils between 11 and 15 years; the programme is that of a pro-gymnasia (one of them has a commercial and one a trade division).

Higher secondary instruction is given in three schools, all in the chief town. One school for boys and two for girls (one is a training school for primary teachers).

Divisions for classical, technical and commercial studies. Leaving certificate at two of these three schools.

A special training school for primary teachers.

Technicum with Trade schools in Fribourg for pupils who left the primary schools after secondary stage with seven terms.

School for Music.

* The Federal Institute of Technology in Zurich is not mentioned here because it is not managed by the Canton. Students can enter after 18 years of age with the leaving certificate of gymnasia.

Trade and commercial schools in Droghens, Bulle, two years' classes.

Continuation Trade schools in 14 places : Continuation Schools for Housekeeping in 46 places.

Two agricultural schools, full time schools, one with 2½ years' classes, one with two winter terms.

Different special and private schools.

3. CANTON TESSIN—

155,000 inhabitants.

Main towns, Bellinzona, Lugano and Locarno, each with a population of about 12,000 inhabitants.

Primary education : eight years compulsory between 6 and 15 years with higher courses in places without secondary schools.

Secondary schools in 10 places with three divisions.

Higher secondary schools in Lugano, training schools for primary teachers in Locarno, commercial school in Bellinzona.

Agricultural school, two courses of half a year : Continuation schools in 16 places, also for apprentices. Many private institutes.

APPENDIX XI.

(A)—LIST OF WITNESSES.**(i) GOVERNMENT DEPARTMENTS.***Department of Education.*

- G. Atkinson, A.R.C.A., Headmaster, Metropolitan School of Art, Dublin.
- J. F. Burke, D.Sc. (Econ.), B.Comm., F.R. Econ. S., Commercial Inspector, Technical Instruction Branch.
- W. Dalton, B.A., Senior Staff Clerk, Technical Instruction Branch.
- G. Fletcher, F.G.S., M.R.I.A., Assistant Secretary in respect of Technical Instruction.
- J. P. Hackett, B.E., A.R.C.Sc.I., Inspector, Technical Instruction Branch.
- J. Hanly, F.R.C.Sc.I., M.R.I.A., General Organising Inspector of Rural Science.
- W. M. Heller, B.Sc., A.C.G.L.I., Inspector, Technical Instruction Branch.
- Peadar MacCionnaith, M.Sc., A.R.C.Sc.I., Junior Inspector, Technical Instruction Branch.
- C. B. McElwee, R.D.S., Organising Inspector of Drawing, Technical Instruction Branch.
- T. P. O'Connor, B.A., Chief Inspector, Primary Education Branch.
- P. O'Sullivan, A.R.C.A., Inspector of Art, Technical Instruction Branch.
- R. Turnbull, B.Sc., Chief Inspector, Technical Instruction Branch.

Department of Fisheries.

- L. C. Moriarty, Secretary.

Department of Industry and Commerce.

- Gordon Campbell, Secretary.
- R. C. Ferguson, Director, Industries Branch.
- J. J. Keane, Chief Employment Officer.

Department of Lands and Agriculture.

- F. J. Meyrick, M.A., Secretary.

(ii)—REPRESENTATIVES OF LOCAL TECHNICAL INSTRUCTION COMMITTEES.

- | <i>Committee.</i> | <i>Witnesses.</i> |
|------------------------|--|
| Cork County Borough .. | D. J. Coakley, F.A.A., Principal, Municipal School of Commerce. |
| | W. Ellis, Vice-Chairman of the Committee. |
| | J. F. King, A.M.I.M.E., Principal, Crawford Municipal Technical Institute. |
| Cork County | J. M. Buckley, Secretary to the Committee. |
| | Rev. F. McCarthy, P.P., Member of the Committee. |
| | Eamon O'Donoghue, M.A., Member of the Committee. |

- Drogheda Urban District .. E. Daly, Secretary to the Committee and Principal.
- Dublin County Borough .. P. J. Hernon, City Commissioner.
L. E. O'Carroll, B.A., B.L., Secretary to the Committee.
- Galway Urban District .. J. T. O'Callaghan, B. A., Secretary to the Committee and Principal.
- Limerick County Borough .. J. Cronin, Member of the Committee.
P. V. Twomey, A.M.I.C.E.I., Secretary to the Committee and Principal.
- Mayo County A. J. Carolan, Secretary to the Committee.
Very. Rev. Canon Hegarty, P.P., Member of the Committee.
Rev. G. J. Prendergast, C.C., Chairman of the Committee.
- Pembroke Urban District .. M. Keady, B.Sc., A.R.C.Sc.I., Principal.
J. G. Matthews, Secretary to the Committee.
Professor B. F. Shields, M.A., Member of the Committee.
- Rathmines Urban District .. G. J. T. Clampett, B.L., F.R.G.S., F.R.Econ.S., Secretary to the Committee and Principal.
- Waterford County .. T. J. Power, Chairman of the Committee.
P. A. Ussher (Junior).

(iii)—REPRESENTATIVES OF LOCAL COMMITTEES OF AGRICULTURE OR COMBINED COMMITTEES OF AGRICULTURE AND TECHNICAL INSTRUCTION.

- | <i>Committee.</i> | <i>Witnesses.</i> |
|------------------------------------|---|
| Cork County | E. Corcoran, Secretary to the Committee of Agriculture.
P. J. Halliden, N.T., Member of the Committee of Agriculture. |
| Roscommon County .. | Very Rev. Canon Cummins, P.P., D.D., V.F., Chairman of the Committee of Agriculture and Technical Instruction. |
| Tipperary County (North Riding) .. | J. Ryan, Secretary to the Committee of Agriculture. |
| Wexford County | J. J. O'Byrne, Member of the Committee of Agriculture and Technical Instruction.
Sean O'Byrne, Member of the Committee of Agriculture and Technical Instruction. |

(iv)—CHAMBERS OF COMMERCE.

- Clonmel Chamber of Commerce .. J. F. O'Gorman, President.
- Cork Chamber of Commerce .. J. C. Foley, F.A.A.

Cork Incorporated Chamber of Commerce and Ship- ping.	R. W. Sinnott.
Dublin Chamber of Commerce.	R. W. Booth. J. J. Crowe, Secretary. J. C. M. Eason, President. Dr. W. Lomoard Murphy. M. F. O'Brien.

(v)—ASSOCIATIONS REPRESENTING EMPLOYERS.

<i>Association.</i>	<i>Representatives.</i>
Dublin Engineering Em- ployers' Association.	T. E. Booth, Honorary Secretary. G. Watt, M.I.Mech.E.
Dublin Master Builders' Association.	R. Denne Bolton.
Dublin Master Printers and Allied Trades Association.	A. D. Brewster. W. Fitzsimons. J. Warren. J. G. Wilson.
Dublin United Furniture Manufacturers' Association.	J. Hicks.

vi)—ORGANISATIONS REPRESENTING LABOUR.

<i>Organisation.</i>	<i>Representatives.</i>
Amalgamated Engineering Union.	S. Bradley, Organiser.
Amalgamated Society of Woodworkers.	J. Brown. T. Dunne.
Ancient Guild of In corpo- rated Brick and Stone layers' Trade Union.	E. Byrne. O. Hynes, General Secretary.
Dublin Typographical Provi- dent Society.	Sean Campbell. W. J. Whelan, Secretary.
Electrical Trades Union (Ireland).	J. M. O'Duffy, Secretary. F. J. Taylor.
Irish Labour Party and Trade Union Congress, National Executive.	T. Irwin (Secretary, Dublin Worker's Council and Dublin Operative Plasterers' Society). R. J. P. Mortished, Assistant Secretary. M. Somerville (Dublin District Dele- gate of the Amalgamated Society of Woodworkers).
Irish Transport and General Workers' Union.	Eamon Lynch.
Irish Transport and General Workers' Union (Hotel Workers' Branch).	Monsieur Opperman, Chef. C. F. Ridgway, Secretary. Monsieur Wuest, Chef.
Irish Women Workers' Union,	Louie Bennett, } Helen Chenevix. } Secretaries.

(vii) ORGANISATIONS REPRESENTING TEACHERS.

<i>Organisations.</i>	<i>Representatives.</i>
Irish Agricultural and Technical Instruction Officers' Organisation.	F. McNamara, Arklow, General Secretary. J. Mahony, A.R.C.Sc.I., Ennis, Chairman.
Association of Domestic Science Teachers.	Elizabeth Bloxham, Wexford.
Association of Secondary Teachers, Ireland.	J. J. Murphy, A.R.C.Sc.I., Roscrea.
Irish National Teachers' Organisation.	W. P. Ward, N.T., Ballinasloe.

(viii)—OTHER ORGANISATIONS AND THEIR REPRESENTATIVES.

Civics Institute of Ireland.	Lena Long, Secretary. R. Caulfeild Orpen, B.A., F.R.I.A.I., Chairman.
Cork Agricultural and Economic Society.	Professor J. Busteed, B.Com., F.Econ.S., F.S.S., Vice-President. E. J. Cussen, } Honorary Secretaries. J. O'Sullivan, }
County Councils' General Council.	P. Belton.
Gaelic League.	Cormac Breathnach, President. E. Joynt, Member of Coisde Gnotha.
Irish Farmers' Union.	A. S. Patten, M.B.E.
Irish Fishermen's Association.	J. Beamish. E. F. Culverwell, S.F.T.C.D.
Irish Nursing Matrons' Association.	Alice Reeves, President. Mary C. Wall.
Irish Nurses' Union.	Kathleen Holohan. Kathleen N. Price, Secretary.
Mayo Industrial Organisation.	Liam Coyne, D.J.
Royal Institute of the Architects of Ireland.	G. F. Beckett, F.R.I.A.I. Professor R. M. Butler, M.R.I.A., F.R.I.A.I., F.R.I.B.A.
Society of Irish Motor Traders, Ltd.	T. Fitzpatrick.
Standing Council of the Irish Technical Instruction Association.	G. J. T. Clampett, B.L., F.R.G.S., F.R.Econ.S. T. P. Gill, President, (who however was unable to attend owing to illness). Mary S. Kettle, B.A.

(ix)—INDIVIDUAL WITNESSES.

- Professor Tomas Breathnach, M.A., M.D., University College, Galway, who was a member of the Gaeltacht Commission.
- Dr. D. J. Coffey, M.A., LL.D., President, University College, Dublin.
- Rev. P. Conefrey, C.C., St. Mary's, Moyne, Co. Cavan.
- Rev. T. Corcoran, S.J., D.Litt., Professor of the Theory and Practice of Education, University College, Dublin.

- R. Dickie, Cabinetmaker, Botanic Avenue, Dublin.
 W. J. Fahy, Owens, Co. Cork.
 C. E. Jacob, Director, Messrs. W. and R. Jacob and Co., Ltd., Dublin.
 J. A. Jones, Automobile Engineer, Haddington Road, Dublin.
 T. Mason, P.C., President, Irish Optical Association, Dublin.
 Sean Morrissey, of Roche, Morrissey and Kennedy, Ltd., Builders and Shopfitters, Clonmel.
 Sir H. McLaughlin, K.B.E., of McLaughlin and Harvey, Ltd., Builders and Contractors, Dublin.
 W. McMillan, of Dublin Shipbuilders, Ltd., Ringsend Dock Yard.
 T. J. Nolan, F.I.C., Assistant State Chemist, State Laboratory, Dublin.
 Colonel E. O'Brien, D.S.O., M.I.C.E., M.I.E.E., Deputy Chief Mechanical Engineer (retired) of the Lancashire and Yorkshire Railway.
 C. O'Byrne, Ecclesiastical Decorator, Dublin.
 L. O'Toole, Ship Owner and Broker, Arklow.
 E. R. Richards-Orpen, Late Inspector of the Rural Industries Bureau under the Board of Agriculture, London.
 Manning Robertson, A.R.I.B.A., M.R.I.A.I., Chartered Architect, Dublin.
 S. T. Robinson, Automobile Engineer, South King Street, Dublin.
 R. J. Scallan, Automobile Engineer, Lower Pembroke Street, Dublin.
 J. Sibthorpe, of Messrs. Sibthorpe and Sons, Painters and Decorators, Dublin.
 J. S. Smurthwait, Welfare Supervisor, Messrs. W. and R. Jacob, Ltd., Dublin.
 J. Walsh (Junior), of Walsh and Sons, Builders, Clonmel.
 Lewis Whyte, Managing Director, Messrs. Smyth and Co., Ltd., Hosiery Manufacturers, Balbriggan.
 J. B. Whelehan, Controller, Stationery Office, Dublin.
 Rev. Brother E. D. Young, Principal, Christian Brothers Junior Technical School, Hardinge Street, Belfast.

(B)—LIST OF ORGANISATIONS AND PERSONS WHO SUPPLIED WRITTEN EVIDENCE AND OTHER DATA FOR THE USE OF THE COMMISSION.

- Arts and Crafts Society of Ireland.
 Association of Principals of Technical Institutes in Ireland (Southern Branch).
 Association of Woollen and Worsted Manufacturers of Ireland.
 E. P. Barrett, B.Sc., Inspector, Technical Instruction Branch, Department of Education.
 Belgian Consul-General, Dublin.
 Dr. U. Bosch, Wilsbacherstrasse, 60, Berlin.
 M. J. Byrne, Springfield Terrace, Crumlin Road, Dublin.
 Carlow, The Committee of Agriculture for the County of.
 Carlow, The Technical Instruction Committee for the County of.
 Clare, The Committee of Agriculture for the County of.
 Clare, The Technical Instruction Committee for the County of.
 Clonmel, The Technical Instruction Committee for the Urban District of,
 Cobh, The Technical Instruction Committee for the Urban District of.
 Cork Advisory Committee for Juvenile Employment.
 Margaret Cunningham, M.A., Trinity Hall, Dartry Road, Dublin.

- M. Dalton, Controller of Stores, Department of Posts and Telegraphs, Dublin.
- Department of External Affairs.
- Vaughan Dempsey, Commercial Representative for An Saorstát in Paris.
- E. Hughes Dowling, 46 Lower Baggot Street, Dublin.
- Dublin Advisory Committee for Juvenile Employment.
- Dublin, The Technical Instruction Committee for the County of.
- Dun Emer Guild, Ltd., Hardwicke Street, Dublin.
- Enniscorthy, The Technical Instruction Committee for the Urban District of.
- Rev. E. Fitzgerald, C.C., The Presbytery, Kinsale.
- Gaelic League, Co. Wicklow Branch.
- Galway, The Technical Instruction Committee for the County of.
- J. Harris, Manager, Harding Boys' Technical School, Lord Edward Street, Dublin.
- Theodor Hayek, Technical Manager, Irish Sugar Beet Factory, Carlow.
- Irish Free State Wholesale Clothing Manufacturers' Association.
- Irish National Painters' and Decorators' Trade Union.
- Irish Newspaper Society.
- Irish Union of Distributive Workers and Clerks.
- G. A. Jenkin, South Africa House, Trafalgar Square, London.
- W. B. Joyce, B.A., F.R.S.A., Headmaster, Central Model Schools, Dublin.
- E. A. Johnson, Ballinapierce, Enniscorthy.
- J. J. Kelly, Ballylickey House, Bantry.
- P. D. Kenny, Agmore, Co. Mayo.
- Kerry, The Technical Instruction Committee for the County of.
- Laoighis, The Committee of Agriculture and Technical Instruction for the County of.
- Leinster Laundries Association.
- Limerick Advisory Committee for Juvenile Employment.
- Louth, The Technical Instruction Committee for the County of.
- Monaghan, The Committee of Agriculture for the County of.
- Monaghan, The Technical Instruction Committee for the County of.
- Fionan Mac Coluim, Inspector for Irish, Technical Instruction Branch, Department of Education.
- New Ross, The Technical Instruction Committee for the Urban District of.
- Offaly, The Committee of Agriculture for the County of.
- Offaly, The Technical Instruction Committee for the County of.
- H. O'Flynn, Technical Staff, Board of Works.
- F. W. Sinclair, Inspector, Technical Instruction Branch, Department of Education.
- Sligo, The Technical Instruction Committee for the Urban District of.
- J. C. Smail, Chief Organiser of Trade Schools, Education Officers' Department, London County Council.
- E. P. Smyth, Principal, Dublin School of Commerce (private academy).
- Rev. P. Swayne, B.A., Knockbeg College, Carlow.
- Tipperary (North Riding), The Technical Instruction Committee for the County of.
- Tirconaill, The Committee of Agriculture for the County of.
- Tirconaill, The Technical Instruction Committee for the County of.
- Typographical Association (Irish Organisation).

United House and Ship Painters' and Decorators' Trade Union of Ireland.

Roisin Walsh, B.A., Librarian and Secretary, Libraries Committee, Courthouse, Kilmainham.

Waterford, The Committee of Agriculture for the County of.

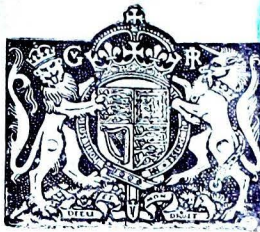
Waterford, The Technical Instruction Committee for the County Borough of.

W. H. Loewe Watson, D.S.O., Ministry of Labour, Montagu House, London.

Westmeath, The Committee of Agriculture and Technical Instruction for the County of.

Wexford, The Technical Instruction Committee for the Urban District of.

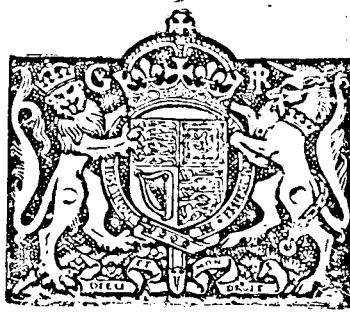
Wicklow, The Technical Instruction Committee for the County of.



Report of the Female
Education Committee
Central Provinces and
Berar, 1927

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Berár 1927

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1927

REPORT OF THE FEMALE EDUCATION COMMITTEE, CENTRAL PROVINCES AND BERAR, 1927.

CHAPTER I.

PRESENT CONDITIONS AND FUTURE DEVELOPMENT.

SECTION I.—*Terms of Reference and Procedure of the Committee.*

We, the members of the Committee appointed by the Local Government to examine the question of the education of girls in the Central Provinces and Berar, have the honour to submit our report.

We were appointed by a resolution of the Local Government in the Education Department, No. 878, dated Nagpur, the 10th November 1926, which read as follows:—

The Governor in Council has had under consideration the question of the education of girls, and has decided to appoint the following ladies and gentlemen to serve on a Committee to examine the matter:—

- (1) The Director of Public Instruction—*Chairman.*
- (2) Miss A. Thompson, Inspectress of Schools, Nagpur.
- (3) Deaconess Bardsley, Lady Principal, C. E. Z. Girls' High School, Katni.
- (4) Mrs. Mathurabai Dravid, Lady Superintendent, Bhide Girls' School, Sitabuldi, Nagpur.*
- (5) Miss Saraswati Singh, Assistant Inspectress of Schools, Jubbulpore.
- (6) Miss S. Levi, Lady Superintendeat, Normal School for Women, Jubbulpore.
- (7) Mr. S. V. Gokhale, Municipal Committee, Amraoti.
- (8) Miss Dwarkabai Balchandra, Head Mistress, Girls' High School, Amraoti.†
- (9) Mr. V. M. Jakatdar, Chairman, District Council, Bhandara.
- (10) Khan Sahib Maulvi Abdul Qadir, Pleader, Amraoti.
- (11) Rao Sahib T. S. Korde, Murtizapur.

*Now Head Mistress, Girls' High School, Amraoti.

†Now Mrs. Ramabai Tambe.

- (12) Mr. P. C. Bose, Municipal Committee, Jubbulpore.
- (13) Rai Bahadur Mathura Prasad, O.B.E., Chhindwara.
- (14) Rao Bahadur Hiralal, retired Deputy Commissioner, George Town, Jubbulpore.
- (15) Mr. Abdus Samad, retired Extra-Assistant Commissioner, Jubbulpore.

2. The terms of reference to the Committee are as follows :—

To examine and report on—

- (a) the practicability of improving and extending (i) primary education, (ii) secondary education for girls, regard being had, *inter alia*, to the desirability and practicability or otherwise of extending the system of co-education in certain stages, and at other stages of introducing separate courses of instruction for girls intending to proceed to higher education on the one hand and for girls not intending to proceed to higher education on the other ;
- (b) the desirability and practicability or otherwise of transferring Government primary and vernacular middle schools for girls to local bodies ;

and to make recommendations, with an estimate of the increased expenditure (if any), which such recommendations may involve.

3. Deaconess Bardsley left India before the conclusion of our sittings and was replaced by the Reverend Mother Noémie, Mother Superior of the Providence Mission, Nagpur, who attended the third and subsequent meetings of the Committee. Mr. H. S. Staley, of the Indian Educational Service, acted as our Secretary at the first two meetings and, on his departure from India on leave, was replaced by Mr. F. P. Tostevin, of the Indian Educational Service, who acted as Secretary during the remainder of our sittings.

4. We met for the first time on the 24th January, 1927, and issued a questionnaire (which will be found in the appendix to this report) which was circulated to all Commissioners of Divisions ; Deputy Commissioners ; Inspectors and Inspectresses of Schools ; Lady Superintendents of Normal Schools ; the Head Mistress, Girls' High School, Amraoti ; Chairmen of District Councils, Municipalities and Notified Areas ; and to the Managers of Girls' Schools. Spare copies were enclosed for distribution by Deputy Commissioners to any residents in their district, not included in the above list, whose views and opinions they considered should be placed before

us. The chairmen of local bodies were requested to make themselves responsible for consulting sufficient local opinion to afford material for a representative reply.

5. We received just over a hundred replies to our questionnaire from 21 local bodies, 30 government officials, 30 non-officials and 2 ladies. The answers to individual questions varied greatly in number and value, ranging from 101 on such broad general questions as the control of primary education to 15 on matters of more detailed administration. These replies were tabulated, correlated and summarized, and then considered by the Committee at its second meeting on the 31st March 1927. The majority of the replies, especially from non-officials, were too vague and general to be of much value in the more detailed matters dealt with in our questionnaire. We were, perhaps, a little too ambitious and optimistic in expecting anything else; for the details of educational administration, though the fact is not always realized by the general public, are essentially a matter for the expert. On the broader questions of policy, however, the replies though still disappointingly general and lacking in any reasoned argument for the views put forward, were valuable as indicating the general trend of the opinion which we had been able to consult. We were thus enabled to lay down certain broad general lines of policy which were embodied in a series of draft resolutions and discussed in detail at our third and fourth meetings on the 8th and 10th September 1927. We met again on the 5th December 1927, having held a total of five meetings up to the date of the submission of this report.

SECTION II.—*Present Condition of Female Education in the Central Provinces and Berar.*

6. We feel that it will help to a better understanding of the problem before us if we indicate briefly the steps which have recently been taken by the Local Government to extend and improve female education in the Central Provinces and Berar. It will suffice for our purpose if we begin this rapid review with the year 1913, when Government opened the Girls' High School and hostel at Amraoti. During the same year the administrative staff was strengthened by the appointment of a second Inspectress of Schools in the Indian Educational Service and of two additional Assistant Inspectresses in the Provincial Educational Service. From 1915 onwards the amount annually included in the Education budget for the

extension and improvement of girls' vernacular schools was increased and new vernacular schools were opened. Special scholarships tenable in girls' secondary schools were sanctioned in 1915 and there were scholarships tenable in colleges. The system of awarding stipends in normal schools was reorganized in 1916 at an increased cost, and during the same year the staffs of normal schools were increased, salaries were raised and the posts of Assistant Superintendents were added. In 1915, a system of scholarships was sanctioned to encourage the general education of the classes and castes which provide the dais of the Province but these have since been abolished. A committee, presided over by Mr. A. I. Mayhew, then Director of Public Instruction, was appointed in 1916 to consider the revision and extension of female education. The extent to which we are indebted to that and other committees on matters of curricula, the training of teachers and other matters will be apparent throughout our report. Finally, in 1924, in a resolution dealing with a scheme of compulsory primary education for boys and again in its resolution on the annual report on the state and progress of education in 1923-24, the Local Government, Ministry of Education, declared its intention to appoint a committee to report on the education of girls. The committee of which we are the members is the outcome of this declaration.

7. How far the demand for female education has reacted to these efforts of the Local Government may be gathered from the statistics on the state and progress of female education in the Central Provinces and Berar during the last ten years, which approximately cover the period since Mr. Mayhew's committee submitted its report. For the sake of convenience we give only approximate figures.

8. During the ten years 1916-17 to 1926-27, the expenditure on girls' education has increased from approximately Rs. 1,42,000 to Rs. 2,74,000 in primary schools, from Rs. 27,000 to Rs. 77,000 in vernacular middle schools, from Rs. 19,000 to Rs. 48,000 in the anglo-vernacular middle stage and from Rs. 9,000 to Rs. 34,000 in the high school stage. Bonuses, given to head masters to encourage girls to attend boys' primary schools, have increased from Rs. 3,467 to Rs. 4,322. This increase of expenditure has resulted in an increase in the number of girls' schools, of pupils and of

teachers. The number of girls in primary schools has risen from 308 to 324. The number of girls in the primary stage has increased from 35,304 to 38,728 as under :—

Year.	Girls in primary schools for girls.	Girls in primary schools for boys.	Girls in primary classes of vernacular middle schools for boys and girls.	Total.
1916-17	17,331	15,613	2,360	35,304
1926-27	19,798	13,410	5,520	38,728

The number of teachers has risen from 356 in 1919-20 (the earliest figure available) to 731 in 1926-27 of whom 234 in 1919-20 and 364 in 1926-27 were trained teachers.

The number of vernacular middle schools for girls has risen from 25 to 40 and the girls in the vernacular middle stage from 196 to 962 as under :—

Year.	Number of girls' vernacular middle schools.		Total.
	For girls.	For boys.	
1916-17	7	189	196
1926-27	410	552	962

In the anglo-vernacular middle stage, the number of girls' schools has increased from 5 to 8 and the number of school girls from 236, of whom 7 were in boys' schools in 1916-17, to 711, of whom 34 were in boys' schools in 1926-27. The number of girls' high schools has increased from 3 to 4 and the number of high school girls from 31, all of whom were in girls' schools in 1916-17, to 145, of whom 2 were in boys' schools in 1926-27. The number of women students studying beyond the high school stage is still too small to justify the opening of a separate college for women but the number of women students in the arts colleges for men has increased from 1 in 1916-17 to 17 in 1926-27. Two women students were under training in the Spence Training College, Jubbulpore, in 1926-27.

9. The above figures shew an advance in female education and there may be some who take comfort in that thought. But most of the advance in the number of girls' primary schools took place in 1918-19. Dropping from 308 in 1916-17 to 304 in 1918-19 the number then rose at a bound to 318. For seven years, therefore, from 1918-19 to 1925-26 the number of schools remained practically stationary. It was not till the present year that the number rose by 6 to 324. The number of pupils in the girls' primary schools remained stationary from 1916-17 to 1922-23 and such increase as we have noted has taken place during the last five years. The advance, therefore, has been both slight and slow. And how much still remains to be accomplished will be better understood if the above figures are compared with those for boys' education. It will suffice for our purpose to take only the figures for the last year of our review. Let us examine first the question of expenditure. In the primary stage, the total cost of boys' education is more than 10 times that of girls'. In the vernacular middle stage, it is about 11 times as great; in the anglo-vernacular middle stage, more than 20 times as great; and in the high school stage the cost of boys' education is nearly 19 times that of girls'. So much for the total expenditure on education. The comparative cost to Government of educating each individual boy and girl is, if anything, still more striking. But, as one would expect, in view of the difference in numbers, the balance is in the opposite direction. During the ten years under review, the cost of educating each individual boy in the primary school has increased from Rs. 5-2-11 to Rs. 11-5-4 as compared with Rs. 8-3-2 and Rs. 13-12-4 for each girl. In the vernacular stage, the cost of each boy's education has risen from Rs. 8-2-9 to Rs. 13-9-2 and of each girl's from Rs. 12-11-1 to Rs. 15-11-4. In the anglo-vernacular middle stage, the cost for each boy has risen from Rs. 32-0-6 to Rs. 41-15-4, whilst that for each girl has fallen from Rs. 82-8-10 to Rs. 70-8-6. In the high school stage, the education of each boy cost Government Rs. 20-3-11 in 1916-17 and Rs. 72-8-2 in 1926-27 as compared with Rs. 148-10-3 and Rs. 114-8-4 for each girl.

10. The return for this expenditure, in the number of boys and girls under instruction, is equally interesting. In 1926-27, the number of boys' primary schools was approximately 13 times greater than the number of girls' schools and

the number of primary school boys approximately 8 times the number of primary school girls. In the vernacular middle stage, the proportion was more than 8 to 1 for schools and approximately 15 to 1 for pupils. In the anglo-vernacular middle stage, there are 19 times as many schools for boys as for girls and about 54 boys to every girl under instruction. In the high school stage, there are 11 boys' schools for every girls' school and 33 school boys to every school girl. In the colleges, the proportion of men to women students is approximately 82 to 1, the figures being 1,392 and 17 respectively. One other comparison remains to be noted. Out of a total female population of 6,961,361, as given in the 1921-22 census report of the Central Provinces and Berar, not more than 42,342 receive school instruction of any kind, including those in unrecognized schools. Most of these are in the primary stage. Not more than 163-145 in the high schools and 17 in the colleges—have yet got beyond the middle stage. In other words, only 61 out of every 10,000 women receive school instruction of any kind and only 1 out of every 50,000 has yet got beyond the middle school stage. It can scarcely be denied that this is a matter which calls for serious thought and constant and earnest endeavour for the extension and improvement of female education.

SECTION III.—*Our Proposals.*

A.—The Demand for Education.

11. The brief sketch which we have given above of the present condition of female education in the Central Provinces and Berar, shews that nearly all the women folk of the province, or approximately one-half of the total population, is still illiterate. This fact is already so well-known that it may be thought unnecessary to draw attention to it. And yet it is precisely in this general recognition of the fact that we see one of the greatest barriers to progress. Things whose existence is generally recognized are apt to be taken for granted and to be accepted as inevitable, with the result that no effort is made to improve them. This, we feel, accounts to a large extent for the apathy shewn by all except a few enthusiasts towards the very important subject of female education. Social and economic causes have also contributed towards the present unsatisfactory state of affairs. Financial pressure which makes the education of boys an economic necessity; the purdah system; early marriage; the

attitude of the elder women and of a large number of men who, naturally conservative, fear that education, like a poisonous plant, will destroy much which they revere in the old and traditional position of women in Indian society; the peculiar difficulties which surround the women teachers—all these are factors which have contributed to retard the improvement and extension of female education in this Province as elsewhere in India. And as the Calcutta University Commission pointed out in their chapter on girls' and women's education in Bengal, this attitude towards female education has, in recent years, been intensified by a dislike of some of the more recent aspects of the emancipation of the women in the West. Many earnest thinkers who are desirous of increasing the standard of literacy among the women of the Province, shrink from what they regard as westernization and the ultimate breaking down of an old, long established and revered order in the possible ultimate feminist demand for political and social emancipation. We recognize and sympathize with this fear. But we feel bound to follow the Calcutta University Commission in pointing out that although the modern women's movement in the West has been facilitated by the improvement of women's education, it is due ultimately and inevitably to the political ideas of the 19th century. In those ideas India is now sharing. Her very claim for further political advancement is the outcome of the acceptance of these ideas on the part of her men. We come, therefore, to the position, so clearly pointed out by the Calcutta University Commission, that our men have accepted western education and western political theories for themselves, but fear the acceptance of either by our womenfolk. For the men to go back, to reject these theories for themselves, is impossible. To accept them and carry them into the practical realm of political and social reform must inevitably tend, sooner or later, to social changes affecting the position of women which may be delayed but can never be averted by denying efficient education to the girls and women of the Province. To attempt to do so, even for a time, would result in a widening of the gulf which already exists between the thoughts and aims of the girls and women and those of the men who have received western education and will insist on it for their sons. Looked at from this point of view, women's education becomes inevitable. "The only solution," if we may venture again to quote from the Calcutta University Report, "must be a resolute attempt to achieve a real synthesis

between the ideas and traditions of the west and the ancient and rooted ideas and traditions of India." We believe that such a synthesis is possible and that, given such a synthesis, an extension and improvement in the education of the girls and women of the Province along the right lines is a social and political necessity. Our opinion on this subject cannot be better expressed than by reproducing the following passage from the "Indian Social Reformer" which was quoted in the Calcutta University Commission Report :—
 "Education is essentially a question of social reform—and in education, I would give the first place to the education of girls. The education of a single girl means the uplifting of a whole family in a larger sense than the education of a single man." And without further female education, we are unable to believe that India can ever rise to her full strength in the national sense. So strongly do we feel on this subject that we venture to base all our recommendations on the following resolution.

12. The advancement of India is so bound up with the education of girls that unless active measures are taken to further their education and a public demand is created for it, the general progress of the country must be impeded.

13. The demand for female education is reflected in the number of girls attending school and college. Judged from this point of view, the figures which we have given in paragraphs 8 to 10 above, shew that the demand is so slight as to be practically non-existent. There is, in fact, much truth in the oft quoted and somewhat cynical epigram that at present "female education is carried on in response to a demand which does not exist". So long as this state of things persists, the work of the educationalist may be likened to the labour of Sisyphus, a heart-breaking struggle to roll a big stone up a steep hill only to find that when the stone reached the top it always fell down again. Obviously, the first desideratum is the creation of a demand for female education. This demand cannot be created by Government. In the minds of the villagers—the people whom it is most necessary to reach—Government is too remote and possibly too impersonal to reach them in matters which so deeply concern traditions and customs which have the sanctity of age if not also of religion. And even if it were possible for Government to

induce the villagers to send their children to school the result would be artificial and temporary. Ultimately, the demand must come from the people themselves. We feel that the best means of creating it is through a non-official agency. The demand, especially in the remote districts, will be created only by a gradual breaking down of local prejudice, old standing customs, apathy and in certain cases antipathy. Such work can best be done by men and women who by their race and religion belong to the people, helped by others with expert knowledge of educational matters, men and women of broad vision, wide sympathies, local knowledge and untiring zeal and enthusiasm—practical mystics, persons who dream dreams and see visions, who see the need for female education and are able to make others see it. We believe that such persons may be found. Such committees as we have in mind would probably include the wives of well-known citizens, of men who are themselves enthusiastic in the cause of female education, and head mistresses and teachers of girls' schools and other educationalists. Well organized propaganda would be necessary to interest others in their work and to create in the minds of the people generally not only a desire but an irresistible demand for female education. The kind of work which we have in mind is propaganda somewhat along the lines undertaken in the interests of child-welfare or the various health-week campaigns which are now well-known in India. Much might be done, for instance, by lantern lectures and demonstrations, informal talks and exhortation in the towns and villages. But we are unable to offer more than general suggestions. Details must naturally vary according to local needs and circumstances and must be left to the discretion of individual committees. The carrying out of this propaganda will demand careful and thorough organization and the committees through whom the work is carried out would need to keep in close touch with Government and local bodies to keep Government and the local bodies alive to the needs of the people and to offer suggestions for the best means of supplying the needs. We summarize these views in the following resolution—

14. In order to stimulate public interest in girls' education, vigorous and active propaganda is necessary. We recommend that for this purpose a non-official publicity organization of committees of ladies and gentlemen interested in education should be established with its headquarters at

Nagpur and subsidiary committees in the district headquarters and smaller municipalities of the Province to work in co-operation with Government and local authorities.

15. One means of propaganda already exists in the co-education of boys and girls. This is a question which has attracted a good deal of attention at various times. In some ways it may be said to be the basis on which female education in this Province at present rests in that in the past it has been a common practice to encourage the attendance of girls at primary schools for boys until the number of girls in attendance becomes large enough to justify the opening of a separate girls' school. It is of interest therefore to note some of the results of experience of girls' education in villages. In many areas it has been found advisable to distinguish between a town and a village school. There is, on the one hand, a considerable body of opinion which favours the deliberate encouragement of the attendance of girls at the village primary school for boys in preference to opening separate schools for them. Co-education up to the primary standard receives an increasing measure of support in the villages and it is only when this system becomes very successful and when large numbers of girls attend the boys' primary schools that the opening of separate girls' schools becomes necessary. On the other hand, there is a very definite body of opinion to the effect that girls are more likely to remain longer in separate girls' schools and thereby to increase the probability of their prosecuting their studies to a higher stage. One of the questions, therefore, which we were required to examine was whether the present number of girls attending village girls' schools, especially in the higher classes, would continue to attend boys' schools if co-education were insisted on. The question is of importance because if the establishment of separate girls' schools is insisted on, there is little hope for co-education as a really strong factor in the field of female education. In this connection, it may be noted that the Urdu schools are reported to be reluctant to adopt a full primary course for girls in boys' schools, and from such evidence as has been available in the past this sentiment appears to be fairly strong. We note, too, that the figures given in paragraph 8 above, indicate a decrease since 1916-17 in the number of girls attending boys' primary schools along with an increase in the total number of girls under instruction in the primary stage.

But closer examination of the figures at our disposal shews fluctuations during the past ten years. The number of girls in boys' primary schools reached its high water mark at 16,119 in 1919-20, it fell to 11,403 in 1922-23, made a slight recovery in the following year, and reached its lowest ebb in 1924-25 when it fell to 11,253. The figures for the last two years have been on the upward grade. On the whole, we are inclined to think that whatever prejudice exists against co-education is slowly dying down. And we are so convinced of the present need for co-education that we look forward to a time when popular prejudice against it will be weakened to the point at which a definite stimulus will break it for ever. But we distinguish sharply between co-education in the primary and post-primary stages of school life and also between the admission of girls to boys' primary schools and that of boys to girls' primary schools. In no case do we think that co-education in schools, as distinct from colleges, should be carried beyond the primary stage. We are aware that in very exceptional cases it may be found convenient to admit boys to girls' schools in places in which there is only one school in which instruction is given in a particular language such, for example, as the Marathi girls' school at Bilaspur or the Bengali girls' school at Jubbulpore. But, as a general rule, we think that boys should not be admitted to girls' primary schools. The demand for boys' education is so much greater than for girls' that the admission of boys to girls' schools is likely to result in the virtual transformation of the girls' school into a boys' school. Nor do we regard co-education as the final stage. Our recommendations on this point may now be briefly stated.

16. The co-education of boys and girls in schools should not be continued beyond the primary stage, and no boys should be admitted to girls' schools at any stage of their education. But in places where there is not sufficient demand for girls' primary education to justify the opening of separate girls' primary schools the present system of admitting girls to boys' primary schools should be continued both as a valuable means of propaganda to popularize female education and in order to procure the number of girls necessary to justify the opening of separate primary schools for girls.

17. We recommend also that as soon as the number of girls in a boys' primary school reaches thirty a separate

girls' primary school should be opened if there is a generally expressed desire on the part of the parents.

18. We have already referred, in paragraph 8 above, to the system of paying bonuses to the head masters of boys' primary schools to which girls are admitted. We think that this system should be continued with slight modifications. In the past it has been the custom to award a bonus of six annas for each girl in Class I. In the higher classes the rate has fluctuated according to local circumstances between a minimum and a maximum rate of Re. 1 and Rs. 2 in Class II, Re. 1-8-0 and Rs. 3 in Class III and Rs. 2 and Rs. 4 in Class IV. This has been accompanied by a proviso that no consolidated grant of less than Rs. 2 should be paid. It has also been laid down that the rewards should be calculated on the annual average attendance of girls in each class in the school. Finally it has been laid down that the number of girls on whose behalf the grant is paid in Class I should not exceed the total number in Classes II, III and IV. The last condition is significant for it is due to the fact that the majority of girls under instruction leave school before they reach the second class. This will be clear from the following table which shows the attendance of girls in primary classes in schools for Indians in 1926-27:—

	In girls' primary schools and primary classes attached to the vernacular middle schools.	In boys' schools.	Total.
Class I ..	14,839	9,897	24,736
Class II ...	3,833	2,565	6,398
Class III ...	3,079	1,442	4,521
Class IV ..	2,351	722	3,073
Total ...	24,102	14,626	38,728

It will be noticed that the number in Class I is greater than in all the other classes put together. The fact is that Class I of the primary schools is often looked upon by villagers as a crèche, a play-ground to which children can conveniently be sent in order to leave the parents free to do their daily work. From this point of view the first class of a primary school is popular and it is doubtful whether any encouragement is necessary to induce parents to send their children to the lower classes of a primary school. The real difficulty comes in the higher

classes, particularly the third and fourth. We doubt whether the awards at present given to head masters are sufficient to encourage them to induce parents to allow their girls to enter these classes and complete the primary school course. We recommend, therefore, that the awards should be made more attractive in these two classes. We think that the granting of bonuses should continue to be based on average attendance and we deprecate the giving of any rewards to head masters which are based on examination results. We fear that bonuses given on examination results would lead to the cramming of the few most intelligent girls and the neglect of the majority. Our detailed proposals on this matter are given below.

19. The present scale of capitation grants to schoolmasters to encourage the attendance of girls at boys' primary schools should remain unchanged for Classes I and II but in Classes III and IV the present rates, which fluctuate according to local circumstances from Re. 1-8-0 to Rs. 3 in Class III and from Rs. 2 to Rs. 4 in Class IV, should be replaced by a uniform rate of Rs. 3 in Class III and Rs. 4 in Class IV.

20. Capitation grants should be based on regularity of attendance and a capitation grant for any particular girl should automatically cease when she has spent one academic year in a particular class and should only be renewed when she secures promotion to a higher class.

21. No examination bonuses should be paid to head masters for girls in boys' schools.

B.—Curricula.

22. Assuming that the demand for education can be created by support and propaganda from the intelligentsia of the Province, and by the more attractive system of bonuses which we have suggested, it will obviously be necessary to maintain the demand. This will depend to no small extent on the courses of study which the schools will offer. Other factors, such as the provision of suitable buildings and equipment, possibly also increased facilities for attending the schools, will, we assume, receive the attention they deserve as the need arises. But a basic and fundamental factor is undoubtedly the provision of a suitable curriculum. This does not present any great difficulties in the primary stage

for the foundation of all forms of education, whether for boys or girls, must be a sound general education. And it is generally admitted that this should include the training of hand and eye and, in the case of girls, should create or at least develop a taste for household pursuits. It should also, as far as possible, be adapted to the village environment. Reading, writing, arithmetic and geography are at present compulsory subjects both in boys' and girls' primary schools. In addition, every girl is at present taught sewing and drill. Boys, on the other hand are taught either gardening or hand-work or drawing as an optional subject wherever the staff is sufficient and competent. In this connection, it is interesting to recall some of the daily duties for which girls were prepared in ancient India. In Vatsyananē's *Kamasutra* occurs an interesting list of subjects in which girls were expected to make themselves adept. These included gardening: the preparing of flower-beds and plots for house-hold vegetables and the regular tending, watering and pruning of the young plants. Good and careful cooking; the keeping of every-day accounts; looking after domestic animals and birds; other house-hold duties and physical exercises are also mentioned. The education imparted was, in fact, related to the life which the girls were expected to lead. We believe that in the primary schools of to-day a similar relation between the instruction in the schools and the life of the villager can be obtained by a judicious combination of the curricula and syllabuses already prescribed for boys and girls.

23. We recommend, therefore, that the curriculum of girls' primary schools should consist of the following subjects and where the subjects of study are the same as for boys' primary schools the syllabus also should be the same:—

Compulsory.

Reading.
Writing.
Arithmetic.
Geography.
Sewing.
Physical exercises.

Optional.

Whenever the staff is competent and sufficient, one of the following subjects should be taught:—
Gardening.
Handwork.
Drawing.

24. It is interesting to recall that in the *Harita Dharma-sutra* girls in ancient India were divided into two classes. On the one hand, were those who were destined to marry and take

up the ordinary duties of a wife and a mother. These were generally taught at home by their father or brothers or other members of the family. But there were also girls who, like boys of that age, went to live in educational institutions with sages and pursued a course of study suitable to the life to which they dedicated themselves. A similar division may be found to-day. On the one hand, there are the vast majority of girls whose natural destiny is the home and whose training should aim at the production of the perfect house-wife and mother. On the other hand, are those who desire to proceed to higher education. Too often the line of division is so complete that the majority of girls never pursue their education beyond the primary stage. If, therefore, female education is to be extended beyond this stage it becomes imperative to achieve that synthesis to which we have already referred between post-primary studies and the home. This question occupied our attention when we were considering the curricula of girls' schools in the middle stage of education. We realize that the girl who proceeds to higher studies or who desires to fit herself for one of the professions will require instruction, or more specialized instruction, in certain subjects which will not be necessary for her sister whose destiny is the home. But for each type of girl certain subjects must always remain a common necessity. Each will need "to mould her physical frame," as Ruskin puts it, and each will need "to fill and temper her mind with all knowledge and thoughts which tend to confirm its natural instincts of justice, and refine its natural tact of love". And whether her domain of influence is to be the home or the outside world, "all such knowledge should be given her as may enable her to understand, and even to aid, the work of men." For this purpose, she should not be given a superficial smattering of many subjects. But she should certainly have an accurate, if elementary, knowledge of certain subjects which are the common basis of all education. To this extent, the education of girls in the middle stage will not differ in its subjects of study nor in the detailed syllabuses from the education of boys. Differentiation will be necessary only in certain subjects which by their very nature are more suitable for girls than for boys. Such a differentiation already exists in the middle school curriculum already prescribed for boys and girls. And in the middle school course already prescribed for girls, provision is made to suit the needs of those who intend to proceed to higher studies and of those who do not intend to proceed to higher studies.

We agree with the Central Provinces High School Board, which framed that syllabus, that no bifurcation of courses is necessary or desirable at this stage of education to meet the needs of both classes of girls: We would, however, like to see included in the course certain extra subjects for study but not for examination. These may be regarded as accomplishments and we would limit our suggestions to the inclusion of music and art needle-work. Music is generally recognized as a natural heritage. We feel that this should not be dissociated from our girls' schools, and it is generally recognized that song is a valuable channel of education. Art needle-work also will be valuable as a development of the training of hand and eye which we have recommended in the primary stage and as a means of developing the artistic faculty. We desire therefore to recommend an addition to the note which the Central Provinces High School Education Board have appended to their middle school syllabus. The Board state that "the choice of subjects should be made with reference to the probable school or academic career of the pupil. Thus pupils who intend to proceed to a high school should take Mathematics and English as optional subjects." But we foresee the possibility that girls who pass the middle school examination without Mathematics might afterwards desire to prosecute their studies beyond this stage. We recommend for the consideration of the High School Education Board that such girls should be permitted to offer themselves for Mathematics at a subsequent examination and, if they pass, that they be eligible for admission to the high schools. We may now state briefly our recommendations on the middle school curriculum.

25. Whilst no actual bifurcation of courses is necessary or desirable during the middle stage of education, the curriculum of girls' middle schools should include a liberal number of optional subjects to meet the needs (a) of girls desiring to proceed to higher education and (b) of girls not desiring to proceed to higher education. We are of the opinion that the needs of both classes of girls can be met (1) by the addition to the present middle school syllabus of certain extra subjects which may be regarded as accomplishments and taken as subjects for study but not for examination, and (2) by a provision that girls who pass the Middle School Examination without Mathematics and afterwards desire to proceed to a secondary school may be allowed to offer

Mathematics at a subsequent examination and be admitted to the secondary schools if they are successful. The course which we recommend for girls is as follows :—

- (1) *Compulsory subjects*—One Vernacular (Hindi, Marathi, Urdu, Bengali, or Gujrathi) Arithmetic, History of India, Geography, Domestic Science (including sewing).
- (2) *Optional subjects*.—One or two of the following :—
English, Drawing, Mathematics (Algebra and Geometry).
- (3) *Extra subjects for study but not for examination*.—Music, Art needle-work.

NOTE.—The choice of subjects should be made with reference to the probable future or academic career of the pupil. Thus pupils who intend to proceed to a high school should take Mathematics and English as optional subjects, provided that girls who pass the Middle School Examination without Mathematics may be admitted to a high school if they pass in Mathematics at a subsequent examination.

26. It will be noticed that the list of subjects which we have included in the curriculum which we recommend for middle schools, English is an optional subject even for those girls who do not desire to proceed to higher studies. For such girls provision is already made by the teaching of English as an optional subject in the vernacular middle schools. Girls who wish to proceed to higher studies at present do so through the anglo-vernacular middle schools which have a four years' course and include Class VII. The vernacular middle school course is a three years' course which ends at Class VII. There is, therefore, no direct path from the vernacular middle schools to the high schools. It is possible, however, that girls from the vernacular middle schools may wish to proceed to higher studies. We think that a definite policy should be laid down to facilitate their doing so. This, we believe, would give a definite stimulus to secondary and higher education whilst encouraging girls to take the more domesticated part of the course which we have outlined above.

27. We recommend that in order to encourage a demand for the secondary and higher education of girls, English may be taught as an optional subject in vernacular middle schools and girls taking English in these schools should be allowed to proceed to anglo-vernacular schools and be admitted to the class for which they are educationally qualified.

28. In the high school stage as elsewhere we feel that, whilst following the main lines of the curriculum for boys, girls should be encouraged to attach less importance to those subjects which are more important to boys and to give special emphasis to those which are of special value to girls and women. But their education in those subjects must in no wise be inferior in standard or quality to that imparted to boys of the same educational stage. We would have desired to go further and differentiate more sharply than we have hitherto done between the two classes of girls for whom education must be provided. Those who desire to proceed to higher studies must obviously be trained for entrance to the universities and sit for a matriculation or high school leaving certificate examination. With regard to those girls who stay at home and who will always be the large majority, we considered the practicability of recommending courses of the same standard as those for the high school examination but not leading up to that examination. In this way, we hoped to avoid to some extent the physical strain of working for and passing examinations which, often severe in the case of boys, might tell even more on girls with their finer susceptibilities and more delicate constitutions. We realize, however, that although a great deal of lip service might be given to the advisability of instituting courses not leading up to an examination recognized by the University, such courses would, in practice, be unpopular. The shadow of the matriculation, or an equivalent examination, still hangs over the school system and for the passing of this examination English is a compulsory subject. One of the phenomena of social life of the present day is the value which young men, anxious to find educated brides, attach to the possession by girls of a matriculation or high school leaving certificate. As long as that continues, parents will naturally desire that their girls should study for such a certificate. We realize that it might be contended that in giving way to this demand we are neglecting the claims of the village maiden for higher education in the interests of the daughters of the professional classes. This is true to a certain extent. But two facts deserve to be noted. First, the stimulus to higher education must, for many years, come from the professional classes who alone demand it at present and who, presumably, are the most likely to provide teachers for higher studies. From them the demand for higher education must gradually filter down to the more conservative classes. And, secondly, even

in the villages the well-to-do classes who seek to educate their daughters demand that they should be taught English. Apart from this it would have been difficult without great additional expense to provide purely vernacular courses in the high schools for girls not proceeding to higher studies. And, even if funds were available, we are not convinced that pupils would be forthcoming in sufficient numbers to justify the extra expenditure which would be involved with a consequent diversion of funds from more immediately necessary objects. We have, therefore, taken the present high school syllabus as the basis of our recommendations. As in our proposals for the middle school curriculum, we have added to the list of subjects already prescribed, certain accomplishments particularly suitable for girls and women. These will be outside the ordinary school course, subjects for study but not for examination. Music, art needle-work and gardening will be continued from the middle stage, but we recommend that painting should now be added. Here again we find precedents in Sanskrit poetry and drama. One of the friends of Shakuntala knew painting and in the Ratnavali of King Harsha the heroine is represented as drawing a picture. Other instances could be multiplied but these are sufficient to shew that the development of the artistic and emotional side of women's nature was regarded in the old days as being of no less importance than the development of her reasoning faculties. Draupadis skilled in argument will always be few, but there can be little doubt that many will find profitable enjoyment in the increased appreciation of nature which, in its expression through gardening and art, whether of music or of painting, is the natural development of those faculties which we desired to awaken by hand and eye training in the primary school. We believe that these accomplishments will be not only useful but also a source of pleasure both to the girl who proceeds to higher studies and to those who do not. We are now in a position to state our conclusions on this subject.

29. Although it is desirable not to overload the curriculum of girls' secondary schools, the curriculum for girls proceeding to higher education should include, in addition to the subjects prescribed for boys, the following optional subjects which are suitable to the needs of girls and women:—

Domestic Science, Music, Painting, Art needle-work and Gardening.

The course which we recommend for girls is as follows:—

- (a) *Compulsory subjects*.—(1) English, (2) Mathematics, (3) History and Geography.
- (b) *Optional subjects*.—Any two of the following:—
- (1) Science (Physics and Chemistry).
 - (2) Drawing.
 - (3) A Classical language (Sanskrit, Persian, Arabic and Latin).
 - (4) A Vernacular (Hindi, Marathi, Urdu, Gujrati, Bengali).
 - (5) Domestic Science.
 - (6) A Modern European language (French).
- (c) *Extra subjects for study but not for examination*.—One or more of the following:—
- (1) Music.
 - (2) Art needle-work.
 - (3) Painting.
 - (4) Gardening.

30. We realize that those girls who are presumably destined for a home-life are more likely to give emphasis to the subjects suitable for such a life if they realize from the start that they are not thereby irrevocably closing the door on their chances of afterwards carrying their studies a stage further. We think that this could be met in a way similar to that which we recommended for such girls in the middle school stage.

31. We therefore recommend that for girls not proceeding to higher education the high school curriculum and examination should be the same as for girls proceeding to higher education except that Arithmetic should be substituted for Mathematics among the compulsory subjects for the former class of girls, and provided that any girl who has passed the examination without Mathematics may be allowed to offer Mathematics at a subsequent examination and be entitled to a certificate of having passed the High School Certificate Examination if she qualifies in that subject.

C.—Scholarships.

32. Another means of popularizing female education and increasing the demand for it is in the provision of scholarships. This, however, applies particularly to the post-primary stage.

of education. It was at one time the policy of Government to provide primary school scholarships and stipends to induce girls to continue their studies beyond the second vernacular class and thereby to enlarge the field of selection of candidates for the normal schools. This policy was, however, abandoned because it did not produce suitable candidates for the normal schools. Nor was it possible to ensure that girls who received the scholarships would subsequently join the normal schools. We see no reason why these scholarships should be revived for this purpose. Nor can we see any justification for instituting primary school scholarships from any other point of view. Such scholarships, because they make girls wage-earners at an early age, might prove attractive to the poorer classes. But they would be merely bribes to those classes to induce them to allow their girls to complete the primary stage of instruction without any guarantee that they would ever pursue their studies further. Besides being wrong in principle we believe that it is economically unsound to spend in this way money which might be utilized better elsewhere, particularly in providing suitable schools and suitable teachers.

33. We recommend that no scholarships or stipends should be granted to girls to induce them to complete the primary stage of education.

34. At present 95 scholarships of Rs. 5 per mensem, tenable in Class V of girls' vernacular middle schools, are awarded by Government through the inspectresses of schools to girls who proceed to the normal schools of the province. No scholarships are awarded in these schools to enable girls to proceed to higher studies. The reason is, obviously, that at present the path to higher studies lies through the anglo-vernacular and high schools. At present 56 scholarships are awarded by Government through the inspectresses of schools to girls studying in Government or aided anglo-vernacular middle and high schools in the Province. These scholarships vary in value according to the class in which they are tenable and are of higher value for boarders than for day-scholars. Of the 56, 35 are awarded to day-scholars and 21 to boarders, 14 of the former and 7 of the latter being reserved for pupils of the Government Girls' High School, Amraoti. But with an increased demand for education girls will enter the vernacular middle schools in increasing numbers. If the proposals which we have made in paragraph 27 above are accepted the vernacular middle schools

will cease to be either the final stage of education for a large number of girls or merely the pathway to the normal schools for others. We anticipate that an increasing number of girls in these schools will desire to prosecute their studies a stage further and we feel that scholarships tenable in these schools by girls not proceeding to the normal schools would stimulate vernacular education at this stage and, possibly, create a demand for higher studies among the classes who do not at present send their girls to anglo-vernacular schools.

35. We recommend that there should be a liberal provision of scholarships for girls to be awarded on the results of the Middle School Scholarship Examination and tenable in Classes V, VI and VII of vernacular middle schools and in Classes V, VI, VII and VIII of anglo-vernacular middle schools.

36. Coming to the question of the number and value of these scholarships, we desire to revert for a moment to a more detailed examination of the figures which we have given in paragraph 34 above. The 56 scholarships at present tenable in Government or aided anglo-vernacular middle and high schools are distributed as follows :—

(1) Available in all Government or aided anglo-vernacular girls' schools—

<i>For day-scholars.</i>	<i>For boarders.</i>
3 in each class from V to XI.	2 in each class from V to XI.
Value, Rs. 3 in classes V and VI.	Value, Rs. 7 in classes V to VIII.
Rs. 4 in classes VII and VIII.	Rs. 9 in classes IX, X, XI.
Rs. 5 in classes IX, X, XI.	
Total .. 21	Total ... 14

(2) Reserved for the Government Girls' High School, Amraoti—

<i>For day-scholars.</i>	<i>For boarders.</i>
2 in each class from V to XI.	1 in each class from V to XI.
Value, Rs. 3 in classes V and VI.	Value, Rs. 7 in classes V to VIII.
Rs. 4 in classes VII and VIII.	Rs. 9 in classes IX to XI.
Rs. 5 in classes IX to XI	
Total ... 14	Total ... 7

The scholarships at present tenable in Class V of vernacular middle schools, on the other hand, are all of the value of Rs. 5 per mensem. Two points deserve notice. First, the scholarships in the anglo-vernacular middle schools are of higher value for boarders than for day-scholars because of the greater expense involved when school girls live apart from their parents. Secondly, the scholarships at present awarded to girls in vernacular middle schools are of higher value than those given to day-scholars below class IX in anglo-vernacular middle and high schools. The justification of this lies in the fact that these vernacular middle school scholarships are stipends rather than scholarships. They are given definitely for pre-vocational training, and are more of the nature of wages given to apprentices to the profession for which the girls are about to be trained in the normal schools. They do not, therefore, serve as a guide in determining the value of the scholarships which should be awarded in accordance with the proposals which we have outlined in paragraph 35 above. We consider that scholarships awarded in vernacular middle schools for general educational purposes, as distinct from these pre-vocational apprenticeship stipends, should be of lower value than those awarded to girls studying in the anglo-vernacular middle schools. We base our opinion on the fact that the cost of education, including fees and books, is heavier in the anglo-vernacular schools, and we believe that the granting of scholarships of a higher value in anglo-vernacular schools would encourage girls to enter these schools with a view to prosecuting their studies a stage further. We are of the opinion that a fixed number of scholarships should be awarded for each class of school. Consistently, however, with our belief that girls, setting out with the idea of completing their education at the end of the middle school, may afterwards desire to go further, we recommend that vernacular middle school scholarship-holders should be permitted at any time to migrate to the anglo-vernacular middle schools. We think that this could satisfactorily be accomplished by permitting such girls to retain their scholarships in the anglo-vernacular middle school classes without, however, having their value enhanced. Our proposals with regard to the number and value of these scholarships may now be briefly stated.

37. Middle school scholarships for girls attending anglo-vernacular middle schools should be of a slightly higher value

than those for girls attending vernacular middle schools in order to cover the heavier expenditure for school fees and books in the former schools and to encourage higher education. We recommend that 50 scholarships of Rs. 3 and Rs. 7 per mensem should be provided for girls attending anglo-vernacular middle schools, 50 of Rs. 2 and Rs. 5 per mensem for girls attending vernacular middle schools and 12 of Rs. 5 and Rs. 9 per mensem for girls attending high schools tenable in each case on the same conditions as those offered for boys, except that a higher age limit should be fixed for girl candidates applying for these scholarships than is at present fixed for boys.

38. In a later section of this report, we contemplate the possibility of Government transferring the management and control of girls' vernacular education, both primary and middle, to local authorities and of the local authorities opening girls' vernacular middle schools of their own or aiding the opening of such schools by private enterprise. At this stage of our report, we are concerned with this question only in so far as it might affect the scheme of scholarships which we have recommended above.

39. We recommend that if local authorities at any time take over the management and control of existing Government vernacular middle schools or open vernacular middle schools of their own, Government scholarships tenable therein should be paid by the head mistress on the countersignature of the inspectress of schools on the scholarship bill, subject to the conditions laid down in the Education Manual governing the award of scholarships.

D.—Teachers.

40. We now come to the question of the supply of teachers which, in some ways, is the most important of all the questions connected with female education. For it is obvious that no extensive preaching of education, however ardent; no changes in curricula, however sweeping; and no award of scholarships, however generous; will suffice to advance the cause of female education unless an adequate supply of competent teachers is forthcoming. The ability, skill and personality of the teacher will, in the long run, determine the pace at which people will accept and demand a larger measure of education. But here we are confronted

with great difficulties. The first of these will be realized by a consideration of the figures given in paragraphs 8 to 10 of this report. The total female population of the Province is 6,961,361. But not more than 1,049 girls passed the primary school examination in 1927. In the same year, there were only 145 girls in the high school classes and only 17 in the colleges. Numbers, alone, therefore constitute a difficulty. To other difficulties, connected with social conditions in India, we shall have occasion to refer in paragraph 44 below. But from the point of view of numbers, it is obvious that the field of selection of teachers is limited and the supply of teachers is likely to increase only with the demand for education and certainly not in advance of it. To keep pace with this demand by training an adequate supply of teachers has hitherto been regarded by Government as one of its duties and has hitherto been its special charge. For the training of women teachers for the vernacular schools Government at present maintains two normal schools, one at Amraoti and the other at Jubbulpore. It also aids four normal schools for women which have been opened by missionary bodies and are managed and maintained by them. For the training of teachers in the girls' anglo-vernacular middle and high schools, Government has instituted a system of scholarships. Twenty-five scholarships each of Rs. 50 per mensem for graduates, and 100, each of Rs. 40 per mensem, for undergraduates, tenable in the Spence Training College, Jubbulpore, are open to men and women candidates. Owing to the difficulties of providing adequate accommodation for women outside the college these scholarships are generally taken up by men though a few women candidates also profit by them. In addition two stipends, each of the value of Rs. 50 per mensem for graduates and two, each of the value of Rs. 40 per mensem for undergraduates, are available for the training of women teachers in institutions outside the Central Provinces and Berar. We desired to utilize some of these extra-provincial scholarships for the improvement of the staff in the normal school at Amraoti in order ultimately to obtain better teachers in the vernacular schools in the Marathi-speaking districts. At our request the Director of Public Instruction enquired whether vacancies could be secured for our scholarship-holders in training institutions in Bombay where the training is given through Marathi. We regret that facilities were not available. We assume that the present system of granting scholarships and

stipends to graduate and undergraduate candidates for the teaching profession will continue and we desire to offer no further recommendations on this point. We are so convinced, however, of the importance of providing an increasing supply of vernacular teachers and of the impossibility of any agency other than Government being able adequately to undertake this work that we desire to record a definite recommendation to this effect.

41. The training of an adequate supply of women teachers should continue to be the special charge of Government. We therefore recommend that Government should continue to maintain its two normal schools for women as at present and should be prepared to extend these schools to meet any increased demand which may in the course of time arise for vernacular teachers. Government should continue also to aid normal schools for women which are opened as the result of private enterprise subject to the usual conditions of recognition.

42. We have already referred to the fact that scholarships are granted by Government to girls in the vernacular middle schools who desire to undergo training in the normal schools for the profession of teachers. In many places, however, middle schools do not exist. In order, therefore, to open up a field of recruitment for teachers from these places and to give the necessary middle school training preparatory classes have been opened in the Government normal schools. The entrance qualification is the possession of the Primary School Certificate. After completing the course in these preparatory classes the girls pass on, like those from the vernacular middle schools, to what may be called the normal school proper. There they receive training for the Junior Training Certificate Examination. They are then posted to the various schools in the Province. Training for the Senior Training Certificate Examination is given in the normal schools to girls who enter these schools direct after passing through the high schools and also to trained teachers who return from their schools for further training in the normal schools. In the preparatory as in the normal school classes, stipends are given to the girls under training. As a result the number of girls under training in the Government normal schools has averaged approximately 200 during each of the last five years and

approximately 30 girls annually leave the normal schools with a Junior Women's Training Certificate and about the same number with a Senior Women's Training Certificate. The numbers in each case have varied slightly from year to year but these are sufficiently exact to give an idea of the work that is being done. Obviously, much more remains to be accomplished if female education is to advance during the next few years. With regard to the stipends it may be noted that 30, each of the value of Rs. 8 per mensem, are annually awarded to girls in the preparatory classes at Jubbulpore. At Amraoti, 20 preparatory stipends are awarded, each of the value of Rs. 9 per mensem. For girls in the junior and senior classes of the normal schools 40 stipends, each of the value of Rs. 10 per mensem, are awarded at Jubbulpore, and 40, each of the value of Rs. 12 per mensem, at Amraoti. We agree that the difference between the cost of living at Amraoti and the cost at Jubbulpore justifies a continuance of the more valuable stipends in the former place. But we see no reason for differentiating between the preparatory and normal school classes in the same institutions at these places. The girls in the preparatory classes live under the same conditions as those in the normal school classes and have to bear extra expenses, connected with the initial outlay on books and outfit. We consider that the stipends in the preparatory classes are inadequate and should be raised to the same amount as those in the normal school classes. We consider that the latter are adequate under present conditions. We are now in a position to formulate our proposals on this subject.

43. In order to secure an adequate supply of competent teachers, the preparatory classes should be retained in the women's normal schools, the number of stipends in the normal schools should be increased when necessary and the value of the stipends should be of a uniform rate of Rs. 10 per mensem in preparatory and other classes at the normal school, Jubbulpore, and of Rs. 12 per mensem at the normal school, Amraoti.

44. We now come to the special difficulties, to which we referred in paragraph 40 above, which retard the recruitment of competent women teachers. These difficulties arise from Indian social conditions which are so well known that it

may be thought unnecessary to mention them here. But few ever pause to consider how adversely they affect the recruitment of women teachers and thereby retard the development of female education. We believe that a frank avowal of these difficulties, in no spirit of carping criticism, should be made in fairness to the present members of the teaching profession and is more likely to lead to an earnest and sympathetic endeavour for their removal than any attempt to pass them over in silence. To begin with, the source of supply of teachers, already slender because of the small number of educated girls, is further limited by the purdah system and by early marriages. Unmarried women teachers are available only in small numbers. Married women who enter the profession belong, as a rule, only to the poorer classes. At first sight the teaching of girls would appear to offer a useful and admirable occupation for the child widows of the Province. But selection from this class is restricted by the fact that under present conditions Indian parents are naturally jealous of the honour of their widowed daughters and view with anxiety anything which takes them away from their homes. Girls belonging to the Indian Christian community often enter the teaching profession and are generally satisfactory but are not always acceptable to the more conservative classes in the villages. And the Missions which train them naturally have a prior claim on their services. The position may be briefly summarized by stating that teaching, under present conditions, is generally not regarded as a desirable profession for Indian girls. With few exceptions among the more advanced sections of the intelligentsia who realize the need for women teachers of the right type, the average Indian parent, with a reasonable income, would hesitate long before allowing his wife or daughter to enter the profession. And the intelligentsia are not likely to prove a recruiting ground for any teachers for work outside the larger towns. The result is that vernacular school teachers, the basis on which future development of female education rests, usually come from the poorer classes. When posted or transferred to a strange place the woman teacher is often regarded with suspicion by the more orthodox inhabitants and coming as she generally does from the poorer classes, the caste system generally deprives her of any social position in the village. If unmarried or a widow and unprotected by the presence of elder relatives, she often becomes the victim of intrigues and accusations by the

unscrupulous. The teacher's lot is not a happy one. In order to mitigate these conditions it has for some time been the practice of the Education Department in this Province to post unmarried or widowed teachers to their own towns or villages. Ultimately, this policy means that any town or village and, possibly, any community which desires education for its girls must be prepared to provide a suitable person to be educated and trained as a teacher. We do not regard this as a disadvantage but rather as an extra stimulus to each community to work for its own welfare. And we regard it as a valuable means of raising the status and general repute of the teaching profession in the villages. Our general position may be expressed as below.

45. It is desirable that a woman teacher should as far as possible be recruited from and employed in her own town or village.

46. It will be clear from the above that as a class primary school teachers need protection. We consider it essential that their pay should be sufficient to render them independent and to enable them to maintain a near relative. The presence of the latter would alleviate the loneliness of life in the villages and would protect the teacher from undesirable outside influences. The present rates of pay of women teachers in the cadre for vernacular schools are Rs. 60, Rs. 50, Rs. 40, Rs. 30, Rs. 25 and Rs. 20 per mensem for trained teachers and Rs. 15 per mensem for untrained teachers. We consider that the pay of untrained women teachers is insufficient for the purposes mentioned above. We think also that it should be possible for every trained teacher to reach, within a definite time, a minimum salary of Rs. 30 per mensem apart from such chances of promotion as already exist within the present cadre. We are of the opinion that this could be done by introducing a time-scale of pay in the lower posts of the cadre. We are satisfied that the present scale of pay in the Lower and Upper Divisions of the Subordinate Educational Service and of the Select Division posts is adequate to guarantee a supply of teachers sufficient to meet present requirements. We note, however, that the Lower Division of the Subordinate Educational Service posts contains only one select post with a salary of Rs. 100-5-125 per mensem. We are of the opinion that this should be increased to two. We believe that these

improvements in salaries and prospects will lead to a raising of the public estimate of the teaching profession. That, in itself, will go far towards making the profession more attractive and thereby increasing the field of recruitment. Within the profession itself we believe that our proposals will lead to better work because of increased prospects and the spur to ambition. These proposals may now be briefly stated.

47. It is essential that the pay of women teachers should be sufficient to render them independent. We consider that Rs. 15 per mensem, the present pay of untrained women teachers, is insufficient for this purpose and that the prospects of trained teachers should be made more attractive. We therefore recommend that the pay of untrained women teachers should be increased and that in the lower posts of the cadre for trained teachers a time-scale should be introduced which would enable every trained teacher to reach a pay of Rs. 30 per mensem apart from such chances of promotion as exist in the present cadre. We further recommend that the number of select posts on Rs. 100—5—125 in the Lower Division of the Subordinate Educational Service should be increased from one to two.

E.—The Opening of New Schools.

48. A question which engaged our attention during our discussions on the need to popularise girls' education was whether Government or local authorities should open separate schools for different classes or castes. We unanimously agreed that this would be a retrogressive step and would tend to a perpetuation of class or communal feeling which we feel is the very negation of nationality. On the other hand, we sympathise with any community wishing to open a school of its own to meet its particular needs but we think that the present grant-in-aid regulations, as given in article 10 of the Educational Manual, are adequate to meet such a case. The case for opening separate language schools is different and we are of the opinion that if the need should arise Government and local authorities should be prepared not only to aid the opening of separate language schools but also to open such schools of their own. This is in accordance with the practice of the past. Our recommendations on this subject may now be briefly stated.

49. No separate caste or class schools should be opened by Government or local authorities.

50. The usual provision should be made to meet the needs of communities differing in language by opening or aiding the opening of schools for separate languages.

51. At present there is only one Government high school for girls in the Province, the Government High School for Girls, Amraoti. In this school, the medium of instruction is Marathi. One of the questions brought before us for consideration was whether it is desirable to open a high school for girls in the Hindi districts of the Province. In dealing with this question we did not limit our enquiries to the Hindi districts but examined the wider question as to whether additional high schools for girls are at present required in any district. At present there are four high schools for girls in the Province, two in the Nagpur Circle and two in the Jubbulpore Circle. Of the former, one is a Government and one an aided institution. In the Jubbulpore Circle, which includes the Hindi-speaking districts, both high schools are aided. The distribution of girls in the high school classes of these four schools in 1926-27 was as follows:—

Jubbulpore Circle.			Nagpur Circle.		
9th Class	...	25	9th Class	...	25
10th Class	...	25	10th Class	...	26
11th Class	...	28	11th Class	...	16
<hr/>			<hr/>		
Total	...	78	Total	...	67
<hr/>			<hr/>		

This gives an average of approximately 12 or 13 girls in Classes IX or X of each school in all districts, of 14 in Class XI of each school in the Hindi districts and of 8 in Class XI of each school in the Marathi districts. Obviously the limit of accommodation and efficiency in these schools has not yet been reached. No evidence has been placed before us to shew that these classes are likely to be filled in the near future. Such evidence as may be gathered from the present numbers in the eighth anglo-vernacular middle classes, from which girls proceed to the high schools, points

the other way. There are at present only 110 girls in the eighth anglo-vernacular middle class. Of these 63 are in the Jubbulpore Circle and 47 in the Nagpur Circle. All these girls could find accommodation in the four existing high schools. To open new Government high schools for girls at present, therefore, would result in competition with the existing aided institutions and would be both uneconomical and inexpedient. Our general position is as given below.

52. No new high schools for girls are required in the Province at present but we hope that the need will arise as the result of the expansion which we look forward to in primary education and we recommend that Government should open or aid the opening of new high schools as soon as the demand is sufficient to justify such action; and in particular we recommend that when the need arises Government should consider the desirability of opening a Government girls' high school for the Hindi districts of the Province corresponding to the Marathi Girls' High School, Amraoti.

53. We considered also the question of opening special schools to meet the needs of the Urdu-speaking population of the Province. But the social customs which have retarded the education of Hindu girls apply with even greater force to Muhammadan girls. Stricter observance of the *pardah* system, a distrust of secular education for girls and the greater general backwardness of the Muhammadan community have resulted in an almost entire absence of girls' education above the primary stage. We know of only one Muhammadan girl in the top class of a vernacular middle school. There are none in the anglo-vernacular middle schools and only one in the high schools. This is insufficient to justify the opening of special secondary schools for Urdu-speaking girls. We considered the possibility of these girls being admitted to the Government Girls' High School, Amraoti, and we examined the practicability of facilitating this by the appointment of an Urdu-speaking teacher to the staff of that school. But the medium of instruction for certain subjects at the Girls' High School, Amraoti, is Marathi. It is equally impossible for Urdu-speaking girls to receive instruction in Marathi, and for a single Urdu-speaking teacher to teach a variety of subjects to a number of classes in Urdu. We were therefore reluctantly compelled to abandon any idea of recommending the appointment of an Urdu-speaking teacher

at this school as impracticable. The only solution of the difficulty which we can suggest under present conditions is that efforts should be made to secure the admission of Muhammadan girls to the convent schools of the Province. Indian girls who speak English are already admitted to these schools and many Parsis take advantage of the fact. The medium of instruction would be English but Urdu-speaking girls desiring secondary and higher education would learn that language in any case. And, finally, we believe that the atmosphere of a convent school would meet the needs of girls for whom the strict observance of *pardah* must be guaranteed. With regard to the secondary education of Muhammadan girls our recommendations may now be stated.

54. The demand for the secondary education of Muhammadan girls is at present insufficient to justify the opening of special schools for these girls and the fact that the medium of instruction at the Girls' High School, Amraoti, is Marathi prevents any practicable arrangement being made for the admission of Muhammadan girls to that school. We therefore recommend that Government should endeavour to secure the admission of qualified Muhammadan girls to the convent schools of the Province, in which the medium of instruction is English, until there is a sufficient demand to justify the opening of a separate high school for Urdu-speaking girls.

F.—Administration and Control.

55. The last subject with which we are concerned as likely to affect the extension and improvement of female education is that of control. In the past, the control of female education has vested in Government which has always regarded education as its special charge and has provided and encouraged the education of girls either in institutions of its own or by giving financial aid to institutions started by private munificence and missionary enterprise. Until recently public opinion has generally been in favour of Government continuing to exercise this control. So far as the secondary education of girls is concerned we are of the opinion that no other agency exists in India sufficiently equipped to take over this work. Local authorities, for example, have not at present the necessary experience or

financial resources. Until the demand for female education has become more general, and enthusiasm for its development more deep-seated and widespread, the transfer of Government control of girls' secondary education would, in our opinion, lead to sporadic effort and to lack of uniformity in system. This would mean a definite retarding of expansion and development.

56. We recommend, therefore, that the secondary education of girls should continue to be the special charge of Government and of private enterprise assisted by Government grants-in-aid.

57. With regard to vernacular education, in the middle as in the primary stage, the position has changed considerably during the last few years. Recent Acts affecting local bodies have empowered local authorities to make provision for primary education in its various branches, and the control of vernacular education for boys has already been transferred to local authorities in the Central Provinces and Berar. The present position is therefore anomalous. Local authorities control the vernacular education of boys but not of girls; and with regard to the vernacular education of girls they are vested with powers of control which continue to be exercised by Government. And elsewhere in India, girls' vernacular schools are managed and controlled by local bodies.

58. We are of the opinion that the ultimate aim of educational policy should be to place the vernacular education of girls under the same management and control as the vernacular education of boys, namely, local authorities, and that the vernacular education of girls should be conducted in schools maintained by local bodies or by private enterprise assisted by grants-in-aid from those bodies

59. It will be noted that we do not contemplate that Government should immediately transfer its control of girls' vernacular education to local bodies. Difficulties, mainly connected with the staff, occur with regard to the transfer of existing Government institutions. These difficulties would obviously be perpetuated and would increase if new Government institutions were opened. It was, therefore, suggested in our discussions that, as a first step towards attaining the object which we have in view, Government should cease to

open new schools for girls. This, however, brought to light a decided reluctance on the part of some of our members to put into practical effect the policy which has already been enunciated. It was pointed out that the funds already at the disposal of local authorities are limited, that public enthusiasm for female education is as yet too frail a foundation on which local authorities are likely to base a demand for extra taxation, that in the past local authorities have done little for boys' education and nothing for girls' and that they were not likely to do anything in future. Local body funds for educational purposes are like butter in a besieged town, not too much for one and far too little to go around. If more butter were obtainable in the shape of extra taxation it was far more likely to be spread on the boys' bread than on the girls'. We feel that this apprehension is to a certain extent justifiable. Local bodies have not hitherto done much for vernacular education, particularly the vernacular education of girls. But local bodies have not really been put to the test. Government has always been in the back-ground ready, in the absence of local effort, to supply the schools that were needed. Stop this source of supply, put local bodies on their mettle to supply new schools of their own and they will respond, urged the protagonists of this point of view. In any case, the opening of new schools by Government would increase the difficulty of the transfer of control and postpone that transfer to a more distant date. Finally, though not unanimously, we agreed that, as a first step towards the realization of the policy which we have advocated, Government should cease to open new vernacular schools for girls but it should be free to develop and expand its present schools to meet local requirements. Our recommendations on this point may now be briefly enunciated.

60. The opening of new vernacular schools for girls should be left to local authorities and to private enterprise assisted by grants-in-aid from Government.

61. Meanwhile, we feel that definite tangible encouragement should be given by Government to local authorities who are willing to undertake the extra responsibility and expense which the opening of vernacular schools for girls will entail. We suggest that this should take the form of financial help given through the grant-in-aid system. At present schools which are opened by private enterprise may,

upon recognition, receive a Government grant-in-aid equal to one-third of its approved annual expenditure. In special cases this may be increased to one-half. We see no reason for a modification of this so far as it concerns schools opened by private enterprise. But we should like to discriminate between such schools and those opened by local authorities by giving the latter, not in exceptional cases but as a general rule, more generous financial help than the former.

62. We recommend that a local authority opening a new vernacular school for girls should be assisted by a grant-in-aid equal to one-half of its total approved annual recurring expenditure under the usual conditions of the grant-in-aid code.

63. Besides leaving the opening of new schools to local authorities with the more generous grant-in-aid which we have recommended, we considered the practicability of further experiment in this direction. We all agreed that the immediate transfer of all Government schools to local authorities is impracticable. Many local authorities have not yet shewn any manifest enthusiasm for female education nor proved themselves capable of undertaking this responsibility and some of them might not be prepared voluntarily to accept it at present. In any case it was felt that as a general rule it is bad statesmanship to effect any sudden and violent change in administration when more progressive measures are possible. We asked ourselves, therefore, how far it would be practicable and advisable as an experimental measure to transfer immediately certain selected existing Government schools to such local authorities as agree to accept their control and management for a given period under certain definite conditions. It was suggested, as a basis for discussion, that existing Government vernacular schools for girls at district headquarters should immediately be transferred to local bodies as an experimental measure for a period of three years. These are the best of the Government vernacular schools for girls and would be transferred as working propositions. Local authorities would thus be given the best possible opportunity of acquiring experience in the management and control of schools and of shewing whether they had sufficient enthusiasm for female education to develop and expand those schools. Conditions were suggested to safe guard the interests of the

present staff. It was proposed that any local authority taking over these schools should be assisted in their control and management by a statutory committee with a definite proportion of local lady members. The purpose of these committees was to ensure that sufficient importance should be attached by local authorities to female education and to its extension and improvement, that ladies with knowledge of local conditions should always be available to voice local educational needs and to press for measures to meet those needs. Finally it was felt that the presence of ladies on the committees would afford protection to the staff of the schools and secure a sympathetic consideration of the peculiar difficulties and dangers to which their isolated position makes them liable. We realized that it may not be easy to find ladies with sufficient leisure and qualifications to undertake this work. We are aware also that such ladies' committees as already exist in connection with girls' schools have met with varying success in different districts and that generally they have been a failure. But the present committees are merely supplementary to the school committees. The ladies' committees which we recommend, being statutory committees, will be based on a firmer foundation. And even where the present ladies' committees have been a failure some very good work has been done by individual members of them. In any case we recommend that the creation of such committees should be an indispensable condition for the transfer of schools to local bodies. And we think that ladies of sufficient leisure and qualifications are more likely to be forthcoming in district headquarters than elsewhere. But against the immediate transfer of these schools it was urged that Government has definite obligations towards the existing staff of the schools. The women teachers employed in these schools had entered Government service with security of tenure, pay, pension, provident fund and promotion, on the definite understanding, at any rate from their point of view, that they would remain in Government service so long as they continued to give satisfaction. It was urged that few of them would willingly agree to be transferred to the service of local authorities. It was felt that many of the difficulties under which they at present work would be enhanced if they were employed by local authorities, that, in any case, they could not expect from local authorities any sympathetic consideration of the special dangers and difficulties which surround them and that from every point of view they would regard the transfer with acute misgiving. To offer them the

choice of being transferred from Government service to that of local authorities, or an alternative which their poverty prevented them from refusing would be virtually a breach of contract. And in addition it was urged that all the arguments, detailed in paragraph 59 above, against leaving the opening of new schools to local authorities applied with greater force to the transfer of existing Government schools. To leave the opening of new schools to local authorities would, at the worst, mean the cessation of future expansion of female education. To give over the best existing Government schools might mean a definite diminution of female education. Whatever view might be held of Government's responsibility for schools to be opened in future there could be no two opinions regarding its responsibility to maintain present standards. It was agreed by all that ultimately all Government schools must be transferred to local authorities if the policy of transferring the control of female education to them is accepted. But it was argued that local authorities were more likely to manage Government schools successfully if they first acquired experience with their own new schools, and that they would be more likely to put their best effort into the opening and managing of their own schools if they know that successful management would lead to their controlling Government schools. Instead, therefore, of Government taking a leap in the dark by asking local authorities to take over existing Government schools it was argued that the better plan would be to watch for five years the progress made by local authorities in the opening and managing of new schools. At the end of five years the whole position could be reviewed with a view to determine whether Government schools in district headquarters should be transferred as described above. Ultimately this view was accepted. Our recommendations on this subject are given in the two following resolutions.

64. Government should watch carefully the progress made by local authorities in opening new vernacular schools for girls and should review the whole position of girls' vernacular education after a period of five years with a view to determine whether the management and control of existing Government vernacular schools for girls should be transferred to local authorities and the future development of vernacular education made the special charge of local authorities.

65. If, at the end of five years, Government is satisfied with the progress made by local authorities in opening vernacular schools for girls, we recommend that the whole position should be reviewed and that the following suggestions should then receive consideration :—That, in order to enable local authorities to gain further experience and to encourage them to take over girls' vernacular education, Government vernacular schools for girls in district headquarters should be transferred to local authorities on the following conditions :—

- (1) that the Municipality in the particular district headquarters agrees to take over the control and management of the school ;
- (2) that the Municipality is assisted in the control and management of the school by a special statutory committee with a definite proportion of local lady members, the Municipal Act being amended if necessary for the creation of such a committee ;
- (3) that adequate safeguards be provided for the protection of the women teachers in order to guarantee to the teachers employed by Government at the time of the transfer such security of tenure, pay, pension, provident fund, promotion and other prospects as they would have enjoyed if the school had not been transferred to the Municipality ;
- (4) that the final decision on all question of transfer, promotion and punishment of the existing Government staff shall remain with the Education Department as at present ;
- (5) that the Municipality shall be given the use of the school buildings, furniture and equipment conditionally on the Municipality maintaining the buildings, furniture and equipment in repair and returning them to Government if at any time they cease to be used for the purposes of a vernacular school for girls.

65. It was agreed that the maintenance of standards and the improvement and extension of female education would depend in future as at present on adequate inspection and general organization. At present all girls' schools are

inspected by Government Inspectresses and Assistant Inspectresses. In the remote parts of the province which are difficult of access a good deal of the inspection of girls' schools is done by Deputy Inspectors. We are of the opinion that this system should be continued provided that the present arrangement is maintained by which Muhammadan schools are under female inspection and the work of the Deputy Inspectors is subject to the general instructions of the Inspectress and that every school is visited once in a cycle of years by a lady inspecting officer. We also think that the time has arrived to fill a post which has long been vacant in the inspecting staff of Nagpur Circle. Our recommendations are on these points are given below.

67. Girls' schools should continue to be inspected as at present by Government Inspectresses and Assistant Inspectresses assisted by Deputy Inspectors in out-of-the way places.

68. The post of Assistant Inspectress, Nagpur Circle, which has been vacant for a long time should be filled.

CHAPTER II.

SUMMARY OF OUR PROPOSALS.

Reference to
Paragraphs
in Report.

1 to 21.

A.—The Demand for Girls' Education.

11 and 12.

Resolution 1.—The advancement of India is so intimately bound up with the education of girls that unless active measures are taken to further their education and a public demand is created for it, the general progress of the country must be seriously impeded.

13 and 14.

Resolution 2.—In order to stimulate public interest in girls' education vigorous and active propaganda is necessary. We recommend that for this purpose a non-official publicity organization of committees of ladies and gentlemen interested in education be established with its headquarters at Nagpur and subsidiary committees in the district head-quarters and smaller municipalities of the Province to work in co-operation with Government and local authorities.

15 and 16.

Resolution 3.—The co-education of boys and girls in schools should not be continued beyond the primary stage and no boys should be admitted to girls' schools at any stage of their education. But in places where there is not sufficient demand for girls' primary education to justify the opening of separate girls' primary schools the present system of admitting girls to boys' primary schools should be continued both as a valuable means of propaganda to popularize female education and in order to procure the number of girls necessary to justify the opening of separate primary schools for girls.

17.

Resolution 4.—As soon as the number of girls in a boys' primary school reaches thirty a separate girls' primary school should be opened if there is a generally expressed desire on the part of the parents.

18 and 19.

Resolution 5.—The present scale of capitation grants to school masters to encourage the attendance of girls at boys' primary schools should remain unchanged for Classes

I and II but in Classes III and IV the present rates, which fluctuate according to local circumstances from Rs. 1-8-0 to Rs. 3 in Class III and from Rs. 2 to Rs. 4 in Class IV, should be replaced by a uniform rate of Rs. 3 in Class III and Rs. 4 in Class IV.

Resolution 6.—Capitation grants should be based on regularity of attendance and a capitation grant for any particular girl should automatically cease when she has spent one academic year in a particular class and should only be renewed when she secures promotion to a higher class. 20.

Resolution 7.—No examination bonuses should be paid to headmasters for girls in boys' schools. 21.

B.—Curricula. 22 to 31.

Resolution 8.—The curriculum of girls' primary schools should consist of the following subjects and where the subjects of study are the same as for boys' primary schools the syllabus also should be the same:— 22 and 23.

Compulsory.

Reading.
Writing.
Arithmetic.
Geography.
Sewing.
Physical exercises.

Optional.

Whenever the staff is competent and sufficient one of the following subjects should be taught:—
Gardening.
Handwork.
Drawing.

Resolution 9.—Whilst no actual bifurcation of courses is necessary or desirable during the middle stage of education, the curriculum of girls' middle schools should include a liberal number of optional subjects to meet the needs (a) of girls desiring to proceed to higher education and (b) of girls not desiring to proceed to higher education. We are of the opinion that the needs of both classes of girls can be met (1) by the addition to the present middle school syllabus of certain extra subjects which may be regarded as accomplishments and taken as subjects for study but not for examination and (2) by a proviso that girls who pass the middle school examination without Mathematics and afterwards desire to proceed to a secondary school may be allowed to offer Mathematics at a subsequent examination and 24 and

be admitted to the secondary schools if they are successful. The course which we recommend for girls is as follows :—

- (i) *Compulsory subjects*.—One Vernacular (Hindi, Marathi, Urdu, Bengali or Gujrati), Arithmetic, History of India, Geography, Domestic Science (including Sewing).
- (ii) *Optional subjects*.—One or two of the following :—
English, Drawing, Mathematic (Algebra and Geometry).
- (iii) *Extra subjects for study but not for examination*:—Music, Art needle-work.

NOTE.—The choice of subjects should be made with reference to the probable future or academic career of the pupil. Thus pupils who intend to proceed to a high school should take Mathematics and English as optional subjects, provided that girls who pass the Middle School Examination without Mathematics may be admitted to a high school if they pass in Mathematics at a subsequent examination.

25 and 26.

Resolution 10.—In order to encourage a demand for the secondary and higher education of girls, English may be taught as an optional subject in vernacular middle schools and girls taking English in these schools should be allowed to proceed to anglo-vernacular schools and be admitted to the class for which they are educationally qualified.

27 and 28.

Resolution 11.—Although it is desirable not to overload the curriculum of girls' secondary schools the curriculum for girls proceeding to higher education should include, in addition to the subjects prescribed for boys, the following optional subjects which are suitable to the needs of girls and women :—

Domestic Science, Music, Painting, Art needle-work and Gardening.

The course which we recommend for girls is as follows :—

- (a) *Compulsory subjects*.—(1) English, (2) Mathematics, (3) History and Geography.
- (b) *Optional subjects*.—Any two of the following :—
 - (1) Science (Physics and Chemistry)
 - (2) Drawing.
 - (3) A Classical language (Sanskrit Persian, Arabic and Latin).
 - (4) A Vernacular (Hindi, Marathi, Urdu, Gujrati, Bengali).
 - (5) Domestic Science.
 - (6) A Modern European language (French).

(c) *Extra subjects for study but not for examination.*—

One or more of the following :—

- (1) Music
- (2) Art needle-work.
- (3) Painting.
- (4) Gardening-

Resolution 12.—For girls not proceeding to higher education the high school curriculum and examination should be the same as for girls proceeding to higher education except that Arithmetic should be substituted for Mathematics among the compulsory subjects for the former class of girls, and provided that any girl who has passed the examination without Mathematics may be allowed to offer Mathematics at a subsequent examination and be entitled to a certificate of having passed the High School Certificate Examination if she qualifies in that subject. 30 and 31.

C.—Scholarships.

Resolution 13.—No scholarships or stipends should be granted to girls in primary schools to induce them to complete the primary stage of education. 32 and 33.

Resolution 14.—There should be a liberal provision of scholarships for girls to be awarded on the results of the Middle School Scholarship Examination and tenable in Classes V, VI and VII of vernacular middle schools and in Classes V, VI VII and VIII of anglo-vernacular middle schools. 34 and 35.

Resolution 15.—Middle school scholarships for girls attending anglo-vernacular middle schools should be of a slightly higher value than those for girls attending vernacular middle schools in order to cover the heavier expenditure for school fees and books in the former schools and to encourage higher education. We recommend that 50 scholarships of Rs. 3 and Rs. 7 per mensem should be provided for girls attending anglo-vernacular middle schools, 50 of Rs. 2 and Rs. 5 per mensem for girls attending vernacular middle schools and 12 of Rs. 5 and Rs. 9 per mensem for girls attending high schools, tenable in each case on the same conditions as those offered for boys, except that a higher age limit should be fixed for girl candidates applying for these scholarships than is at present fixed for boys. 36 and 37.

Resolution 16.—If local authorities at any time take over the management and control of existing Government vernacular middle schools or open vernacular middle schools of their own, Government scholarships tenable therein should be paid by the Head Mistress on the countersignature of the Inspectress of Schools on the scholarship bill, subject to the conditions laid down in the Education Manual governing the award of scholarships.

40 to 47.

D.—Teachers.

40 and 41.

Resolution 17.—The training of an adequate number of woman teachers should be the special charge of Government. We therefore recommended that Government should continue to maintain its two normal schools for women as at present and should be prepared to extend these schools to meet any increased demand which may in the course of time arise for vernacular teachers. Government should continue also to aid normal schools for women which are opened as the result of private enterprise subject to the usual conditions of recognition.

42 and 43.

Resolution 18.—In order to secure an adequate supply of competent teachers the preparatory classes should be retained in the women's normal schools, the number of stipends in the normal schools should be increased when necessary and the value of the stipends should be of a uniform rate of Rs. 10 per mensem in the preparatory and other classes at the Normal School, Jubbulpore, and of Rs. 12 per mensem at the Normal School, Amraoti.

44 and 45.

Resolution 19.—It is desirable that a woman teacher should as far as possible be recruited from and employed in her own town or village.

46 and 47.

Resolution 20. It is essential that the pay of women teachers should be sufficient to render them independent. We consider that Rs. 15 per mensem, the present pay of untrained women teachers, is insufficient for this purpose and that the prospects of trained teachers should be made more attractive. We therefore recommend that the pay of untrained women teachers should be increased and that in the lower posts of the cadre for trained teachers a time scale should be introduced which would enable every trained teacher to reach a pay of Rs. 30 per mensem apart from such chances of

promotion as exist in the present cadre. We further recommend that the number of select posts on Rs. 100-5-125 in the lower division of the Subordinate Educational Service should be increased from one to two.

Opening of New Schools.

48 to 54

Resolution 21.—No separate caste or class schools should be opened by Government or public bodies. 48 and 49.

Resolution 22.—The usual provision should be made to meet the needs of communities differing in language by opening or aiding the opening of schools for separate languages. 50.

Resolution 23.—No new high schools for girls are required in the Province at present but we hope that the need will arise as the result of the expansion which we look forward to in primary education and we recommend that Government should open or aid the opening of new high school as soon as the demand is sufficient to justify such action and in particular we recommend that when the need arises Government should consider the desirability of opening a Government girls' high school for the Hindi districts of the Province corresponding to the Marathi Girls' High School, Amraoti. 51 and 52.

Resolution 24.—The demand for the secondary education of Muhammadan girls is at present insufficient to justify the opening of special schools for these girls and the fact that the medium of instruction at the Girls' High School, Amraoti, is Marathi prevents any practicable arrangement being made for the admission of Muhammadan girls to that school. We therefore recommend that Government should endeavour to secure the admission of qualified Muhammadan girls to the convent schools of the Province, in which the medium of instruction is English, until there is a sufficient demand to justify the opening of a separate high school for Urdu-speaking girls. 53 and 54.

F.—Administration and Control.

55 to 68.

Resolution 25.—The secondary education of girls should continue to be the special charge of Government and of private enterprise assisted by grants-in-aid. 55 and 56.

Resolution 26.—The ultimate aim of educational policy should be to place the vernacular education of girls under the same management and control as the vernacular education of boys, namely, local authorities and private institutions.

59 and 60. **Resolution 27.**—The opening of new vernacular schools for girls should be left to local authorities and to private enterprise assisted by grants-in-aid from Government.

61 and 62. **Resolution 28.**—A local authority opening a new vernacular school for girls should be assisted by a grant-in-aid equal to one-half of its total approved annual recurring expenditure under the usual conditions of the grant-in-aid code.

63 and 64. **Resolution 29.**—Government should watch carefully the progress made by local authorities in opening new vernacular schools for girls and should review the whole position of girls' vernacular education after a period of five years with a view to determine whether the management and control of existing Government vernacular schools for girls should be transferred to local authorities and the future development of vernacular education made the special charge of local authorities.

65. **Resolution 30.**—If, at the end of five years, Government is satisfied with the progress made by local authorities in opening vernacular schools for girls, we recommend that the whole position should be reviewed and that the following suggestion should then receive consideration:—That, in order to enable local authorities to gain further experience and to encourage them to take over girls' vernacular education, Government vernacular schools for girls in district headquarters should be transferred to local authorities on the following conditions:—

(1) that the Municipality in the particular district headquarters agrees to take over the control and management of the school;

(2) that the Municipality is assisted in the control and management of the school by a special statutory committee with a definite proportion of local lady members, the Municipal Act being

amended if necessary for the creation of such a committee ;

- (2) that adequate safeguards be provided for the protection of the women teachers in order to guarantee to the teachers employed by Government at the time of the transfer such security of tenure, pay, pension, provident fund, promotion and other prospects as they would have enjoyed if the school had not been transferred to the Municipality ;
- (4) that the final decision on all questions of transfer, promotion and punishment of the existing Government staff shall remain with the Education Department as at present ;
- (5) that the Municipality shall be given the use of the school buildings, furniture, and equipment conditionally on the Municipality maintaining the buildings, furniture and equipment in repair and returning them to Government if at any time they cease to be used for the purposes of a vernacular school for girls.

Resolution 31.—Girls schools should continue to be inspected as at present by Government Inspectresses and Assistant Inspectresses assisted by Deputy Inspectors in out-of-the way places. 66 and 6

Resolution 32.—The post of an Assistant Inspectress, Nagpur circle, which has been vacant for a long time should be filled. 66 and 6

R. Tambe,
M. Noemi,
M. Dravid,
S. Levi,
Amy Thompson,
Saraswati Singh,
S. N. Gokhale,
Abdul Qadir,
P. C. Bose,
V. M. Jakatdar,
Hiralal,
T. S. Korde,

F. P. Tostevin (*Secretary*). R. H. Beckett (*Chairman*).

NOTE.—Rai Bahadur Mathura Prasad and Mr. Abdus Samad were not asked to sign this report as they attended only the first preliminary meeting.

APPENDIX A. QUESTIONNAIRE.

Committee on Female Education in the Central Provinces.

N.B.—In order to expedite classification of replies, it is requested that the following rules may be observed in submitting written replies to the questionnaire :—

- (1) Replies should be typed or written on one side of the paper only.
- (2) The reply to each question should commence on a fresh sheet.
- (3) Any number of sheets containing the reply to one question should be securely fastened together and the pages numbered.

In a covering letter it should be stated which questions have been dealt with in the replies submitted.

Name _____

Address _____

I.—PRIMARY EDUCATION.

- (1) Should the management of the present Government Primary Schools for girls be transferred to Local Bodies?
- (2) If such transfer is desirable, in what way do you think it will facilitate the extension and improvement of Primary Education for girls?
- (3) If such transfer is effected, what financial aid should be given to Local Bodies for the maintenance of the transferred schools?
- (4) In Municipal areas the minimum grant for boys' schools is one-half of the expenditure incurred in excess of 6½ per cent of the net Municipal income. Should this system apply also to Primary Girls' Schools in Municipal areas if transferred to Municipal management?
- (5) In District Councils Primary Education of boys is supported by lump sum grants assisted by District Council income from other sources. Should girls' schools, if transferred to District Council management, be governed by the same financial arrangement?
- (6) In the event of transfer of Primary Schools to Local Bodies should the grant-in-aid system be applied? If so, should aid be calculated according to present rules or what system would you recommend?
- (7) Are you in favour of Government retaining the existing schools and leaving future extension to public bodies or private enterprise?

(8) If you are in favour of the system in question (7), which of the systems of financial aid referred to above do you consider desirable?

(9) If Government Girls' Primary Schools were transferred to the management of Local Bodies, how far should such management be supplemented or replaced by special committees?

(10) How far should girls be admitted to boys' schools and *vice versa*?

(11) Should the practice of encouraging female education by means of capitation grants for girls who study in boys' schools be retained and, if so, is it desirable to increase these grants?

(12) Are any special measures desirable to induce girls to complete the Primary course? If so, what would you suggest?

(13) Is it desirable to establish separate schools for separate sexes or classes?

(14) What subjects should be included in the curriculum? What subjects should be compulsory and what optional?

II.—SECONDARY EDUCATION FOR GIRLS.

(1) Should the principles to be followed in respect of the management of elementary girls' schools be considered applicable also to Vernacular Middle Schools for girls?

(2) What subjects should be included in the curriculum for Middle and High Schools for girls? What subjects should be compulsory and what optional?

(3) Should separate courses of study be prescribed for girls desiring higher education and those not desiring higher education?

(4) If separate courses of study are recommended, at what stage should the courses of study bifurcate and how should the separate courses of study be drawn up? What should be the aims of the respective courses?

(5) If courses are bifurcated as suggested above, how far should uniformity of standard be required in schools which do not prescribe study for higher education and whose course is not determined by public examination?

APPENDIX B.

The meetings were held on the following dates:—

A.—First meeting on the 24th January 1927.

B.—Second meeting on the 31st March 1927.

C.—Third and fourth meetings on 8th and 10th September 1927, respectively.

D.—Fifth meeting on the 5th December 1927.

The following members were present or absent at each of the meetings:—

Members.	Meetings.				
	1st.	2nd.	3rd.	4th.	5th.
Miss Thompson	p.	p.	p.	p.	p.
Deaconess Bardsley*	p.	...	...	...	...
Mrs. Mathurabai Dravid	p.	p.	p.	p.	p.
Miss Saraswati Singh	p.	p.	p.	p.	Abs.
Miss Levi	p.	p.	p.	p.	p.
Mr. S. V. Gokhale	p.	p.	p.	p.	p.
Mrs. R. Tambe	p.	p.	p.	p.	p.
Rao Bahadur Jakatdar	p.	p.	p.	p.	p.
Khan Sahib Maulvi Abdul Qadir	p.	p.	p.	p.	p.
Rao Sahib Korde	p.	p.	p.	p.	Abs.
Rai Bahadur Bose	p.	Abs.	p.	p.	p.
Rai Bahadur Mathura Prasad	p.	Abs.	Abs.	Abs.	Abs.
Rai Bahadur Hiralal	p.	p.	Abs.	Abs.	p.
Mr. Abdus Samad	p.	Abs.	Abs.	Abs.	Abs.
The Revd. Mother Noemi*	...	...	p.	p.	Abs.

* Deaconess Bardsley left India after the first meeting and the Revd. Mother Noemi of the Providence Mission was nominated in her place.

No. 690.

GOVERNMENT OF THE CENTRAL PROVINCES.

EDUCATION DEPARTMENT.

Nagpur, the 15th May 1928.

READ—

The Report of the Female Education Committee, Central Provinces and Berar, 1927.

RESOLUTION.

1. It can still unfortunately be said with truth that nearly all the women of the province are illiterate. In 1926-27 the number of girls in primary schools was 38,728. Of these, 24,736 were in class I, 6,398 in class II, 4,521 in class III and 3,073 in class IV. The wastage at the close of class I is particularly noticeable, and it must be confessed that class I performs the function of a crèche where mothers can safely deposit their infants for a portion of the day rather than that of preparing girls for the higher classes of primary schools. As primary education can hardly be considered of value unless the four-year course is completed, importance must be attached not so much to the number enrolled in class I as to the annual output of class IV which may be reckoned at about 3,000. This figure is pitifully small when compared with the total female population of nearly 7 millions. In vernacular middle schools the number of girls was 962, in anglo-vernacular middle schools 711, in high schools 145 and in colleges 17. It is true that the enrolment is larger than it was 10 years ago and that some advance has been made, but no thoughtful person can regard the present position with complacency. The wider the view the more important the problem appears; in fact, as the

Committee observes, the progress of India as a whole is bound up with the problem of female education.

2. Government has not neglected the problem and has done much in recent years to provide facilities for the education of girls. Recent examples of its activities are the opening in 1913 of the girls' high school and hostel at Amraoti, the creation in the same year of posts of an additional inspectress and of two additional assistant inspectresses, the award of special scholarships tenable in girls' secondary schools and the award on a liberal scale of stipends in normal schools. In the sphere of vernacular education Government has opened many new vernacular schools for girls. The rate of progress towards literacy among females has, however, been disappointing. The same criticism in a lesser degree can be made about the progress towards literacy among males, but the advance towards universal literacy among males, however slow it may be, is now along the high road of compulsion. The problem of female education must be tackled in other ways. To survey, therefore, the whole field of the primary and secondary education of girls and to recommend to Government the lines on which advance should be made the Female Education Committee of 1927 was appointed.

3. The Committee in its valuable report has gone unerringly to the root of the problem of female education and has pointed out that there is no public demand for it. The apathy of the public must therefore in some way be overcome and a public demand must be created. The public, and in particular the educated classes, must be galvanized into giving their active support to the movement for the advancement of female education. Clearly, the only available means to overcome the apathy of the public and to create a demand for girls' education is vigorous and active propaganda. For this purpose the Committee advocates a non-official publicity organization comprising a committee of ladies and a committee of gentlemen at Nagpur with subsidiary committees at district headquarters and in municipalities. Government agrees that a non-official agency is best for propaganda of this kind, and will take steps for the formation of the proposed publicity committees. Female education is a cause which Government has deeply at heart, and the Committees which will be formed can in their efforts to stimulate interest and

activity in the cause of female education rest assured of the hearty support and co-operation of Government.

4. The outstanding feature of the Committee's report from an administrative point of view is the recommendation that the responsibility for opening new vernacular schools for girls should be transferred from Government to local authorities. Government accepts the principle that ultimately the vernacular education of girls should be under the same management as that of boys. The opening of new vernacular schools for girls will, therefore, in future be left to local authorities. Government will assist by giving grants-in-aid equal to one-half of the total approved expenditure under the usual conditions of the Grant-in-aid Code. With regard to the transfer of the existing Government vernacular girls' schools to local authorities, the policy outlined in the report will be followed. The progress made by local authorities in opening vernacular schools for girls will be carefully watched, and the whole position of female education will again be reviewed after an adequate time has elapsed to enable Government to form an opinion of the ability and enterprise of local authorities in respect of the education of girls. If it is then decided that the existing Government vernacular schools for girls should be transferred to local authorities, the conditions suggested in the report will receive consideration. The change in policy indicated in this paragraph does not affect private enterprise which will continue to be encouraged as at present. The attention of all local authorities is called to the change in policy indicated in this paragraph.

5. The vexed question of the curricula of primary and middle schools for girls has been boldly tackled by the Committee. Framing a curriculum always presents special difficulties. There are so many subjects that seem to deserve inclusion that it is difficult to decide what to omit. The proposals of the Committee for the curriculum of primary schools for girls follow closely the curriculum of primary schools for boys with the addition of sewing as a compulsory subject. The proposals will be carefully examined by the Education Department. For middle and high schools the Committee proposes to solve the problem of the curricula by dividing the subjects into three classes: compulsory subjects, optional subjects and extra subjects for study but not for examination. The proposals seek to make possible

a suitable choice of subjects not only for girls who intend to proceed to a higher stage of education but also for girls whose education will be completed at the middle or high stage. The curricula of middle and high schools lies within the province of the High School Board and the proposals of the Committee will be put before that board for consideration.

6. Several of the recommendations of the Committee involve considerable additional expenditure, although they do not aim at any essential alteration of the present system. The chief of these relate to scholarships, stipends and pay of teachers. The proposals for scholarships and stipends involve an additional expenditure of approximately Rs. 10,000 in the first year rising to Rs. 18,000 in the fourth year, and the proposals for raising the pay of teachers an additional annual cost of approximately Rs. 50,000. A small increase is also proposed in the grants given to Head Masters of boys' primary schools for the attendance of girls in boys' primary schools. Government is carefully examining these proposals.

7. Many of the resolutions of the Committee affirm the soundness of the present practice and do not call for any special comment. The Committee approves the present practice of encouraging the admission of girls to boys' primary schools in places where there is not sufficient justification for opening a special primary school for girls, the maintenance of normal schools by Government, the inspection of girls' schools by government inspectresses and assistant inspectresses and by deputy inspectors in out-of-the-way places, the employment of women teachers as far as possible in their own villages and the maintenance of separate schools for communities differing in language but not for separate castes or classes. Steps are being taken to fill the post of assistant inspectress, Nagpur circle, which has been vacant for a long time. With regard to the admission of qualified Muhammadan girls to convent schools, Government is in communication with the Roman Catholic Bishop of Nagpur on the subject.

8. Government is grateful to the members of the Committee for having given up so much of their time to a careful examination of the whole field of girls' primary and secondary education. For its own part, Government is

prepared to meet its obligations in respect of female education and will carry into effect the recommendations of the Committee as indicated above. As regards the larger problem of the creation of a public demand for female education, Government trusts that the proposed publicity organization will succeed in banishing the existing apathy of the public and in arousing a keen sense of the necessity of female education and a genuine demand for its rapid expansion and improvement.

By order of the Government
(Ministry of Education),

E. A. MACNEE,

*Offg. Secretary to Government,
Central Provinces.*

- 4 MAY 1928

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1925—1926

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PREFACE.

I—STATISTICAL TABLES.

A—GENERAL TABLES.

B—PUBLIC AND OTHER ELEMENTARY SCHOOLS.

1. Summary Figures.
2. Public Elementary Schools.
 - (i) Schools.
 - (ii) Pupils.
 - (iii) Teachers.
 - (iv) Organisation.
3. Practical Instruction in Centres.
4. Certified Efficient Schools.
5. Certified Special Schools for Blind, Deaf, Defective and Epileptic Children.
6. Historical Tables.
 - (i) General.
 - (ii) Public Elementary Schools.
 - (iii) Certified Special Schools for Blind, Deaf, Defective and Epileptic Children.
 - (iv) Nursery Schools.
 - (v) Provision of Meals.
 - (vi) Organisation of Physical Training.
 - (vii) Evening Play Centres.

C—SECONDARY AND PREPARATORY SCHOOLS ON THE EFFICIENT LIST.

1. Summary.
2. Secondary Schools on the Grant List.
 - (i) Schools.
 - (ii) Pupils.
 - (iii) Teachers.
 - (iv) Courses of Instruction.
 - (v) Approved Examinations.
 - (vi) Output of Secondary Schools to Universities.
3. Historical Tables.
 - (i) Schools.
 - (ii) Pupils.
 - (iii) Teachers.
 - (iv) Output of Secondary Schools to Universities.

D—TECHNICAL SCHOOLS, SCHOOLS OF ART, AND OTHER FORMS OF PROVISION OF FURTHER EDUCATION.

1. Technical Institution Courses and Courses of Advanced Instruction in Arts.
2. Junior Technical Schools.
3. Day Technical Classes.
4. Schools of Nautical Training.
5. Schools of Art.
6. Art Classes.
7. Art Examinations.
8. Part-time Technical and other Instruction.
9. Teachers in Technical, &c., Schools.
10. Historical Table.
11. Classes recognised under the Adult Education Regulations.

E—SCHOLARSHIPS AWARDED BY THE BOARD AND MAINTENANCE ALLOWANCES.

1. State Scholarships.
2. Awards in Science.
3. Whitworth Scholarships.
4. Scholarships, etc., in Art.
5. Studentships for Teachers.
6. Maintenance Allowances.

F—PRELIMINARY EDUCATION, TRAINING, EXAMINATION AND SUPPLY OF TEACHERS.

1. Preliminary Education and Training of Teachers.
 - (i) Pupils in Preparatory Classes, Pupil-Teachers and Student-Teachers.
 - (ii) Preliminary Examination for the Elementary School Teachers' Certificate.
2. Training and Certification of Teachers.
 - (i) General Tables.
 - (ii) Training of Teachers for Elementary Schools.
 - (iii) „ „ „ for Secondary Schools.
 - (iv) „ „ „ of Domestic Subjects.
 - (v) Other Courses for Teachers.
3. Teachers Recognised.

II—EXPLANATORY NOTES.

III—LIST OF STATISTICAL PUBLICATIONS.

TABLE OF CONTENTS.

[Notes:—1. Tables which did not appear in the volume for 1924-25 are shown in italics in the Table of Contents. In the case of other tables, the number in the 1924-25 volume is entered in brackets at the head of the table.

2. Tables included in the 1924-25 volume, which have been omitted from this volume, are shown on page xii].

PREFACE	Page xiii
LIST OF ABBREVIATIONS	xiv

I—STATISTICAL TABLES.

A—GENERAL TABLES.

Table	<i>No. in 1924-25 Vol.</i>		
1.	1.	Areas of Local Education Authorities as existing on 31st March, 1926, with Population:—Summary, by Type of Area	3
2.	2.	Elementary and Junior Technical Schools, Secondary Schools on the Grant List and Pupil-Teacher Centres: Number on Registers, by Age, and corresponding Population	4

B—PUBLIC AND OTHER ELEMENTARY SCHOOLS.

1.—SUMMARY FIGURES.

3.	4.	Summary Figures of Schools, Departments, Accommodation, Average Number on Registers, Average Attendance, and Teachers	5
4.	5.	Number on Registers, by Type of School and by Age	6

2.—PUBLIC ELEMENTARY SCHOOLS.

(i)—Schools.

5.	6.	Summary Figures of Schools, Departments, Accommodation, Average Number on Registers and Average Attendance, by Denomination	7
----	----	---	---

(ii)—Pupils.

Number on Registers:—			
6.	10.	(a) by Type of Department and of Area	8
7.	11.	(b) by Type of Area and by Age	9
8.	12.	(c) by Type of Department and by Age	10
9.	14.	Average Number on Registers and Average Attendance, by Denomination and by Type of Area	11
Pupils who left School, by Age at leaving:—			
10.	15.	(a) Total number	12
11.	16.	(b) in order to attend Secondary Schools	12
12.	16.	(c) in order to attend Junior Technical or Commercial Schools or other full-time Institutions or Day Schools not Public Elementary Schools or Secondary Schools	13
13.	17.	(d) for Employment on or after becoming Totally Exempt from School Attendance and did not continue full-time education	13

TABLE OF CONTENTS—*continued.*B—PUBLIC AND OTHER ELEMENTARY SCHOOLS—*continued.*

No. in 1924-25		2.—PUBLIC ELEMENTARY SCHOOLS— <i>continued.</i>		
Table	Vol.	(iii)—Teachers.		Page
		Teachers :—		
14.	18-20. 22-27.	} (a) by Grade and Sex and by Type of Area .. ..	.. ..	14
15.	21.		(b) by Grade and Sex, and by Type of Department	15
16.	38.	Staff per 1,000 Pupils in Average Attendance, by Type of Area and Grade of Teacher .. ..	.. ..	16
		(iv)—Organisation.		
		Departments :—		
17.	31.	(a) by Size (Average Attendance) and by Number of Classes .. ..	.. ..	17
18.	36.	(b) by Size (Average Attendance) and by Type of Area .. ..	.. ..	18
19.	—	(c) by Type of Department and of Area .. ..	.. ..	19
		Classes :—		
20.	33.	(a) by Age-range of Pupils and Size of Class .. ..	.. ..	19
21.	34.	(b) by Grade of Teacher in charge and Size of Class .. ..	.. ..	19
22.	35.	(c) by Grade of Teacher in charge and Age-range of Pupils .. ..	.. ..	20
		3.—PRACTICAL INSTRUCTION IN CENTRES.		
23.	—	<i>Practical Instruction Centres and Contributory Schools</i>		21
		4.—CERTIFIED EFFICIENT SCHOOLS.		
24.	41.	Summary Figures, by Denomination .. ..	.. ..	21
25.	42.	Number of Pupils on Registers, by Type of Department and by Age .. ..	.. ..	21
26.	43.	Teachers, by Grade and Sex .. ..	.. ..	21
		5.—CERTIFIED SPECIAL SCHOOLS FOR BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.		
27.	44.	Summary, by Type of Area .. ..	.. ..	22
28.	45.	Number of Pupils on Registers, by Age and Sex .. ..	.. ..	24
29.	46.	Average Number on Registers and Average Attendance .. ..	.. ..	24
30.	47.	Teachers, by Grade and Sex .. ..	.. ..	26
		6.—HISTORICAL TABLES.		
		(i)— <i>General.</i>		
31.	—	<i>Elementary Schools : Number on Registers, by Age</i>		28
32.	—	<i>Number on Registers, by Age and corresponding Population</i>		29
		(ii)— <i>Public Elementary Schools.</i>		
33.	—	<i>Council (or Board) and Voluntary Schools and Accommodation</i>		30
34.	—	<i>Voluntary Schools and Accommodation, by Denomination</i>		30
35.	—	<i>Departments, by Type of Department</i>		30
36.	—	<i>Teachers, by Grade and Sex</i>		31
37.	—	<i>Number of Classes, by Size (Number on Registers)</i>		32
		(iii)— <i>Certified Special Schools for Blind, Deaf, Defective and Epileptic Children.</i>		
38.	—	<i>Schools and Accommodation</i>		33
39.	—	<i>Certified Special Schools : Teachers, by Grade and Sex</i>		34
40.	—	<i>Institutions for the Training of Blind and other Defective Students over the age of 16 years : Institutions and Students</i>		35

TABLE OF CONTENTS—*continued.*

No. in B.—PUBLIC AND OTHER ELEMENTARY SCHOOLS— <i>continued.</i>			Page
Table	Vol.		
6.—HISTORICAL TABLES—<i>continued.</i>			
(iv)— <i>Nursery Schools.</i>			
41.	—	<i>Nursery Schools : Children in Attendance</i>	35
42.	—	<i>Teachers Employed</i>	36
(v)— <i>Provision of Meals.</i>			
43.	—	<i>Local Education Authorities providing Meals for Children attending Public Elementary Schools, Children fed, Meals supplied and Expenditure incurred</i>	36
(vi)— <i>Organisation of Physical Training.</i>			
44.	—	<i>Local Education Authorities employing Organisers and the number employed</i>	37
(vii)— <i>Evening Play Centres.</i>			
45.	—	<i>Centres and the Average Attendance of Children</i>	37
C—SECONDARY AND PREPARATORY SCHOOLS ON THE EFFICIENT LIST.			
1.—SUMMARY.			
46.	51. } 76. }	Schools and Pupils	38
2.—SECONDARY SCHOOLS ON THE GRANT LIST.			
(i)— <i>Schools.</i>			
Schools, by Type of Responsible Body :—			
47.	52.	(a) Summary classification, with Pupils	38
48.	53.	(b) Detailed classification	39
49.	54.	Schools, by Sex of Pupils	40
50.	55.	Schools, by percentage of Free Places normally required	40
51.	—	<i>Schools by Size</i>	41
52.	56.	Tuition Fees	41
53.	57.	Day and Boarding Schools	42
54.	58.	Schools, by Ages of Full-time Pupils	42
55.	59.	Schools, by average length of School Life	43
56.	60.	Schools, by average Leaving Age	44
57.	61.	Classes, by Size	44
(ii)— <i>Pupils.</i>			
58.	62.	Full-time Pupils, compared with Population and with Pupils in Public Elementary Schools	45
59.	63.	Full-time Pupils, by Sex and Age	45
60.	73.	Full-time Pupils and Pupils admitted during the year, by Type of Area	46
61.	64.	Ages on date of Admission of Full-time Pupils admitted during the School Year	48
62.	65.	Ages on 31st March of all Full-time Pupils in the Schools on that date	50
63.	—	<i>Occupations of Fathers of Pupils</i>	52
64.	75.	Average length of School Life and average Leaving Age of Full-time Pupils, by Type of Area	53
65.	66.	School Life and Leaving Age of Full-time Pupils	54
66.	—	<i>Further Education or Occupation of Full-time Pupils who left during the School year</i>	56

TABLE OF CONTENTS—*continued.*

No. in 1924-25		C.—SECONDARY AND PREPARATORY SCHOOLS ON THE EFFICIENT LIST— <i>continued.</i>		Page
Table	Vol.	2.—SECONDARY SCHOOLS ON THE GRANT LIST—<i>continued.</i>		
		(iii)—Teachers.		
67.	67.	Teachers, by Sex and Qualification	58	
68.	68.	Full-time Teachers, by Sex and Qualification, and by Responsible Body of School	59	
		(iv)—Courses of Instruction.		
69.	—	<i>Particulars of certain Courses in the Curricula..</i> .. .	60	
70.	—	<i>Particulars of Languages other than English</i> .. .	61	
71.	—	<i>Advanced Courses..</i> .. .	64	
		(v)—Approved Examinations.		
72.	69. } 70. }	First and Second Examinations	65	
		(vi)—Output of Secondary Schools to Universities.		
73.	71.	Schools from which Pupils proceeded to a University ..	66	
74.	72.	Pupils who left during or at the end of the School Year and proceeded to a University	67	
		3.—HISTORICAL TABLES—SCHOOLS ON THE GRANT LIST.		
		(i)—Schools.		
75.	—	<i>Schools, by Type of Responsible Body</i>	68	
76.	—	<i>Schools, by Size</i>	68	
77.	—	<i>Classes, by Size</i>	68	
		(ii)—Pupils.		
78.	—	<i>Pupils, by Age</i>	69	
79.	—	<i>Pupils, by Age (Percentage Table)</i>	69	
80.	—	<i>Free Places awarded to ex-Public Elementary School Pupils</i>	69	
		(iii)—Teachers.		
81.	—	<i>Teachers, by Sex and Qualification</i>	70	
82.	—	<i>Teachers, by Sex and Qualification (Percentage Table)</i> ..	71	
		(iv)—Output of Secondary Schools to Universities.		
83.	—	<i>Pupils who left during or at the end of the School Year and proceeded to a University or University Training Department</i>	72	
		D—TECHNICAL SCHOOLS, SCHOOLS OF ART, AND OTHER FORMS OF PROVISION OF FURTHER EDUCATION.		
		1.—TECHNICAL INSTITUTION COURSES AND COURSES OF ADVANCED INSTRUCTION IN ARTS.		
84.	77.	Number of Institutions conducting such Courses .. .	73	
85.	78.	Number and Age of Students attending such Courses ..	73	
86.	79.	Particulars of Courses and Students	74	
		2.—JUNIOR TECHNICAL SCHOOLS.		
87.	80.	Number of Schools	75	
88.	81.	Number and Age of Pupils	75	
89.	82.	Duration of Courses	75	
90.	83.	Occupations for which Courses prepare	76	
		3.—DAY TECHNICAL CLASSES.		
91.	84.	Number of Institutions conducting such Classes .. .	76	
92.	85.	Number and Age of Students attending such Classes ..	77	
93.	86.	Particulars of Courses and Students	77	

		TABLE OF CONTENTS— <i>continued.</i>	
Table	<i>No. in 1924-25 Vol.</i>		Page
		4.—SCHOOLS OF NAUTICAL TRAINING.	
94.	87.	Number of Schools and Pupils	78
		5.—SCHOOLS OF ART.	
95.	88.	Number of Schools	79
96.	89.	Number and Age of Students	79
97.	90.	Analysis of Types of Students	80
		6.—ART CLASSES.	
98.	91.	Number of Classes	80
99.	92.	Number and Age of Students	80
		7.—ART EXAMINATIONS.	
100.	93.	Subjects and Results	81
101.	94.	Crafts in relation to which Candidates at the Industrial Design Examination were examined, and the Number of Candidates examined in each Craft	81
		8.—PART-TIME TECHNICAL AND OTHER INSTRUCTION.	
102.	95.	Number of Schools	82
		Number of Schools :—	
103.	96.	(a) with Ordinary Continuation or Technical Courses ..	82
104.	97.	(b) with Day Continuation Courses	82
105.	98.	Number of Students	83
		Number of Students :—	
106.	99.	(a) attending Ordinary Continuation or Technical Courses	83
107.	100.	(b) attending Day Continuation Courses	83
		Age-distribution of Students :—	
108.	101.	(a) attending Ordinary Continuation or Technical Courses	84
109.	102.	(b) attending Day Continuation Courses	84
		Particulars of Student-hours per Student, Class-hours, and Student-hours per Class-hour :—	
110.	103.	(a) Ordinary Continuation and Technical Courses ..	85
111.	104.	(b) Day Continuation Courses	85
112.	105.	Ordinary Continuation and Technical Courses : Subjects of Instruction	86
		9.—TEACHERS IN TECHNICAL, ETC., SCHOOLS.	
113.	108.	Teachers returned to the Board as in regular full-time em- ployment	88
		10.—HISTORICAL TABLE.	
114.	—	<i>Comparative figures for Technical etc., Schools, and Schools of Nautical Training</i>	89
		11.—CLASSES RECOGNISED UNDER THE ADULT EDUCATION REGULATIONS.	
115.	109.	Extra-mural and similar Courses supervised by Universities or University Colleges, other than University Extension and Vacation Courses	90
116.	110.	Part-time Courses under the control and direction of Ap- proved Associations for Adult Education, other than Vacation Courses	91
117.	111.	University Extension Courses	92
118.	112.	Classification of Subjects of above Courses	92
119.	113.	Vacation Courses supervised by Universities or University Colleges	93
120.	114.	Residential Colleges	93

TABLE OF CONTENTS—*continued.*

E—SCHOLARSHIPS AWARDED BY THE BOARD AND MAINTENANCE ALLOWANCES.

Table	No. in 1924-25 Vol.	1.—STATE SCHOLARSHIPS.	Page
		State Scholarships held during the Academic Year:—	
121.	116.	(a) by University attended.. .. .	94
122.	117.	(b) by course of study taken	94
123.	118. 119.	} Degrees obtained by State Scholars in 1926	95
124.	115.			Entrants and Scholarships awarded up to 1926 (Historical Table) .. .. .
125.	—	<i>Analysis of Awards, by Type of Secondary School Pupil (Historical Table)</i>	95
2.—AWARDS IN SCIENCE.			
126.	120.	Competitors and Awards (Historical Table)	96
3.—WHITWORTH SCHOLARSHIPS.			
127.	120.	Competitors and Awards	96
4.—SCHOLARSHIPS, ETC., IN ART.			
128.	122.	Scholarships, etc., awarded (Historical Table)	97
5.—STUDENTSHIPS FOR TEACHERS.			
129.	121.	Applicants and Awards	98
6.—MAINTENANCE ALLOWANCES.			
130.	123.	Summary of Awards, by Type of Institution at which held..	98
131.	—	<i>(Historical Table)</i>	99
132.	—	<i>Awards taken up during the year (Historical Table)</i>	99

F—PRELIMINARY EDUCATION, TRAINING, EXAMINATION AND SUPPLY OF TEACHERS.

1.—PRELIMINARY EDUCATION AND TRAINING OF TEACHERS.

(i)—Pupils in Preparatory Classes, Pupil-Teachers, and Student-Teachers.

133.	126.	Pupils in Preparatory Classes, Pupil-Teachers, and Student-Teachers	100
134.	127.	Pupil-Teachers and Student-Teachers recognised for the first time during 1921 to 1925	100
135.	129.	Pupil-Teacher Centres, by Kind and by Sex of Pupils	100
136.	130.	Full-time Teachers on staff of separately organised Centres by Qualification and Training	101
Pupil-Teachers:—			
137.	131.	(a) by Organisation of Instruction.. .. .	101
138.	134.	(b) recognised for the first time during the year, by Type of School last attended as a Pupil	101
139.	135.	(c) whose recognition terminated during the year ended 31st July, 1924, by After Careers	102
140.	—	<i>Student-Teachers whose recognition terminated during the year ended 31st July, 1924, by After Careers</i>	102
(ii)—Preliminary Examination for the Elementary School Teachers' Certificate.			
141.	140.	Results of Examination in December, 1925	103
142.	141.	Analysis of Candidates, by Type of Candidate	103

TABLE OF CONTENTS—*continued.*

Table	No. in 1924-25 Vol.	2.—TRAINING AND CERTIFICATION OF TEACHERS.	Page
		(i)—General.	
143.	143.	Institutions recognised as Training Colleges	104
144.	144.	Students in Training, by Type of Institution attended	104
145.	145.	Students in Training, by Type of Course	104
		(ii)—Training of Teachers for Elementary Schools.	
146.	146.	Training Colleges	105
		Students in Training :—	
147.	147.	(a) by Type of Institution attended	105
148.	148.	(b) by Nature of Residence	106
149.	149.	(c) Recognised and Private Students	106
150.	150.	(d) by Type of Course followed	107
		Students admitted to Training Colleges :—	
151.	153.	(a) by Age	107
152.	154.	(b) by previous Status (Historical Table)	108
153.	155.	(c) by previous Education	108
154.	156.	(d) by Qualifying Examination passed	108
155.	157.	Students who completed Courses of Training (Historical Table)	109
156.	159.	Final Examinations taken by Students who completed Courses	110
157.	160.	Results of the Examination held by the Board	112
158.	161.	University Degree Examinations passed by Students, by Universities	114
159.	165.	Teachers on Staff of Training Colleges	114
		(iii)—Training of Teachers for Secondary Schools.	
160.	166.	Training Colleges	115
		Students taking Courses of Secondary Training :—	
161.	167.	(a) by Institution attended	115
162.	168.	(b) by Qualification on entrance	115
163.	169.	(c) by Qualification on leaving (Historical Table)	116
		(iv)—Training of Teachers of Domestic Subjects.	
164.	170.	Training Colleges	116
165.	171.	Students in Training, by Type of Course	117
166.	173.	Students who completed Courses of Training	117
		(v)—Other Courses for Teachers.	
167.	174. 175. }	Courses, Subjects, and Teachers attending	118
		3.—TEACHERS RECOGNISED.	
168.	—	Teachers recognised during the years 1924, 1925, and 1926	119
169.	177. 178. }	Persons recognised as Certificated Teachers during the years 1924, 1925 and 1926	119
		II—EXPLANATORY NOTES	120
		III—LIST OF STATISTICAL PUBLICATIONS	151

NOTE.—The following Tables, included in the 1924–25 Volume, have been omitted from the present Volume.

- Table No. *General :—*
3. Teachers on 31st March returned as being in full-time Service by aggregation of part-time Service in schools of different Types.

Public Elementary Schools :—
 7. Schools, by Number of Departments.
 8. Number on Registers, by Type of Area.
 9. Number on Registers, by Type of Department.
 13. Pupils allowed Partial Exemption from School, by Age.
 28. Particulars as to the employment of Uncertificated and Supplementary Teachers.
 29. Assistant Teachers, by Grade and Sex.
 30. Part-time Teachers.
 32. Departments, by Grade and Sex of Head Teacher.
 36. (*Second Half*) Number on Registers, by Age and by Type of Area.
 37. Departments, by Size (Average Attendance) and Number on Registers in each Local Education Authority's Area in England.
 38. (*First Half*) Classes, by size of Class and Type of Area.
 39. Schools, Average Attendance, Size of Classes and Staffing per 1,000 in Average Attendance for each Local Education Authority's Area in England.

Practical Instruction in Centres .—
 40. Teachers (teaching at Centres), by Grade and Sex.

Recognised Nursery Schools .—
 48. Summary Figures.
 49. Average Attendance : Summary, by Type of Authority.
 50. Superintendents and Assistant Teachers.

Secondary Schools on the Grant List .—
 74. Full-time Pupils and newly admitted Pupils in each Area in England.

Part-time Technical and other Instruction .—
 106. Area Statistics : Summary, by Type of Area.
 107. Area Statistics : Figures for each Local Education Authority in England.

Maintenance Allowances .—
 124. Minor Awards (Day) taken up during the year, by age of Pupils.
 125. Summary, by Type of Area.

Preliminary Education and Training of Teachers :—
 128. Pupils in Preparatory Classes, by age and Status.
 132. Pupil-Teachers recognised for the first time during the year, by Age.
 133. Pupil-Teachers recognised for the first time during the year, by period of Recognition.
 136. Student-Teachers, by Age.
 137. Student-Teachers, by period in Secondary Schools.
 138. Supply of recognised Intending Teachers : Summary by Type of Area.
 139. Persons who entered Training Colleges or became Uncertificated Teachers: Summary, by Type of Area.
 142. Number of Credits obtained in each subject.

Training and Certification of Teachers :—
 151. Students in Training, by stage reached at beginning of year.
 152. Students in Training, by stage reached at end of year.
 158. Students who completed Courses of Training, and dates of completion.
 162. Degree examinations taken.
 163. Third-year Students, by Type of Course.
 164. Third-year Students, by Result of Course.
 172. Students admitted to Training Colleges, by Qualifying Examination passed.
 176. Summary of Results of Certificate Examination for Teachers in Elementary Schools.
- 179–185. Financial Statistics.

PREFACE.

In the Prefaces to the Volumes of Educational Statistics relating to the periods 1920-21 and 1921-22 it was explained that the Board had included in the earlier of those volumes a number of historical and other special tables which it was hoped to publish at quinquennial intervals. In accordance with the hope then expressed, the present volume, relating primarily to the period 1925-26, contains certain additional tables of an historical nature, and others which appeared last in the 1920-21 volume.

The Area tables included in previous volumes summarising certain statistics for each Local Education Authority's area, have been omitted. Area tables relating to the Staffing of Public Elementary Schools have been issued separately as List 44 (1925-26). The small section of Financial tables, which in recent years has appeared at the end of the volume, has also been omitted.

In addition to the principal changes already indicated certain modifications have been made in a number of tables, and, where they are material, have been referred to in the relevant explanatory notes.

As in former years, the titles of new tables are printed in italics in the Table of Contents, and a list of the Tables which appeared in the 1924-25 volume, but are now omitted, is given on page xii.

The tables should be read in the light of the explanatory notes. Attention is also called to the recent publications containing statistics, a list of which appears on pages 152 to 155.

As already announced in Parliament, the Board hope that, by the extended use of mechanical devices, it will be possible to publish the next volume of statistics, relating to the period 1926-27, in conjunction with the Annual Report, at an early date in 1928.

AUBREY V. SYMONDS,

Secretary.

September, 1927.

LIST OF ABBREVIATIONS USED IN CERTAIN
TABLES IN THIS VOLUME.

Accn.	= Accommodation.
Adm. Co.	= Administrative County.
Adv.	= Advanced.
Art.	= Article.
Asst.	= Assistant.
Attce.	= Attendance.
Aver. (or Av.)	= Average.
B.	= Borough.
C.C.	= County Council.
Co. Boro. (or C.B.)	= County Borough.
C.T.	= Certificated Teacher.
Dept.	= Department.
Elem.	= Elementary.
E.S.T.(S.) Acts	= Elementary School Teachers (Super- annuation) Acts.
L.E.A.	= Local Education Authority.
N.O.R.	= Number on Registers.
Ord.	= Ordinary.
P.E.S.	= Public Elementary Schools.
R.T.T.	= Regulations for the Training of Teachers.
Sch.	= School.
Sec.	= Secondary.
S.T.(S.) Act	= School Teachers (Superannuation) Act.
T.C.	= Training College.
U.D.	= Urban District.
U.T	= Uncertificated Teacher.

Note :—The number entered in brackets at the head of each table is that of the corresponding table in the 1924-25 volume.

I

STATISTICAL TABLES

A—General Tables.

B—Public and other Elementary Schools.

C—Secondary and Preparatory Schools on the Efficient List.

D—Technical Schools, Schools of Art, and other forms of provision of Further Education.

E—Scholarships awarded by the Board and Maintenance Allowances.

F—Preliminary Education, Training, Examination and Supply of Teachers.

ENGLAND AND WALES.

A.—GENERAL TABLES.

Table 1. [1] Areas of Local Education Authorities as existing on 31st March, 1926, with Population: Summary, by Type of Area.

(See Explanatory Notes, page 120.)

Type of Area. <i>I.</i>	No. of Areas. <i>2.</i>	Population.	
		1921. <i>3.</i>	1911. <i>4.</i>
I. England (except Monmouthshire).			
1. Administrative Counties (other than London)	49	18,628,610	17,638,589
Areas for Elementary Education within Administrative Counties:—			
(a) Areas under County Councils	49	13,112,213	12,270,488
(b) Boroughs	123	3,732,345	3,706,684
(c) Urban Districts	37	1,784,052	1,661,417
2. County Boroughs	78	12,117,092	11,489,297
3. London	1	4,484,523	4,521,685
Total for Areas under Urban Authorities [1 (b) and (c), 2 and 3]	239	22,118,012	21,379,083
4. Total for England	288	35,230,225	33,649,571
II. Wales (with Monmouthshire).			
1. Administrative Counties	13	2,106,866	1,916,038
Areas for Elementary Education within Administrative Counties:—			
(a) Areas under County Councils	13	1,532,097	1,389,667
(b) Boroughs	6	153,443	137,584
(c) Urban Districts	7	421,326	388,787
2. County Boroughs	4	549,608	504,883
Total for Areas under Urban Authorities [1 (b) and (c) and 2]	17	1,124,377	1,031,254
3. Total for Wales	30	2,656,474	2,420,921

[Continued over.]

ENGLAND AND WALES.

Table 1—continued.

Type of Area. 1.	No. of Areas. 2.	Population.	
		1921. 3.	1911. 4.
III. England and Wales			
1. Administrative Counties (other than London)	62	20,735,476	19,554,627
Areas for Elementary Education within Administrative Counties:—			
(a) Areas under County Councils	62	14,644,310	13,660,155
(b) Boroughs	129	3,885,788	3,844,268
(c) Urban Districts	44	2,205,378	2,050,204
2. County Boroughs	82	12,666,700	11,994,180
3. London	1	4,484,523	4,521,685
Total for Areas under Urban Authorities [1 (b) and (c), 2 and 3]	256	23,242,389	22,410,337
4. Total for England and Wales ..	318	37,886,699	36,070,492

Table 2. [2] Elementary and Junior Technical Schools, Secondary Schools on the Grant List, and Pupil-Teacher Centres: Number on the Registers, by Age, and corresponding Population.

(See Explanatory Notes for each type of School.)

Age. 1.	Elementary. 2.	Junior Technical. 3.	Grant-aided Secondary. 4.	*Pupil-Teachers in Centres 5.	Rural Pupil-Teachers. 6.	Total. 1925-26. 7.	Total 1924-25. 8.	Estimated Population, July, 1926. 9.
Under 3	100	—	—	—	—	100	94	1,990,385
3-4	33,037	—	3	—	—	33,040	43,086	681,607
4-5	149,142	—	77	—	—	149,219	179,284	731,610
5-6	615,920	—	1,031	—	—	616,951	565,210	738,103
6-7	663,235	—	2,020	—	—	665,255	497,759	795,589
7-8	500,213	—	2,375	—	—	502,588	489,683	537,039
8-9	486,026	—	3,869	—	—	489,895	582,031	524,934
9-10	575,787	—	7,458	—	—	583,245	606,654	599,754
10-11	594,646	—	12,114	—	—	606,760	671,577	644,236
11-12	643,114	128	29,525	30	—	672,797	672,522	696,947
12-13	610,569	1,198	59,199	30	—	670,996	667,275	714,599
13-14	585,565	4,226	65,738	133	—	655,662	654,718	711,215
14-15	164,473	4,762	62,632	205	89	232,161	226,265	700,878
15-16	13,749	2,148	55,235	161	221	71,514	71,072	705,664
16-17	1,829	233	34,751	292	223	37,328	36,330	717,907
17 and over†	62	9	24,476	1,792	368	26,707	26,741	2,879,121
Total	5,637,467	12,704	360,503	2,643	901	6,014,218	5,990,301	14,369,588

* Including pupils in Preparatory Classes. (See Explanatory Notes, page 143).

† The Population figures under this Head refer to the age group 17 and under 21.

ENGLAND AND WALES.

B.—PUBLIC AND OTHER ELEMENTARY SCHOOLS.*(See Explanatory Notes, page 120.)*

1.—SUMMARY FIGURES.

Table 3. [4] Summary Figures of Schools, Departments, Accommodation, Average Number on Registers, Average Attendance and Teachers.

	Schools.	Depts.	Accom- modation.	Average Number on Registers.	Average Attend- ance.	Teachers.
1.	2.	3.	4.	5.	6.	7.
1. Public Ele- mentary Schs.	20,727	30,922	7,050,024	5,631,560	4,956,585	168,968
2. Certified Efficient Schs.	26	29	2,795	1,672	1,428	64
3. Certified Special Schs.	555	555	45,261	42,429	36,510	2,268
4. Nursery Schools	28	—	1,391	1,414	1,115	55
5. Total ..	21,336	31,506	7,099,471	5,677,075	4,995,638	171,355

Table 4.

Elementary Schools, Pupils, 1925-26.
ENGLAND AND WALES.

Table 4. [5]

Number on Registers, by Type of School and by Age.

	Un- der 3.	3-4.	4-5.	5-6.	6-7.	7-8.	8-9.	9-10.	10-11.	11-12.	12-13.	13-14.	14-15.	15-16.	16-17.	17 and over.	Total.
<i>I.</i>	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
1. Public Elem. Schools	--	32,770	148,722	615,033	661,802	498,231	483,013	571,431	589,346	636,715	604,347	579,050	160,010	10,723	1,349	62	5,592,604
2. Certified Efficient Schs.	--	44	71	140	162	131	102	144	156	183	186	195	63	11	1	--	1,589
3. Certified Special Schs.	100	223	349	747	1,271	1,851	2,911	4,212	5,144	6,216	6,036	6,320	4,400	3,015	479	--	43,274
4. Total ..	100	33,037	149,142	615,920	663,235	500,213	486,026	575,787	594,646	643,114	610,569	585,565	164,473	13,749	1,829	62	5,637,467

Note:—Figures showing the number of Pupils on the Registers of Nursery Schools are not available.

2.—PUBLIC ELEMENTARY SCHOOLS.

(i)—SCHOOLS.

Table 5. [6] Council and Voluntary Schools: Summary Figures of Schools, Departments, Accommodation, Average Number on Registers and Average Attendance, by Denomination.

		Schools.	Depts.	Accn.	Average Number on Registers.	Average Attendance.
1.		2.	3.	4.	5.	6.
1. Total		20,727 ..	30,922 ..	7,050,024 ..	5,631,560 ..	4,956,585
2. Council		9,101 ..	15,619 ..	4,419,066 ..	3,638,183 ..	3,204,137
3. Voluntary		11,626 ..	15,303 ..	2,630,958 ..	1,993,377 ..	1,752,448
4. Church of England		9,992 ..	12,833 ..	2,091,458 ..	1,541,488 ..	1,358,353
5. Wesleyan		136 ..	187 ..	39,714 ..	29,214 ..	25,501
6. Roman Catholic		1,141 ..	1,842 ..	413,575 ..	362,413 ..	315,166
7. Jewish		12 ..	20 ..	9,263 ..	6,054 ..	5,372
8. Other Voluntary Schools		345 ..	421 ..	76,948 ..	54,208 ..	48,056

(ii)—PUPILS.

Table 6. [10] Number on Registers, by Type of Department and of Area.

1.	2.	3.	4.	5.	6.	7.	8.
	Areas under County Councils.	Boroughs and Urban Districts.	County Boroughs.	London.	Non- Local.	Total.	Percentage to Total Number on Registers.
1. In Senior Boys' Depts.	4,586	8,404	24,481	7,156	1,042	45,669	% 0·8
2. „ Boys' Depts.	204,184	167,258	361,348	172,967	2,139	907,896	16·2
3. „ Junior Boys' Depts.	4,769	3,778	12,605	2,618	—	23,770	0·4
4. In Senior Girls' Depts.	5,792	7,888	21,024	7,139	—	41,843	0·7
5. „ Girls' Depts.	178,564	157,682	348,456	161,061	1,394	847,157	15·1
6. „ Junior Girls' Depts.	4,034	2,585	11,775	2,213	—	20,607	0·4
7. In Senior Mixed Depts. :—							
(a) Boys	9,679	5,186	14,022	4,844	—	33,731	0·6
(b) Girls	9,751	5,005	14,400	5,070	—	34,226	0·6
8. In Mixed Depts. :—							
(a) Boys	628,849	105,511	207,146	27,665	1,167	970,338	17·4
(b) Girls	624,847	111,651	215,620	38,203	860	991,181	17·7
9. In Junior Mixed Depts. :—							
(a) Boys	52,126	26,318	73,349	9,441	41	161,275	2·9
(b) Girls	50,995	25,285	74,062	9,118	37	159,497	2·9
10. In Infants' Depts. :—							
(a) Boys	189,790	124,000	272,179	105,659	80	691,708	12·4
(b) Girls	182,195	118,759	262,842	99,910	—	663,706	11·9
11. Total Boys	1,093,983	440,455	965,130	330,350	4,469	2,834,387	50·7
Total Girls	1,056,178	428,855	948,179	322,714	2,291	2,758,217	49·3
Total Boys and Girls	2,150,161	869,310	1,913,309	653,064	6,760	5,592,604	—

Table 6. ENGLAND AND WALES.

Table 7. [11]

Number on Registers, by Type of Area and by Age.

(See Explanatory Notes, page 123.)

	3-4.	4-5.	5-6.	6-7.	7-8.	8-9.	9-10.	10-11.	11-12.	12-13.	13-14.	14-15.	15-16.	16-17.	17 and over.	Total.
<i>1.</i>	<i>2.</i>	<i>3.</i>	<i>4.</i>	<i>5.</i>	<i>6.</i>	<i>7.</i>	<i>8.</i>	<i>9.</i>	<i>10.</i>	<i>11.</i>	<i>12.</i>	<i>13.</i>	<i>14.</i>	<i>15.</i>	<i>16.</i>	<i>17.</i>
1. Areas under Co. Councils	9,899	49,831	230,298	250,576	201,252	192,479	224,613	230,777	246,439	233,179	220,094	58,551	1,939	221	13	2,150,161
2. Boroughs and U.D.s. ..	3,858	22,130	96,133	101,880	77,065	75,160	89,345	91,980	99,949	94,043	89,809	25,650	2,117	181	10	869,310
3. County Boroughs ..	9,389	45,803	214,857	231,528	169,274	164,595	193,679	200,128	218,394	207,326	199,247	54,720	3,837	493	39	1,913,309
4. London	9,612	30,857	73,566	77,529	50,307	50,405	63,274	65,671	70,985	68,694	68,682	20,390	2,652	440	—	653,064
5. Non-Local	12	101	179	289	333	374	520	790	948	1,105	1,218	699	178	14	—	6,760
6. Total 1925-26	32,770	148,722	615,033	661,802	498,231	483,013	571,431	589,346	636,715	604,347	579,050	160,010	10,723	1,349	62	5,592,604
7. Total 1924-25	42,823	178,791	563,654	495,112	485,490	574,138	594,972	653,004	638,045	604,887	581,416	154,483	10,093	1,185	129	5,578,222
8. Increase (+) or Decrease (-)	-10,053	-30,069	+ 51,379	+166,690	+12,741	-91,125	-23,541	-63,658	- 1,330	- 540	-2,366	+ 5,527	+ 630	+164	-67	+14,382

Table 8.

Public Elementary Schools, Pupils, 1925-26.

ENGLAND AND WALES.

Table 8. [12] Number on Registers, by Type of Department and by Age.

	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17 and over	Total.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
1. In Senior Boys' Depts.	—	—	—	—	—	2	39	748	5,675	14,090	15,525	7,125	2,183	279	3	45,669
2. " Boys' Depts.	3	18	292	1,912	35,723	92,836	136,037	149,329	163,203	147,817	141,977	37,508	1,186	54	1	907,896
3. " Junior Boys' Depts.	20	173	1,499	1,780	3,297	4,989	5,631	4,187	2,022	151	18	3	—	—	—	23,770
4. " Senior Girls' Depts.	—	—	—	—	—	1	34	658	5,271	13,035	13,702	6,331	2,318	469	24	41,843
5. " Girls' Depts.	10	106	380	1,727	29,880	84,128	126,013	139,209	154,008	141,564	134,527	34,612	933	57	5	847,157
6. " Junior Girls' Depts.	25	242	1,530	1,620	3,092	4,066	4,533	3,457	1,696	128	14	4	—	—	—	20,607
7. " Senior Mixed Depts.	—	—	—	—	—	1	139	1,792	9,300	20,700	22,893	10,082	2,638	387	25	67,957
8. " Mixed Depts.	4,902	24,476	114,377	127,951	131,338	177,448	245,686	266,298	296,916	265,988	250,257	64,315	1,460	103	4	1,961,519
9. " Junior Mixed Depts.	1,368	7,514	50,708	58,109	58,005	62,180	49,913	23,425	8,572	838	113	26	3	—	—	320,772
10. " Infants' Depts.	26,442	116,193	446,249	468,503	236,896	57,362	3,406	243	54	36	24	4	2	—	—	1,355,414
11. Total	32,770	148,722	615,033	661,802	498,231	483,013	571,431	589,346	636,715	604,347	579,050	160,010	10,723	1,349	62	5,592,604

Table 9. [14] Council and Voluntary Schools: Average Number on Registers and Average Attendance, by Denomination and by Type of Area. (See Explanatory Notes, page 123.)

1.	Areas under County Councils.			Boroughs and Urban Districts.			County Boroughs.			London.			Non-Local.			Total.		
	Aver. N.O.R.	Aver. Attendance.	Per-centage of Attendance.	Aver. N.O.R.	Aver. Attendance.	Per-centage of Attendance.	Aver. N.O.R.	Aver. Attendance.	Per-centage of Attendance.	Aver. N.O.R.	Aver. Attendance.	Per-centage of Attendance.	Aver. N.O.R.	Aver. Attendance.	Per-centage of Attendance.	Aver. N.O.R.	Aver. Attendance.	Per-centage of Attendance.
1. Total	2,164,533	1,909,647	88·2	875,871	771,735	88·1	1,922,354	1,693,101	88·1	662,169	575,860	87·0	6,633	6,242	94·1	5,631,560	4,956,585	88·0
2. Council	1,226,788	1,080,271	88·1	590,889	521,177	88·2	1,294,353	1,143,846	88·4	526,153	458,843	87·2	—	—	—	3,638,183	3,204,137	88·1
3. Voluntary	937,745	829,376	88·4	284,982	250,558	87·9	628,001	549,255	87·5	136,016	117,017	86·0	6,633	6,242	94·1	1,993,377	1,752,448	87·9
4. Church of England..	830,013	734,981	88·6	212,909	187,490	88·1	403,050	353,399	87·7	94,932	81,922	86·3	584	561	96·1	1,541,488	1,358,353	88·1
5. Wesleyan	12,486	10,783	86·4	6,908	6,087	88·1	9,244	8,150	88·2	576	481	83·5	—	—	—	29,214	25,501	87·3
6. Roman Catholic ..	64,881	56,779	87·5	55,319	48,284	87·3	205,280	178,544	87·0	34,902	29,627	84·9	2,031	1,932	95·1	362,413	315,166	87·0
7. Jewish	—	—	—	—	—	—	1,901	1,684	88·6	4,153	3,688	88·8	—	—	—	6,054	5,372	88·7
8. Other Voluntary Schools.	30,365	26,833	88·4	9,846	8,697	88·3	8,526	7,478	87·7	1,453	1,299	89·4	4,018	3,749	93·3	54,208	48,056	88·7

Table 10.

Table 10. [15] Total Number of Pupils who left Public Elementary Schools, by Age at leaving.
(See Explanatory Notes, page 123.)

		Under 11.	11-12.	12-13.	13-14.	14-15.	15-16.	16 and over.	Total
1.		2.	3.	4.	5.	6.	7.	8.	9.
1. Boys	.. .. .	26,601	23,068	17,892	12,917	272,146	7,374	1,236	361,234
2. Girls	.. .. .	24,332	20,406	14,898	11,260	269,540	6,489	1,899	348,824
3. Total	.. .. .	50,933	43,474	32,790	24,177	541,686*	13,863	3,135	710,058
4. Percentage to Total leavers for all reasons.		7.2%	6.1%	4.6%	3.4%	76.3%	2.0%	0.4%	—

* Of this number 489,216 left during or at the end of the term in which they attained the normal upper age limit of compulsory school attendance (14), the remaining 52,470 staying on voluntarily.

Table 11. [16] Pupils who left Public Elementary Schools in order to attend Secondary Schools, by Age at leaving.

		Under 11.	11-12.	12-13.	13-14.	14-15.	15-16.	16 and over.	Total.
1.		2.	3.	4.	5.	6.	7.	8.	9.
1. Boys	.. .. .	4,209	16,201	10,211	2,768	688	112	38	34,227
2. Girls	.. .. .	3,248	13,597	8,037	2,316	606	79	123	28,006
3. Total	.. .. .	7,457	29,798	18,248	5,084	1,294	191	161	62,233
4. Percentage to Total leavers for all reasons..	.. .. .	1.1%	4.2%	2.6%	0.7%	0.2%	0.0%	0.0%	8.8%

Table 11.

Table 12. [16] Pupils who left Public Elementary Schools in order to attend Junior Technical or Commercial Schools, or other Full-time Institutions, or Day Schools, not Public Elementary Schools or Secondary Schools, by Age at leaving.

1.						Under 11. 2.	11-12. 3.	12-13. 4.	13-14. 5.	14-15. 6.	15-16. 7.	16 and over 8.	Total. 9.
1. Boys	..	..	..	..	..	3,591	1,635	2,920	4,753	2,333	177	25	15,434
2. Girls	..	..	..	..	..	3,431	1,371	1,793	2,830	3,214	298	83	13,020
3. Total	..	..	..	..	..	7,022	3,006	4,713	7,583	5,547	475	108	28,454
4. Percentage to Total leavers for all reasons..	..	..	..	..	..	1.0%	0.4%	0.7%	1.1%	0.8%	0.0%	0.0%	4.0%

Table 13. [17] Pupils who left Public Elementary Schools for Employment on or after becoming Totally Exempt from School Attendance and did not continue full-time education, by Age at leaving. (See Explanatory Notes, page 123.)

1.						13-14. 2.	14-15. 3.	15-16. 4.	16 and over. 5.	Total 6.
1. Boys	..	..	..	..	..	671	267,980	6,965	1,135	276,751
2. Girls	..	..	..	..	..	639	264,246	5,959	1,629	272,473
3. Total	..	..	..	..	..	1,310	532,226	12,924	2,764	549,224
4. Percentage to Total leavers for all reasons	..	..	..	..	..	0.2%	74.9%	1.8%	0.4%	77.3%

Table 12.

Table 13.

(iii)—TEACHERS.

(See Explanatory Notes, page 123.)

Table 14. [*] Teachers, by Grade and Sex, and by Type of Area (not including Teachers in Practical Instruction Centres).

(See Explanatory Notes, page 124.)

1.	Areas under County Councils.				Boroughs and Urban Districts.		County Boroughs.		London.		Non-Local.		Total.	
	Urban Parts.	Rural Parts.	Total Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.
1. Certificated—College Trained				%		%		%		%		%		%
Men	5,506	6,057	11,563	—	4,937	—	10,199	—	4,844	—	71	—	31,614	—
Women	8,911	7,980	16,901	—	9,369	—	22,975	—	10,751	—	54	—	60,050	—
Total	14,417	14,047	28,464	41·2	14,306	58·4	33,174	65·4	15,595	88·9	125	57·6	91,664	56·6
2. Certificated—Others				—		—		—		—		—		—
Men	890	1,657	2,647	—	1,032	—	1,757	—	340	—	16	—	5,792	—
Women	3,812	4,358	8,170	—	3,676	—	8,574	—	1,393	—	22	—	21,835	—
Total	4,802	6,015	10,817	15·6	4,708	19·2	10,331	20·4	1,733	9·9	38	17·5	27,627	17·0
3. Uncertificated				—		—		—		—		—		—
Men	695	586	1,281	—	393	—	446	—	26	—	12	—	2,158	—
Women	8,685	12,014	20,699	—	4,614	—	6,165	—	132	—	34	—	31,644	—
Total	9,380	12,600	21,980	31·8	5,007	20·5	6,611	13·0	158	0·9	46	21·2	33,802	20·9
4. Supplementary				—		—		—		—		—		—
Men	1,094	6,772	7,866	11·4	457	1·9	591	1·2	55	0·3	8	3·7	8,977	5·5
5. Total of Above				—		—		—		—		—		—
Men	7,191	8,300	15,491	—	6,362	—	12,402	—	5,210	—	99	—	39,564	—
Women	22,502	31,134	53,636	—	18,116	—	38,305	—	12,331	—	118	—	122,506	—
Total	29,693	39,434	69,127	100	24,478	100	50,707	100	17,541	100	217	100	162,070	100
6. Special Subjects Teachers (other than Certificated or Uncertificated)				—		—		—		—		—		—
Men	29	13	42	—	37	—	67	—	61	—	3	—	210	—
Women	61	40	101	—	35	—	85	—	49	—	1	—	271	—
Total	90	53	143	—	72	—	152	—	110	—	4	—	481	—
7. Student-Teachers				—		—		—		—		—		—
Men	220	147	367	—	147	—	319	—	18	—	—	—	851	—
Women	675	527	1,202	—	462	—	1,002	—	86	—	—	—	2,762	—
Total	895	674	1,569	—	609	—	1,321	—	114	—	—	—	3,613	—
8. Pupil-Teachers				—		—		—		—		—		—
Boys	74	173	247	—	7	—	60	—	—	—	—	—	314	—
Girls	303	828	1,131	—	27	—	229	—	—	—	—	—	1,387	—
Total	377	1,001	1,378	—	34	—	289	—	—	—	—	—	1,701	—
9. Others				—		—		—		—		—		—
Men	20	19	39	—	5	—	11	—	1	—	—	—	56	—
Women	103	657	760	—	46	—	53	—	180	—	8	—	1,047	—
Total	123	676	799	—	51	—	64	—	181	—	8	—	1,103	—
10. Total				—		—		—		—		—		—
Men	7,534	8,652	16,186	—	6,558	—	12,859	—	5,290	—	102	—	40,995	—
Women	23,644	33,186	56,830	—	18,686	—	39,674	—	12,656	—	127	—	127,973	—
Total	31,178	41,838	73,016	—	25,244	—	52,533	—	17,946	—	229	—	168,968	—

* This Table replaces Tables 18-20 and 22-27 of the previous volume.

Table 15. [21] Teachers, by Grade and Sex and by Type of Department.
(See Explanatory Notes, page 124.)

1.	In Senior Boys' Depts.	In Boys' Depts.	In Junior Boys' Depts.	In Senior Girls' Depts.	In Girls' Depts.	In Junior Girls' Depts.	In Senior Mixed Depts.	In Mixed Depts.	In Junior Mixed Depts.	In Infants' Depts.	Total.
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Certificated Head :—											
(a) Men	175	3,561	62	1	1	—	247	8,755	123	—	12,925
(b) Women	—	28	30	171	3,352	82	3	5,556	1,258	6,710	17,190
(c) Total	175	3,589	92	172	3,353	82	250	14,311	1,381	6,710	30,115
2. Certificated Assistant :—											
(a) Men	1,367	14,717	114	3	1	—	1,004	7,166	109	—	24,481
(b) Women	70	4,289	286	1,264	17,184	354	1,033	18,409	4,621	17,185	64,695
(c) Total	1,437	19,006	400	1,267	17,185	354	2,037	25,575	4,730	17,185	89,176
3. Uncertificated Head :—											
(a) Men	—	—	—	—	—	—	—	23	1	—	24
(b) Women	—	—	—	—	—	1	—	348	221	60	630
(c) Total	—	—	—	—	—	1	—	371	222	60	654
4. Uncertificated Assistant :—											
(a) Men	33	1,239	21	—	—	—	23	801	17	—	2,134
(b) Women	8	1,840	89	54	3,552	98	43	15,572	1,811	7,947	31,014
(c) Total	41	3,079	110	54	3,552	98	66	16,373	1,828	7,947	33,148
5. Supplementary :—Women	—	113	2	—	127	4	4	6,650	383	1,694	8,977
6. Total :—											
(a) Men	1,575	19,517	197	4	2	—	1,274	16,745	250	—	39,564
(b) Women	78	6,270	407	1,489	24,215	539	1,083	46,535	8,294	33,596	122,506
(c) Total	1,653	25,787	604	1,493	24,217	539	2,357	63,280	8,544	33,596	162,070

Table 15.

Public Elementary Schools, Teachers, 1925-26.
ENGLAND AND WALES.

Table 16. ENGLAND AND WALES.

Table 16. [38] Staff per 1000 Pupils in Average Attendance, by Type of Area and Grade of Teacher.
(See Explanatory Notes, page 124.)

1.	Teachers for every 1,000 Pupils in Average Attendance.							
	Certificated Head Teachers.		Certificated Assistant Teachers.		Uncertificated Teachers.		Supple- mentary Teachers.	Total.
	Men.	Women.	Men.	Women.	Men.	Women.	Women.	
2.	3.	4.	5.	6.	7.	8.	9.	
1. Areas under County Councils :—								
Urban Parts	2·6	3·4	4·4	10·5	0·8	9·5	1·2	32·4
Rural Parts	5·8	6·0	2·0	6·4	0·6	12·1	6·8	39·7
Total	4·3	4·8	3·2	8·4	0·7	10·8	4·1	36·2
2. Boroughs and Urban Districts ..	1·8	3·0	5·9	13·9	0·5	6·0	0·6	31·7
3. County Boroughs	1·5	2·5	5·6	16·1	0·3	3·6	0·3	29·9
4. London	1·4	2·5	7·6	18·6	0·0	0·2	0·1	30·5
5. Non-Local	4·5	3·5	9·5	8·7	1·9	5·4	1·3	34·8
6. Total	2·6	3·5	4·9	13·1	0·4	6·4	1·8	32·7

(iv)—ORGANISATION.

Table 17. [31] Departments, by Size (Average Attendance) and by Number of Classes; and Council and Voluntary, by Size (Average Attendance).

(See Explanatory Notes, page 125.)

Average Attendance.	Number of Departments containing																					Number of Departments in	
	One Class.	Two Classes.	Three Classes.	Four Classes.	Five Classes.	Six Classes.	Seven Classes.	Eight Classes.	Nine Classes.	Ten Classes.	Eleven Classes.	Twelve Classes.	Thirteen Classes.	Fourteen Classes.	Fifteen Classes.	Sixteen Classes.	Seventeen Classes.	Eighteen Classes.	Nineteen Classes.	Twenty Classes or more.	Total.	Council Schools.	Voluntary Schools.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
1. Under 30	957	790	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,749	463	1,286
2. 30 and not over 40	88	1,600	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,748	474	1,274
3. Over 40, but not over 100...	6	2,190	5,095	1,018	40	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	8,351	2,785	5,566
4. „ 100 „ „ „ 150...	—	1	703	2,988	1,178	155	18	—	—	—	—	—	—	—	—	—	—	—	—	—	5,043	2,010	3,033
5. „ 150 „ „ „ 200...	—	—	2	495	1,877	1,132	215	18	2	—	—	—	—	—	—	—	—	—	—	—	3,741	1,914	1,827
6. „ 200 „ „ „ 250...	—	—	—	4	446	1,755	1,114	208	32	4	1	—	—	—	—	—	—	—	—	—	3,564	2,355	1,209
7. „ 250 „ „ „ 300...	—	—	—	—	22	500	1,306	800	189	45	7	4	—	—	—	—	—	—	—	—	2,873	2,284	589
8. „ 300 „ „ „ 350...	—	—	—	—	—	22	344	729	478	146	31	14	3	—	—	—	—	—	—	—	1,767	1,488	279
9. „ 350 „ „ „ 400...	—	—	—	—	—	—	19	260	428	329	109	38	17	3	—	—	—	—	—	—	1,203	1,060	143
10. „ 400 „ „ „ 500...	—	—	—	—	—	—	—	9	108	199	182	115	42	17	4	1	—	—	—	—	677	597	80
11. „ 500	—	—	—	—	—	—	—	—	1	2	11	39	62	33	34	8	7	5	—	4	206	189	17
12. Total	1,051	4,581	5,862	4,505	3,563	3,565	3,017	2,024	1,238	725	341	210	124	53	38	9	7	5	—	*4	30,922	15,619	15,303

Note.—In 1913-14 there were 12,091 Departments with an average attendance not over 100, of which 4,703 had an average attendance not over 50.

* Two of these Departments contained 20 classes, one contained 23 classes, and one contained 24 classes.

Table 17.

Public Elementary Schools, Organisation, 1925-26.
ENGLAND AND WALES.

Table 18. [36]

Departments, by Size (Average Attendance) and by Type of Area.
(See Explanatory Notes, page 125.)

Type of Area.	Departments with Average Attendance.												Average size of Dept. (by Average Attendance).
	Under 30.	30 and not over 40.	Over 40 but not over 100.	Over 100 but not over 150.	Over 150 but not over 200.	Over 200 but not over 250.	Over 250 but not over 300.	Over 300 but not over 350.	Over 350 but not over 400.	Over 400 but not over 500.	Over 500.	Total.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. Areas under County Councils :—													
Urban Parts	53	100	1,388	1,369	916	770	486	255	156	76	9	5,578	164
Rural Parts	1,685	1,610	5,927	1,768	722	329	167	90	53	25	1	12,377	80
Total	1,738	1,710	7,315	3,137	1,638	1,099	653	345	209	101	10	17,955	106
2. Boroughs and Urban Districts	7	16	502	699	622	669	522	309	221	105	28	3,700	209
3. County Boroughs	2	17	407	966	1,113	1,335	1,201	786	572	365	151	6,915	245
4. London	—	3	108	227	359	459	497	327	200	106	16	2,302	250
5. Non-Local	2	2	19	14	9	2	—	—	1	—	1	50	125
6. Total	1,749	1,748	8,351	5,043	3,741	3,564	2,873	1,767	1,203	677	206	30,922	160

ENGLAND AND WALES.

Table 19. [—] Departments, by Type of Department and of Area.

	Areas under County Councils.	Boroughs and Urban Districts.	County Boroughs.	London.	Non-Local.	Total.
1.	2.	3.	4.	5.	6.	7.
1. Senior Boys	25	35	88	25	3	176
2. Boys	1,086	636	1,231	637	16	3,606
3. Junior Boys	22	16	46	9	—	93
4. Senior Girls	34	34	80	24	—	172
5. Girls	919	628	1,237	582	14	3,380
6. Junior Girls	20	12	44	8	—	84
7. Senior Mixed	88	39	91	32	—	250
8. Mixed	12,175	888	1,403	247	15	14,728
9. Junior Mixed	836	209	510	59	1	1,615
10. Infants	2,750	1,203	2,185	679	1	6,818
11. Total	17,955	3,700	6,915	2,302	50	30,922

Table 20. [33] Classes, by Age-range of Pupils and Size of Class (Number on Registers).

(See Explanatory Notes, page 125.)

Age-range.	Number of Classes with Number on Registers.						Total.
	Not over 20	Over 20 but not over 30.	Over 30 but not over 40.	Over 40 but not over 50.	Over 50 but not over 60.	Over 60.	
	1.	2.	3.	4.	5.	6.		7.	8.
1. Under 11	6,514	12,518	18,423	22,222	13,714	190	73,581
2. 11 and over (with younger Pupils) ..	3,133	8,061	11,710	12,695	4,408	31	40,038
3. 11 and over (without younger Pupils)	4,267	9,499	13,371	7,967	1,618	21	36,743
4. Total	13,914	30,078	43,504	42,884	19,740	242	150,362

Table 21. [34] Classes, by Grade of Teacher in charge and Size of Class (Number on Registers).

Grade of Teacher in charge of Class.	Number of Classes with Number on Registers.						Total.
	Not over 20	Over 20 but not over 30.	Over 30 but not over 40.	Over 40 but not over 50.	Over 50 but not over 60.	Over 60.	
	1.	2.	3.	4.	5.	6.		7.	8.
1. Certificated Head	4,694	8,319	4,911	1,485	347	30	19,786
2. „ Assistant	1,753	9,702	26,784	33,108	16,188	141	87,676
3. Uncertificated ..	3,443	8,939	10,379	7,530	2,932	66	33,289
4. Supplementary ..	3,723	2,931	1,304	639	211	4	8,812
5. Others	301	187	126	122	62	1	799
6. Total	13,914	30,078	43,504	42,884	19,740	242	150,362

Note :—The number of Certificated Head Teachers not in charge of a class was 10,329, of whom 4,132 were Head Teachers of departments with an average attendance under 250.

Table 22.

ENGLAND AND WALES.

Table 22. [35]

Classes, by Grade of Teacher in charge, and Age-range of Pupils.

(See Explanatory Notes, page 125.)

Grade of Teacher in charge of Class.	Classes with age-range :—													Total.			
	Under 11.				11 and over.												
					With younger Pupils.				Without younger Pupils.								
	containing			Total.	containing			Total.	containing			Total.	containing			Total.	
	Boys only.	Girls only.	Boys and Girls.		Boys only.	Girls only.	Boys and Girls.		Boys only.	Girls only.	Boys and Girls.		Boys only.	Girls only.	Boys and Girls.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	
1. Certificated Head (Men) ..	42	1	46	89	237	2	2,151	2,390	1,339	17	4,635	5,991	1,618	20	6,832	8,470	
2. Certificated Head (Women) ..	52	140	4,577	4,769	6	291	4,015	4,312	14	1,295	926	2,235	72	1,726	9,518	41,316	
3. Certificated Assistant (Men) ..	1,793	1	264	2,058	6,483	8	2,054	8,545	9,513	26	3,714	13,253	17,789	35	6,032	23,856	
4. Certificated Assistant (Women) ..	3,153	4,776	27,065	34,934	1,753	7,346	6,406	15,505	414	9,831	3,136	13,381	5,320	21,953	36,547	63,820	
5. Uncertificated (Men) ..	350	1	137	488	656	4	398	1,058	314	3	216	533	1,320	8	751	2,079	
6. Uncertificated (Women) ..	1,538	2,010	18,955	22,503	600	1,758	5,083	7,441	58	604	604	1,266	2,196	4,372	24,642	31,210	
7. Supplementary (Women) ..	124	134	7,836	8,094	21	43	633	637	1	11	9	21	146	188	8,478	8,812	
8. Other (Men)	14	1	3	18	19	—	14	33	19	—	8	27	52	1	25	78	
9. Other (Women)	15	36	577	628	3	17	37	57	3	23	10	36	21	76	624	721	
10. Total	7,081	7,100	59,400	73,581	9,778	9,469	20,791	40,038	11,675	11,810	13,258	36,743	28,534	28,379	93,449	150,362	

Note.—The number of Men Teachers in charge of classes in which more than 50 % of the pupils were :—

Under 9 years of age

Under 10 years of age, but in which those under 9 were not more than 50 %

Certificated

766

Uncertificated

205

Others

2

1,609

270

6

ENGLAND AND WALES.

3. PRACTICAL INSTRUCTION IN CENTRES.

Table 23. [—] Public Elementary Schools, maintained by Local Education Authorities: Practical Instruction Centres and Contributory Schools.

1.	Centres making provision for									
	Domestic Subjects.		Handicraft.		Gardening.		Dairy Work.		Other Subjects.	
	Centres.	Contributory Schools.	Centres.	Contributory Schools.	Centres.	Contributory Schools.	Centres.	Contributory Schools.	Centres.	Contributory Schools.
2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	
1. Areas under County Councils	1,660	5,173	707	2,644	27	83	8	20	3	3
2. Boroughs and Urban Districts	364	1,434	248	1,102	12	42	—	—	1	8
3. County Boroughs	772	2,586	538	2,206	6	28	—	—	29	200
4. London ..	274	848	236	843	—	—	—	—	—	—
5. Total ..	3,070	10,041	1,789	6,795	40	153	8	20	33	211

Note.—An increasing number of pupils now receive Practical Instruction not in Centres but in their own Schools. In 1925–26 there were 5,504 schools in which provision was made for instruction in one or more of the subjects.

4.—CERTIFIED EFFICIENT SCHOOLS.

(See Explanatory Notes, page 125.)

Table 24. [41] Summary Figures, by Denomination.

Denomination.	Number of Schools.	Number of Departments.						Accn.	Average	
		Boys.	Girls.	Mixed.	Infants.	Total.	Number on Registers.		Average Attce.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
1. Church of England	3	—	—	2	1	3	111	66	58	
2. Wesleyan ..	—	—	—	—	—	—	—	—	—	
3. Roman Catholic ..	9	—	—	9	—	9	442	317	281	
4. Jewish ..	—	—	—	—	—	—	—	—	—	
5. Other Voluntary Schools ..	14	4	3	8	2	17	2,242	1,289	1,089	
6. Total ..	26	4	3	19	3	29	2,795	1,672	1,428	

Table 25. [42] Number of Pupils on Registers, by Type of Department and by Age.

1.	3–4.	4–5.	5–6.	6–7.	7–8.	8–9.	9–10.	10–11.	11–12.	12–13.	13–14.	14–15.	15–16.	16–17.	17 and over	Total.
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	
1. In Boys' Depts. ..	—	—	—	1	21	24	40	36	43	46	58	20	8	—	—	297
2. " Girls' ..	—	—	—	1	17	21	29	37	53	52	65	18	1	—	—	294
3. " Mixed ..	4	19	69	79	77	56	74	83	87	88	72	25	2	1	—	736
4. " Infants' ..	40	52	71	81	16	1	—	—	—	—	—	—	—	—	—	262
5. Number of:—																
(a) Boys ..	28	38	64	77	59	51	82	70	76	83	81	26	8	—	—	743
(b) Girls ..	16	33	76	85	72	51	62	86	107	103	114	37	3	1	—	846
6. Total ..	44	71	140	162	131	102	144	156	183	186	195	63	11	1	—	1,589

Table 26. [43] Teachers, by Grade and Sex.

Certificated.				Uncertificated.				Supplementary (Women).	Others.		Total.	
Head.		Assistant.		Head.		Assistant.			Men	Women	Men	Women
1.	2.	3.	4.	5.	6.	7.	8.					
3	16	2	5	1	5	1	11	15	1	4	8	56

ENGLAND AND WALES.

5.—CERTIFIED SPECIAL SCHOOLS FOR BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

(See Explanatory Notes, page 125.)

Table 27. [44]

Summary, by Type of Area.

1.	Maintained by Local Education Authorities.								Non-L.E.A.		Total.	
	Areas under County Councils.		Boroughs & Urban Districts.		County Boroughs:		London.					
	Schs.	Accn.	Schs.	Accn.	Schs.	Accn.	Schs.	Accn.	Schs.	Accn.	Schs.	Accn.
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Blind—												
(a) Day Schools ..	—	—	4	142	15	1,015	27	1,181	—	103	46	2,441
(b) Boarding Schools ..	2	101	—	—	3	115	2	70	22	1,489	29	1,775
(c) Total	2	101	4	142	18	1,130	29	1,251	22	1,592	75	4,216
2. Deaf—												
(a) Day Schools ..	—	—	3	140	17	1,092	9	619	—	16	29	1,867
(b) Boarding Schools ..	2	211	—	—	3	132	3	177	12	2,243	20	2,763
(c) Total	2	211	3	140	20	1,224	12	796	12	2,259	49	4,630
3. Mentally Defective—												
(a) Day Schools ..	6	263	23	1,100	70	6,637	71	7,264	—	10	170	15,274
(b) Boarding Schools ..	6	394	—	—	1	74	1	72	14	1,340	22	1,880
(c) Total	12	657	23	1,100	71	6,711	72	7,336	14	1,350	192	17,154
4. Physically Defective—												
(1) Open Air—												
(a) Day Schools ..	1	30	9	580	33	3,228	5	780	1	40	49	4,658
(b) Boarding Schools	1	140	—	—	7	418	3	428	13	536	24	1,522
(c) Total	2	170	9	580	40	3,646	8	1,208	14	576	73	6,180
(2) Cripple—												
(a) Day Schools ..	—	—	5	240	21	1,867	35	3,738	—	—	61	5,845
(b) Boarding Schools	—	—	—	—	1	47	—	—	12	786	13	833
(c) Total	—	—	5	240	22	1,914	35	3,738	12	786	74	6,678
(3) Hospital—												
(a) Day Schools ..	—	—	—	—	1	57	1	49	—	12	2	118
(b) Boarding Schools	—	—	—	—	2	137	—	—	38	3,014	40	3,151
(c) Total	—	—	—	—	3	194	1	49	38	3,026	42	3,269
(4) Sanatorium—												
(a) Day Schools ..	—	—	1	20	1	50	5	365	—	—	7	435
(b) Boarding Schools	—	—	—	—	2	57	—	—	33	1,764	35	1,821
(c) Total	—	—	1	20	3	107	5	365	33	1,764	42	2,256
(5) Ophthalmic—												
Boarding Schools ..	—	—	—	—	—	—	—	—	2	353	2	353

ENGLAND AND WALES.

Table 27—continued.

Summary, by Type of Area.

1.	Maintained by Local Education Authorities.								Non-L.E.A.		Total.	
	Areas under County Councils.		Boroughs & Urban Districts.		County Boroughs.		London.					
	2. Schs.	3. Accn.	4. Schs.	5. Accn.	6. Schs.	7. Accn.	8. Schs.	9. Accn.	10. Schs.	11. Accn.	12. Schs.	13. Accn.
i. Epileptic— Boarding Schools ..	—	—	—	—	1	100	—	—	5	425	6	525
ii. Total—												
(a) Day Schools ..	7	293	45	2,222	158	13,946	153	13,996	1	181	364	30,638
(b) Boarding Schools ..	11	846	—	—	20	1,080	9	747	151	11,950	191	14,623
(c) Total*	18	1,139	45	2,222	178	15,026	162	14,743	152	12,131	555	45,261

* There were, in addition, two Certified Homes, one providing board and lodging for 30 Blind children and the other for 100 Deaf children. These children attended a Certified Day School for Blind or Deaf children, as the case might be.

ENGLAND AND WALES.

Table 28. [45]

Number of Pupils on Registers,

Registered Pupils on 31st March, 1926.	Blind.			Deaf.			Mentally Defective.			Open Air.		
	Day Pupils.	Boarders.	Total.	Day Pupils.	Boarders.	Total.	Day Pupils.	Boarders.	Total.	Day Pupils.	Boarders.	Total.
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
A.—By Age.												
1. .. 2-3 ..	—	19	19	—	—	—	—	—	—	—	—	—
2. .. 3-4 ..	—	22	22	1	—	1	—	—	—	—	6	6
3. .. 4-5 ..	1	14	15	16	6	22	—	2	—	2	2	4
4. .. 5-6 ..	43	29	72	52	30	82	10	4	14	26	14	40
5. .. 6-7 ..	69	61	130	89	81	170	44	25	69	94	46	140
6. .. 7-8 ..	111	77	188	99	112	211	354	27	381	247	46	293
7. .. 8-9 ..	180	100	280	134	171	305	748	63	811	422	119	541
8. .. 9-10 ..	246	122	368	187	218	405	1,354	115	1,469	707	172	879
9. .. 10-11 ..	313	131	444	193	292	485	1,805	170	1,975	759	192	951
10. .. 11-12 ..	371	190	561	233	301	534	2,190	261	2,451	871	263	1,134
11. .. 12-13 ..	341	202	543	201	272	473	2,168	251	2,419	797	237	1,034
12. .. 13-14 ..	398	215	613	184	312	496	2,274	355	2,629	773	232	1,005
13. .. 14-15 ..	141	220	361	145	335	480	1,771	332	2,103	219	60	279
14. .. 15-16 ..	63	225	288	125	291	416	1,182	283	1,465	13	8	21
15. .. 16 and over	12	42	54	31	40	71	186	55	241	2	1	3
16. Total ..	2,289	1,669	3,958	1,690	2,461	4,151	14,086	1,943	16,029	4,932	1,398	6,330
B.—By Sex.												
1. Boys ..	1,078	901	1,979	862	1,349	2,211	8,025	1,173	9,198	2,510	869	3,379
2. Girls ..	1,211	768	1,979	828	1,112	1,940	6,061	770	6,831	2,422	529	2,951
3. Total ..	2,289	1,669	3,958	1,690	2,461	4,151	14,086	1,943	16,029	4,932	1,398	6,330

Table 29. [46].

Average Numbers on Registers,

I.	Blind.			Deaf.			Mentally Defective.			Open Air.		
	Av. N.O.R.	Av. Attce.	Per cent. Attce.	Av. N.O.R.	Av. Attce.	Per cent. Attce.	Av. N.O.R.	Av. Attce.	Per cent. Attce.	Av. N.O.R.	Av. Attce.	Per cent. Attce.
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. In Day Schools ..	2,230	1,857	% 83	1,676	1,441	% 86	14,012	11,636	% 83	4,716	3,955	% 84
2. In Boarding Schools ..	1,622	1,543	95	2,440	2,322	95	1,845	1,776	96	1,384	1,310	95
3. Total ..	3,852	3,400	88	4,116	3,763	91	15,857	13,412	85	6,100	5,265	86

by Age and Sex.

Physically Defective.												Epileptic.			Total.		
Cripple.			Hospital.			Sanatorium.			Ophthalmic.			Day Pupils.	Boarders.	Total.			
Day Pupils.	Boarders.	Total.	Day Pupils.	Boarders.	Total.	Day Pupils.	Boarders.	Total.	Day Pupils.	Boarders.	Total.						
14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
—	—	—	—	81	81	—	—	—	—	—	—	—	—	—	—	100	100
—	—	14	—	173	173	—	7	—	—	—	—	—	—	—	1	222	223
3	17	20	—	253	253	—	33	33	—	—	—	—	—	—	22	327	349
112	19	131	5	315	320	3	82	85	—	—	—	—	—	—	251	496	747
256	36	292	9	295	304	13	147	160	—	—	—	—	—	—	574	697	1,271
305	43	348	11	239	250	23	141	164	—	—	—	—	—	—	1,150	701	1,851
487	43	530	10	205	215	30	173	203	—	—	—	—	—	—	2,011	900	2,911
548	57	605	7	204	211	63	174	237	—	—	—	—	—	—	3,112	1,100	4,212
656	66	722	8	250	258	72	185	257	—	—	—	—	—	—	3,806	1,338	5,144
870	75	945	10	219	229	83	213	296	—	—	—	—	—	—	4,628	1,588	6,216
887	73	960	8	213	221	92	197	289	—	—	—	—	—	—	4,494	1,542	6,036
905	95	1,000	1	201	202	88	168	256	—	—	—	—	—	—	4,623	1,697	6,320
699	84	783	6	157	163	32	78	110	—	—	—	—	—	—	3,013	1,387	4,400
466	82	548	8	135	143	6	20	26	—	—	—	—	—	—	1,863	1,152	3,015
61	18	79	—	12	12	—	5	5	—	—	—	—	—	—	292	187	479
6,255	722	6,977	83	2,952	3,035	505	1,623	2,128	—	146	146	—	520	520	29,840	13,434	43,274
3,219	343	3,562	34	1,648	1,682	282	841	1,123	—	72	72	—	299	299	16,010	7,495	23,505
3,036	379	3,415	49	1,804	1,353	223	782	1,005	—	74	74	—	221	221	13,830	5,939	19,769
6,255	722	6,977	83	2,952	3,035	505	1,623	2,128	—	146	146	—	520	520	29,840	13,434	43,274

and Average Attendance.

Physically Defective.												Epileptic.			Total.		
Cripple.			Hospital.			Sanatorium.			Ophthalmic.			Av. M.O.R.	Av. Attce.	Per cent. Attce.			
Av. M.O.R.	Av. Attce.	Per cent. Attce.	Av. M.O.R.	Av. Attce.	Per cent. Attce.	Av. M.O.R.	Av. Attce.	Per cent. Attce.	Av. M.O.R.	Av. Attce.	Per cent. Attce.						
14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
6,208	4,822	% 78	83	71	% 86	505	404	% 80	6	5	% 83	—	—	% —	29,436	24,191	% 82
705	670	95	2,790	2,668	96	1,549	1,400	90	150	147	98	508	483	95	12,993	12,319	95
6,913	5,492	79	2,873	2,739	95	2,054	1,804	88	156	152	97	508	483	95	42,429	36,510	86

ENGLAND AND WALES.

Table 30. [47]

Teachers, by

	Blind.			Deaf.			Mentally Defective.			Open Air.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
I. Full-time Teachers :—												
1. Head Teachers—												
(a) Certified—												
(i) College-trained ..	8	35	43	3	12	15	12	97	109	12	40	52
(ii) Not College-trained ..	4	12	16	15	12	27	8	51	59	1	8	9
(b) Uncertificated ..	—	4	4	—	1	1	1	5	6	—	2	2
(c) Others ..	1	1	2	3	—	3	1	1	2	—	—	—
(d) Total ..	13	52	65	21	25	46	22	154	176	13	50	63
2. Assistant Teachers—												
(a) Certified—												
(i) College-trained ..	14	72	86	28	105	133	33	237	270	29	85	114
(ii) Not College-trained ..	5	24	29	35	60	95	5	96	101	4	18	22
(b) Uncertificated ..	3	46	49	20	47	67	7	107	114	2	35	37
(c) Others ..	10	11	21	24	47	71	76	56	132	3	5	8
(d) Total ..	32	153	185	107	259	366	121	496	617	38	143	181
3. All Full-time Teachers :—												
(a) Certified												
(i) College-trained ..	22	107	129	31	117	148	45	334	379	41	125	166
(ii) Not College-trained ..	9	36	45	50	72	122	13	147	160	5	26	31
(b) Uncertificated ..	3	50	53	20	48	68	8	112	120	2	37	39
(c) Others ..	11	12	23	27	47	74	77	57	134	3	5	8
(d) Total ..	45	205	250	128	284	412	143	650	793	51	193	244
II. Part-time Teachers :—												
1. Teachers who make up Full-time by service in recognised schools of other types ..			59			22			64			15
2. Other Part-time Teachers ..			44			38			61			1

ENGLAND AND WALES.

Grade and Sex.

Physically Defective.												Epileptic.			Total.		
Cripple.			Hospital.			Sanatorium.			Ophthalmic.			Men.	Women.	Total.			
Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.						
14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
3	45	48	—	22	22	2	18	20	—	2	2	—	2	2	40	273	313
2	12	14	—	14	14	—	8	8	—	—	—	1	2	3	31	119	150
—	2	2	—	5	5	—	7	7	—	—	—	—	—	—	1	26	27
—	—	—	—	1	1	—	2	2	—	—	—	—	—	—	5	5	10
5	59	64	—	42	42	2	35	37	—	2	2	1	4	5	77	423	500
3	143	146	1	32	33	2	12	14	—	3	3	1	3	4	111	692	803
3	30	33	—	9	9	—	4	4	—	1	1	—	5	5	52	247	299
7	24	31	—	36	36	—	25	25	—	2	2	—	4	4	39	326	365
15	15	30	2	19	21	—	12	12	—	—	—	1	5	6	131	170	301
28	212	240	3	96	99	2	53	55	—	6	6	2	17	19	333	1,435	1,768
6	188	194	1	54	55	4	30	34	—	5	5	1	5	6	151	965	1,116
5	42	47	—	23	23	—	12	12	—	1	1	1	7	8	83	366	449
7	26	33	—	41	41	—	32	32	—	2	2	—	4	4	40	352	392
15	15	30	2	20	22	—	14	14	—	—	—	1	5	6	136	175	311
33	271	304	3	138	141	4	88	92	—	8	8	3	21	24	410	1,858	2,268
		66			4			2			—			—			232
		20			3			5			3			7			182

6. HISTORICAL TABLES.

(See Explanatory Notes, page 126.)

(i) GENERAL.

Table 31. [—] Elementary Schools : Number on Registers, by Age.

Year.	Under 3.	3-4.	4-5.	5-6.	6-7.	7-8.	8-9.	9-10.	10-11.	11-12.	12-13.	13-14.	14-15.	15-16.	16-17.	17 and over.	Total.	Increase (+) or Decrease (-) % on Preceding Figure.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.
1870-71 ..	6,687	111,397	164,211	196,999	207,930	212,342	214,254	199,596	177,842	141,342	98,867	47,167	23,785	*	—	—	1,802,419	%
1875-76 ..	19,303	117,166	242,063	317,405	345,282	342,414	348,072	337,581	315,136	263,778	192,804	74,487	28,283	*	—	—	2,943,774	+63·3
1880-81 ..	11,760	118,033	275,023	401,285	470,439	481,204	479,654	461,421	450,198	397,586	319,319	158,469	46,038	*	—	—	4,070,429	+38·3
1885-86 ..	7,830	129,573	295,541	450,748	517,552	526,930	530,749	539,488	516,157	468,200	352,654	148,903	40,239	*	—	—	4,524,564	+11·2
1890-91 ..	5,566	135,026	323,241	496,162	566,446	556,108	567,240	564,422	557,119	500,789	380,718	146,082	39,233	*	—	—	4,838,152	+6·9
1895-96 ..	3,589	178,124	388,578	542,169	599,901	595,902	602,161	608,371	600,227	576,270	476,139	205,501	47,866	8,389	†	—	5,433,187	+12·3
1900-01 ..	2,524	201,461	414,146	587,494	628,180	632,588	634,347	627,987	610,167	595,282	534,909	252,323	48,475	7,748	†	—	5,777,631	+6·3
1905-06§ ..	—	497,645	—	1,273,698	—	3,168,321	—	1,096,083	—	6,907	—	301	—	6,538	†	—	6,022,955	+4·2
1910-11§ ..	—	350,591	—	1,301,300	—	3,311,773	—	1,096,484	—	6,538	—	419	—	—	‡	—	6,067,105	+0·7
1913-14 ..	—	64,557	225,200	620,491	678,199	683,042	675,943	678,822	672,818	663,438	623,347	445,972	41,229	5,587	196	54	6,078,895	+0·2
1919-20 ..	12	39,009	147,834	552,235	654,594	659,557	654,747	658,370	665,836	668,923	635,092	506,730	115,912	8,521	769	90	5,968,231	-1·8
1920-21 ..	35	33,118	144,349	500,827	655,313	663,895	656,208	653,421	657,965	654,990	638,322	514,644	120,160	9,940	1,167	112	5,904,496	-1·1
1921-22 ..	38	35,933	122,653	495,024	594,445	665,167	661,398	656,269	651,339	644,456	625,943	547,708	146,256	12,637	1,368	110	5,860,744	-0·7
1922-23 ..	58	43,998	122,081	411,910	572,293	601,612	662,637	662,352	654,802	640,688	616,871	587,950	155,362	13,737	1,668	126	5,748,145	-1·9
1923-24 ..	90	50,551	161,361	433,900	482,130	579,867	599,170	662,760	658,950	642,239	612,942	589,902	162,715	13,046	1,663	152	5,651,438	-1·7
1924-25 ..	94	43,081	179,184	564,402	496,167	487,324	577,373	599,310	658,707	643,788	611,195	587,472	158,731	13,152	1,732	129	5,621,841	-0·5
1925-26 ..	100	33,037	149,142	615,920	663,235	500,213	486,026	575,787	594,646	643,114	610,569	585,565	164,473	13,749	1,829	62	5,637,467	+0·3

‡ Pupils aged 15 and over are included in column 14.

† Pupils aged 16 and over are included in column 15.

‡ Pupils aged 17 and over are included in column 16.

§ Figures for each year of age separately are not available.

Table 32. [—] Elementary Schools: Number on Registers, by Age and corresponding Population.

Year.	Number of Pupils on the Registers, and Population (in thick type).													3 and under 15.	
	3-4.	4-5.	5-6.	6-7.	7-8.	8-9.	9-10.	10-11.	11-12.	12-13.	13-14.	14-15.	Total.	Percentage Increase (+) or Decrease (-) in 10 Years.	
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	
1870-71	111,397	164,211	196,999	207,930	212,342	214,254	199,596	177,842	141,342	98,867	47,167	*23,785	*1,795,732	%	
1871	590,614	578,614	567,554	555,059	542,739	530,669	518,911	507,352	496,553	486,080	475,882	465,901	6,315,928	—	
1875-76	117,160	242,063	317,405	345,282	342,414	348,072	337,581	315,136	263,778	192,804	74,487	*28,283	*2,924,471	—	
1880-81	118,033	275,023	401,285	470,439	481,204	479,654	461,421	450,198	397,586	319,319	158,469	*46,038	*4,058,669	+ 126.0	
1881	670,723	669,103	662,687	646,912	631,295	615,987	601,092	586,760	573,042	560,637	549,580	539,704	7,307,542	+ 15.7	
1885-86	129,573	295,541	450,748	517,552	526,930	530,749	539,488	516,157	468,200	352,654	148,903	*40,239	*4,516,734	+ 54.4	
1890-91	135,026	323,241	496,162	566,446	556,108	567,240	564,422	557,119	500,789	380,718	146,082	*39,233	*4,832,586	+ 19.1	
1891	667,388	690,127	688,629	685,866	681,979	677,028	671,053	664,146	656,312	647,494	637,594	626,920	8,014,536	+ 9.7	
1895-96	178,124	388,578	542,169	599,901	595,902	602,161	608,371	600,227	576,270	476,139	205,501	47,866	5,421,209	+ 20.0	
1900-01	201,461	414,146	587,494	628,180	632,588	634,347	627,987	610,167	595,282	534,909	252,323	48,475	5,767,359	+ 19.3	
1901	711,155	717,442	699,711	700,171	702,238	701,916	693,265	659,517	676,610	665,499	677,984	671,722	8,277,230	+ 3.9	
†1905-06	497,645		1,273,698			3,168,321						1,076,083		6,015,747	+ 11.0
†1910-11	350,591		1,301,300			3,311,773						1,096,484		6,060,148	+ 5.1
1911	777,351	783,191	748,016	745,549	746,485	733,920	722,826	718,683	703,507	699,511	690,732	687,255	8,737,026	+ 5.6	
1913-14	64,557	225,200	620,491	678,199	683,042	675,943	678,822	672,818	663,438	623,347	445,972	41,229	6,073,058	+ 0.5	
1919-20	39,009	147,834	552,235	654,594	659,557	654,747	658,370	665,836	668,923	635,092	506,730	115,912	5,958,839	- 1.7	
1920-21	33,118	144,349	500,827	655,343	663,895	656,208	653,421	657,965	654,990	638,322	514,644	120,160	5,893,242	- 2.8	
1921	536,703	610,982	655,122	707,334	724,753	721,087	710,630	716,074	729,083	742,026	744,768	727,875	8,326,437	- 4.7	
1925-26	33,037	149,142	615,920	663,235	500,213	486,026	575,787	594,646	643,114	610,569	585,565	164,473	5,621,727	—	

* Including pupils aged 15 and over.

† Figures for each year of age separately are not available.

Elementary Schools, Historical Tables.

ENGLAND AND WALES.

(ii) PUBLIC ELEMENTARY SCHOOLS.

Table 33. [—] Council (or Board) and Voluntary Schools and Accommodation.

Year.	Council (or Board).		Voluntary.		Total.	
	Schools.	Accommodation.	Schools.	Accommodation.	Schools.	Accommodation.
1.	2.	3.	4.	5.	6.	7.
1870-71 ..	—	—	8,798	2,012,679	8,798	2,012,679
1875-76 ..	1,596	556,150	12,677	2,870,168	14,273	3,426,318
1880-81 ..	3,692	1,194,268	14,370	3,195,365	18,062	4,389,633
1885-86 ..	4,402	1,692,505	14,620	3,452,787	19,022	5,145,292
1890-91 ..	4,747	1,980,396	14,761	3,647,805	19,508	5,628,201
1895-96 ..	5,432	2,433,411	14,416	3,638,963	19,848	6,072,374
1900-01 ..	5,806	2,884,295	14,320	3,729,551	20,126	6,613,846
1905-06 ..	6,977	3,563,354	13,579	3,507,110	20,556	7,070,464
1910-11 ..	8,056	3,995,198	12,830	2,825,639	20,886	6,820,837
1913-14 ..	8,523	4,252,885	12,530	2,764,523	21,053	7,017,408
1919-20 ..	8,711	4,356,733	12,270	2,730,275	20,981	7,087,008
1920-21 ..	8,790	4,377,801	12,203	2,716,524	20,993	7,094,325
1921-22 ..	8,894	4,401,355	12,046	2,695,337	20,940	7,096,692
1922-23 ..	8,929	4,419,153	11,892	2,676,476	20,821	7,095,629
1923-24 ..	8,976	4,432,138	11,772	2,660,321	20,748	7,092,459
1924-25 ..	9,038	4,419,389	11,698	2,643,954	20,736	7,063,343
1925-26 ..	9,101	4,419,066	11,626	2,630,958	20,727	7,050,024

Table 34. [—] Voluntary Schools and Accommodation, by Denomination.

Year.	Church of England.		Wesleyan.		Roman Catholic.		Jewish.		Others.	
	Schools.	Accommodation.	Schools.	Accommodation.	Schools.	Accommodation.	Schools.	Accommodation.	Schools.	Accommodation.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1870-71	6,724	1,439,428	*	*	383	113,490	*	*	1,691	459,761
1875-76	10,046	2,105,849	*	*	623	200,753	*	*	2,008	563,566
1880-81	11,589	2,351,235	562	197,871	789	261,354	*	*	1,430	384,905
1885-86	11,797	2,535,671	554	208,270	882	306,175	*	*	1,387	402,671
1890-91	11,908	2,670,529	542	212,574	951	348,383	*	*	1,360	416,319
1895-96	11,804	2,730,939	463	184,570	998	371,647	*	*	1,151	351,807
1900-01	11,734	2,811,956	458	184,578	1,054	400,546	*	*	1,074	332,471
1905-06	11,367	2,742,039	354	127,803	1,077	413,964	12	11,730	769	211,574
1910-11	10,986	2,245,278	233	69,322	1,088	379,115	12	10,307	511	121,617
1913-14	10,759	2,202,508	190	57,279	1,105	391,867	12	10,307	464	102,562
1919-20	10,541	2,176,185	163	48,366	1,123	399,894	12	9,865	431	95,965
1920-21	10,484	2,165,471	161	47,402	1,125	401,108	13	9,746	420	92,797
1921-22	10,353	2,149,241	156	45,465	1,129	404,162	13	9,727	395	86,742
1922-23	10,218	2,132,252	149	43,452	1,132	407,317	13	9,727	380	83,728
1923-24	10,114	2,118,028	145	42,522	1,136	409,182	12	9,405	365	81,184
1924-25	10,059	2,105,192	139	40,627	1,136	410,265	12	9,275	352	78,599
1925-26	9,992	2,091,458	136	39,714	1,141	413,575	12	9,263	345	76,948

* Included under the heading "Others," separate figures not being available.

Table 35. [—] Departments, by Type of Department.

1.	Senior Boys.	Boys.	Junior Boys.	Senior Girls.	Girls.	Junior Girls.	Senior Mixed.	Mixed.	Junior Mixed.	Infants.	Total.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1919-20..	72	3,920	58	67	3,802	57	299	15,140	835	7,983	32,233
1920-21..	96	3,887	63	93	3,780	54	315	15,102	843	7,955	32,188
1921-22..	134	3,830	66	120	3,710	59	331	15,005	904	7,867	32,026
1922-23..	132	3,773	73	123	3,619	61	256	14,944	1,078	7,534	31,593
1923-24..	142	3,712	83	129	3,524	74	251	14,851	1,279	7,196	31,241
1924-25..	133	3,687	89	128	3,466	80	244	14,808	1,425	6,993	31,053
1925-26..	176	3,606	93	172	3,380	84	250	14,728	1,615	6,818	30,922

Table 36. [—] Teachers, by Grade and Sex (not including Teachers in Practical Instruction Centres).

Year. 1.	Certificated.						Uncertificated.			Supplement- ary. 11.	Special Subjects Teachers (other than Certificated or Uncertificated).			Total.		
	College-trained.			Others.			Men. 8.	Women. 9.	Total. 10.		Men. 12.	Women. 13.	Total. 14.	Men. 15.	Women. 16.	Total. 17.
	Men. 2.	Women. 3.	Total. 4.	Men. 5.	Women. 6.	Total. 7.				Women. 11.							Men. 12.	Women. 13.	Total. 14.	Men. 15.	Women. 16.	Total. 17.
1870-71	•	•	•	•	•	•	438	813	1,251	—				7,136	7,310	14,446
1875-76	7,974	7,562	15,536	2,396	4,447	6,943	1,146	2,349	3,495	543				11,616	14,901	26,517
1880-81	9,974	9,814	19,788	4,223	9,551	13,774	2,998	5,561	8,559	2,459				17,195	27,385	44,580
1885-86	11,623	11,558	23,181	5,143	13,594	18,737	5,375	12,358	17,733	4,659				22,141	42,169	64,310
1890-91	13,226	13,454	26,680	5,951	14,940	20,891	5,481	13,279	23,760	5,681				24,658	52,354	77,012
1895-96	15,849	16,608	32,457	6,586	17,578	24,164	4,112	21,372	25,484	12,838				26,547	68,396	94,943
1900-01	18,196	19,911	38,107	6,998	21,098	28,096	5,356	29,319	34,675	18,047†				30,592	88,333	118,925
1905-06	20,721	24,153	44,874	8,963	30,809	39,772	4,929	35,824	40,753	23,114†				35,173	113,340	148,513
1910-11	24,623	32,366	56,989	9,632	34,759	44,391	6,137	39,510	45,647	14,418†				40,402	121,043	161,445
1913-14	27,804	39,102	66,906	9,422	32,828	42,250	4,655	36,752	41,407	13,367				41,881	122,049	163,930
1919-20	26,420	50,107	76,527	8,023	29,586	37,609	2,677	33,410	36,087	13,424				37,226	126,711	163,937
1920-21	26,582	52,973	79,555	7,687	28,881	36,568	2,194	33,582	35,776	13,541	106	184	290	36,571	129,151	165,722
1921-22	27,985	54,627	82,612	7,475	27,984	35,459	2,219	32,959	35,178	12,898	128	174	302	37,786	128,610	166,396
1922-23	29,022	54,144	83,166	7,408	26,134	33,542	2,063	30,819	32,882	11,448	107	178	285	38,600	122,728	161,323
1923-24	29,907	55,539	85,446	6,979	24,552	31,531	1,975	30,210	32,185	10,597	137	178	315	38,998	121,076	160,074
1924-25	30,627	57,869	88,496	6,535	23,521	30,056	2,134	31,593	33,727	9,926	143	201	344	39,439	123,110	162,549
1925-26	31,614	60,050	91,664	5,792	21,835	27,627	2,158	31,644	33,802	8,977	210	271	481	39,774	122,777	162,551

* Figures for College-trained and Other Certificated Teachers cannot be given separately for the year 1870-71, the total number of Certificated Teachers in that year was: Men, 6,698; Women, 6,497.

† Including 42 men in 1900-01; 560 in 1905-06; and 10 in 1910-11.

Table 37.

Table 37. [—] Number of Classes, by Size (Number on Registers).

Number of Classes with Number on Registers.																	
1.				2.		3.		4.		5.		6.		7.		8.	
				Under 20.		20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and over.		Total.	
1919-20	11,397	25,415	36,534	39,039	31,204	6,970	150,559						
1920-21	11,878	26,769	38,061	39,565	29,385	5,752	151,410						
1921-22	11,826	27,263	39,252	40,203	28,058	4,973	151,575						
1922-23	11,088	26,159	39,181	41,064	27,166	4,022	148,680						
				Not over 20.		Over 20 but not over 30.		Over 30 but not over 40.		Over 40 but not over 50.		Over 50 but not over 60.		Over 60.		Total.	
1923-24	13,216	27,994	40,570	40,648	24,478	494	147,400						
1924-25	13,392	28,635	41,346	43,358	20,708	637	148,076						
1925-26	13,914	30,078	43,504	42,884	19,740	242	150,362						

(iii)—CERTIFIED SPECIAL SCHOOLS FOR BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

Table 38. [—]

Schools and Accommodation.

Year. <i>I.</i>	Blind and Deaf.		Mentally Defective, Physically Defective and Epileptic.						Total.	
	No. 2.	Accn. 3.			No. 4.	Accn. 5.			No. 6.	Accn. 7.
1895-6	91	4,480			—	—			91	4,480
1900-1	103	5,496			79	3,325			182	8,821
1905-6	85	5,850			177	11,070			262	16,920
1910-11	86	6,452			245	18,021			331	24,473

Year. <i>I.</i>	Blind.*		Deaf.*		Mentally Defective.*		Physically Defective.*				Epileptic.*		Total.		
	No. 2.	Accn. 3.	No. 4.	Accn. 5.	No. 6.	Accn. 7.	Cripples, etc.		Tubercular or Delicate.		No. 12.	Accn. 13.	No. 14.	Accn. 15.	
							No. 8.	Accn. 9.	No. 10.	Accn. 11.					
1913-14 :—															
L.E.A.	24	978	37	2,285	171	13,149	56	4,427	19	1,271	1	100	308	22,210	
Non-L.E.A.	17	1,457	13	2,209	8	687	6	600	10	471	5	396	59	5,820	
Total 1913-14	41	2,435	50	4,494	179	13,836	62	5,027	29	1,742	6	496	367	28,030	
1920-21 :—															
L.E.A.	48	1,916	36	2,319	185	14,821	60	5,506	46	3,718	1	100	376	28,380	
Non-L.E.A.	19	1,534	13	2,310	16	1,310	15	1,035	56	3,017	5	408	124	9,614	
Total 1920-21	67	3,450	49	4,629	201	16,131	75	6,541	102	6,735	6	508	500	37,994	

Year. <i>I.</i>	Blind.		Deaf.		Mentally Defective.		Physically Defective.*								Epileptic.		Total.			
	No. 2.	Accn. 3.	No. 4.	Accn. 5.	No. 6.	Accn. 7.	Open Air.		Cripple.		Hospital.		Sanatorium.		Ophthalmic.		No. 18.	Accn. 19.	No. 20.	Accn. 21.
							No. 8.	Accn. 9.	No. 10.	Accn. 11.	No. 12.	Accn. 13.	No. 14.	Accn. 15.	No. 16.	Accn. 17.				
1925-26 :—																				
L.E.A.	53	2,624	37	2,371	178	15,804	59	5,604	62	5,892	4	243	9	492	—	—	1	100	403	33,130
Non-L.E.A.	22	1,592	12	2,259	14	1,350	14	576	12	786	38	3,026	33	1,764	2	353	5	425	152	12,131
Total 1925-26	75	4,216	49	4,630	192	17,154	73	6,180	74	6,678	42	3,269	42	2,256	2	353	6	525	555	45,261

* Separate figures for each category are not available for preceding years.

Table 39. [—] Certified Special Schools. Teachers, by Grade and Sex.

Year.	Certificated.						Uncertificated.	Others.	All Full-time Teachers.			Part-time Teachers.						
	College-trained.			Not College-trained.					Men.	Women.	Total.	Men.	Women.	Total.				
	Men.	Women.	Total.	Men.	Women.	Total.												
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.
1910-11* ..	—	—	—	—	—	—	—	—	—	—	—	—	297	1,169	1,466	71	98	169
1913-14† ..	85	600	685	53	300	353	—	—	—	194	449	643	332	1,349	1,681	135	153	288
1920-21 ..	113	814	927	61	385	446	23	280	303	181	279	460	378	1,758	2,136	195	175	370
1925-26 ..	151	965	1,116	83	366	449	40	352	392	136	175	311	410	1,858	2,268	—	—	414

* For the year 1910-11 separate figures for each category are not available.

† For the year 1913-14 particulars of "Uncertificated Teachers" are included in Columns 11-13.

Table 40. [—] Institutions for the Training of Blind and other Defective Students over the Age of 16 years.
Institutions and Students.

Year.	Type.	Recognised Institutions.					Number of Students on Registers.												
		Residential.		Day.		Total.	Residential.				Day.				Total.		Pre-viously at a Special School.	Not pre-viously at a Special School.	Total.
		Main-tained by L.E.As.	Non-L.E.A.	Main-tained by L.E.As.	Non-L.E.A.		L.E.A.*		Non-L.E.A.		L.E.A.*		Non-L.E.A.		Male.	Female.			
							Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.					
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
1919-20†..	Blind	—	13	1	5	19	122	79	144	153	11	17	47	22	324	271	416	179	595
	Deaf	—	1	1	—	2	20	—	2	—	—	3	—	22	3	24	1	25	
	Cripple	—	4	—	—	4	2	3	40	19	—	—	—	2	42	24	16	50	66
	Epileptic	—	3	—	—	3	—	—	65	34	—	—	—	—	65	34	47	52	99
	Total	—	21	2	5	28	144	82	251	206	11	20	47	24	453	332	503	282	785
1920-21 ..	Blind	—	16	1	7	24	146	106	146	142	14	26	84	19	390	293	473	210	683
	Deaf	—	1	1	—	2	23	—	2	—	—	5	—	25	5	29	1	30	
	Cripple	—	4	—	—	4	4	—	30	16	5	1	—	39	17	26	30	56	
	Epileptic	—	3	—	—	3	—	—	62	30	—	—	—	62	30	43	49	92	
	Total	—	24	2	7	33	173	106	240	188	19	32	84	19	516	345	571	290	861
1925-26 ..	Blind	1	21	2	15	39	364	281	84	105	231	121	100	41	779	548	786	541	1,327
	Deaf	—	3	1	—	4	22	19	5	17	—	4	—	27	40	63	4	67	
	Cripple	—	6	—	—	6	6	4	65	33	—	—	2	73	38	46	65	111	
	Epileptic	—	3	—	—	3	1	—	49	5	—	—	—	50	5	19	36	55	
	Total	1	33	3	15	52	393	304	203	160	231	125	102	42	929	631	914	646	1,560

* Includes Students sent by Local Education Authorities to non-L.E.A. Institutions.

† These Institutions were recognised for the first time under Special Regulations dated 20th March, 1917. Previous to this some Courses were recognised under the Regulations for Technical Schools. No statistical particulars are available for years prior to 1919-20.

ENGLAND AND WALES.

(iv) NURSERY SCHOOLS.

Table 41. [—] Nursery Schools: Children in attendance.

Year.	Schools provided by Local Education Authorities.				Schools provided by Voluntary Bodies.			
	Schools.	Accommodation.	Average Number of Children on the Admission Register.	Average Attendance.	Schools.	Accommodation.	Average Number of Children on the Admission Register.	Average Attendance.
1.	2.	3.	4.	5.	6.	7.	8.	9.
1918-19 ..	1	22	*	14	12	417	*	268
1920-21 ..	8	357	*	225	14	509	*	387
1925-26 ..	13	672	683	529	15	719	731	586

* Information not available.

Table 42. [—] Nursery Schools: Teachers Employed.

1.	1920-21. 2.	1925-26. 3.
1. Certificated :—		
(a) College Trained	15	20
(b) Not College Trained	1	2
2. Uncertificated	4	9
3. Others	22	22
4. Total	42*	53†

In addition to the above—

* Three part-time teachers were employed.

† Two part-time teachers were employed.

Information in regard to the staff for 1918-19 is not available.

(v)—PROVISION OF MEALS.

Table 43. [—] Local Education Authorities providing Meals for Children attending Public Elementary Schools: Children fed, Meals supplied and Expenditure incurred.

Year.	L.E.As. Feeding.	Individual Children fed.	Meals supplied.	Average Total Cost per Meal.	Gross Expenditure.	Receipts.	
						From Parents.	Miscellaneous.
1.	2.	3.	4.	5.	6.	7.	8.
1908-9	113	*	14,218,560	<i>d.</i> 1-22	<i>£</i> 72,333	<i>£</i> *	<i>£</i> *
1909-10	126	*	16,102,104	2-0	134,105	*	*
1910-11	128	*	16,872,997	2-18	153,568	*	*
1911-12	131	*	16,122,219	2-34	157,127	*	*
1912-13	137	358,306	19,001,729	2-32	183,805	2,430	6,804
1913-14	98	156,531	14,525,593	2-43	147,519	2,997	1,665
1914-15	134	422,401	29,560,316	2-47	304,583	4,225	2,120
1915-16	116	118,114	9,957,634	4-1	170,194	11,324	1,995
1916-17	94	65,301	5,777,147	5-42	130,615	13,862	1,948
1917-18	88	60,633	6,518,174	5-26	142,835	18,202	2,262
1918-19	86	53,742	5,647,954	5-98	137,071	21,902	3,572
1919-20	118	75,013	6,335,821	6-99	184,516	25,612	5,038
1920-21	137	148,082	10,447,596	6-68	290,760	28,695	10,314
1921-22	190	592,518	60,676,017	3-88	983,182	15,822	21,733
1922-23	156	149,676	17,171,298	3-93	281,251	17,197	9,767
1923-24	138	103,231	10,975,220	3-80	173,621	16,557	5,351
1924-25	132	97,993	10,236,718	3-72	158,726	17,831	4,425
1925-26	134	118,464	13,176,383	3-13†	172,064†	19,014†	5,505†

* Particulars not available, as many Authorities did not supply full information previous to receiving grants-in-aid

† In the case of four Authorities the latest available figures, i.e. for 1924-25, have been taken.

ENGLAND AND WALES.

(vi)—ORGANISATION OF PHYSICAL TRAINING.

Table 44. [—] Local Education Authorities employing Organisers and the number employed.

Year. 1.	L.E.As. employing Organisers. 2.	Organisers Employed.		
		Men. 3.	Women. 4.	Total. 5.
1916-17	23	12	22	34
1920-21	78	53	77	130
1925-26	95	72	82	154

(vii)—EVENING PLAY CENTRES.

Table 45. [—] Centres and the Average Attendance of Children.

Year. 1.	Centres conducted by Local Education Authorities.		Centres conducted by Voluntary Bodies.		Total.	
	Centres. 2.	Average Attendance at the Centres. 3.	Centres. 4.	Average Attendance at the Centres. 5.	Centres. 6.	Average Attendance at the Centres. 7.
1916-17	37	*	37	*	74	*
1917-18	87	*	70	*	157	*
1918-19	167	*	83	*	250	*
1919-20	246	48,519	103	16,742	349	65,261
1920-21	278	58,836	100	17,042	378	75,878
1921-22	247	57,988	104	14,508	351	72,496
1922-23	136	34,097	105	14,129	241	48,226
1923-24	150	36,829	100	14,099	250	50,928
1924-25	150	37,639	100	13,833	250	51,472
1925-26	161	40,738	104	14,340	265	55,078

* Average attendance figures not available for these years.

ENGLAND AND WALES.

C.—SECONDARY AND PREPARATORY SCHOOLS ON THE EFFICIENT LIST.*(See Explanatory Notes, page 126.)*

1.—SUMMARY FIGURES.

Table 46. [51, 76]

Summary (Schools and Pupils).

1.	1925-26.			1924-25.		
	Secondary Schools on the Grant List.	Schools not on the Grant List.		Secondary Schools on the Grant List.	Schools not on the Grant List.	
		Second-ary Schools.	Prepar-atory Schools.		Second-ary Schools.	Prepar-atory Schools.
	2.	3.	4.	5.	6.	7.
1. Schools	1,301	312	102	1,284	288	95
2. Pupils :—						
(a) Boys	189,657	29,224	6,540	183,740	27,262	6,172
(b) Girls	170,846	28,036	2,105	168,865	26,653	1,980
(c) Total	360,503	57,260	8,645	352,605	53,915	8,152

2.—SECONDARY SCHOOLS ON THE GRANT LIST.

(I)—SCHOOLS.

Table 47. [52]

Schools, by Type of Responsible Body.

Summary Classification, with Pupils.

(See Explanatory Notes, page 128.)

1.	1925-26.		1924-25.	
	Schools.	Pupils.	Schools.	Pupils.
	2.	3.	4.	5.
1. Council Schools	656	187,320	643	181,649
2. Roman Catholic Schools	73	18,827	68	17,765
3. Foundation and other Schools	471	131,184	473	130,807
4. Welsh Intermediate Schools	101	23,172	100	22,384
5. Total	1,301	360,503	1,284	352,605

ENGLAND AND WALES.

Table 48. [53] Schools, by Type of Responsible Body.
Detailed Classification.

A.—Schools for which Local Authorities were responsible.	
1.	2.
1. Provided by Local Authorities—	
(a) by County Councils	374
(b) by County Borough Councils	168
(c) by Borough Councils	10
(d) by Urban District Councils	7
(e) Total	559
2. Provided jointly by more than one Authority ..	14
3. Endowed Schools municipalised as to Govern- ment and Finance, for which the Responsible Body was—	
(a) a County Council	47
(b) a County Borough Council	28
(c) a Borough Council	6
(d) an Urban District Council	2
(e) Total	83
4. Total of 1, 2, and 3	656
B.—Schools for which Local Authorities were not responsible.	
1.	2.
1. Welsh Intermediate Schools	101
2. On Express Educational Trusts—	
(a) municipalised as to Finance alone, and financed under Scheme—	
(i) by a County Council	5
(ii) by a County Borough Council	1
(b) other Schools under Schemes made by the Court of Chancery, the Charity Commission, or the Board of Education ..	391
(c) under Special Acts	10
(d) under a Royal Charter	1
(e) on the Girls' Public Day School Trust ..	25
(f) other Schools under the Companies Acts ..	6
(g) under original Trusts—	
(i) Roman Catholic Schools	13
(ii) Other Schools	20
(h) Total	472
3. Not known to be on Express Educational Trusts, and controlled—	
(a) by Roman Catholic Religious Orders ..	58
(b) by a Roman Catholic Diocesan Authority ..	2
(c) by a Church of England Religious Organisation	1
(d) by other Bodies or Persons	11
(e) Total	72
4. Total of 1, 2, and 3	645

Secondary Schools on the Grant List, 1925-26.

ENGLAND AND WALES.

Table 49. [54] Schools, by Sex of Pupils.

1.	Schools.				Total. 5.
	For Boys. 2.	For Girls. 3.	For Boys and Girls. 4.		
1. Council Schools	172 ..	250 ..	234 ..	..	656
2. Roman Catholic Schools	19 ..	54 ..	— ..	..	73
3. Foundation and other Schools ..	265 ..	136 ..	70 ..	..	471
4. Welsh Intermediate Schools ..	21 ..	23 ..	57 ..	..	101
5. Total	477 ..	463 ..	361 ..	..	1,301

Table 50. [55] Schools, by Percentage of Free Places normally required.

(See Explanatory Notes, page 128.)

1.	25	20	15	12½	10	Total. 7.
	per cent. 2.	per cent. 3.	per cent. 4.	per cent. 5.	per cent. 6.	
1. Council Schools	639 ..	1 ..	1 ..	3 ..	12 ..	656
2. Roman Catholic Schools..	63 ..	2 ..	4 ..	3 ..	— ..	72
3. Foundation and other Schools	346 ..	11 ..	8 ..	21 ..	82 ..	468
4. Welsh Intermediate Schools	100 ..	— ..	— ..	1 ..	— ..	101
5. Total*	1148 ..	14 ..	13 ..	28 ..	94 ..	1,297

* Excluding four Schools which received grant on the lower scale and were not required to satisfy the conditions of Art. 20 of the Regulations for Secondary Schools.

ENGLAND AND WALES.

Table 51. [*] Schools, by Size.

<i>I.</i>	Under 50. 2.	50 and under 75. 3.	75 and under 100. 4.	100 and under 125. 5.	125 and under 150. 6.	150 and under 200. 7.	200 and under 250. 8.	250 and under 300. 9.	300 and under 400. 10.	400 and under 500. 11.	500 and under 600. 12.	600 and over. 13.	Total 14.
31st March, 1926.													
1. Council Schools	5	12	34	33	37	78	95	86	156	68	33	19	656
2. Roman Catholic Schools ..	—	1	2	1	5	13	18	13	14	3	2	1	73
3. Foundation and other Schools	2	12	24	33	45	61	62	53	86	47	30	16	471
4. Welsh Intermediate Schools...	1	4	8	12	8	14	9	14	22	9	—	—	101
5. Total, 1925-26	8	29	68	79	95	166	184	166	278	127	65	36	1,301
6. Total, 1920-21	6	30	41	89	105	140	161	166	241	128	59	39	1,205

* This Table last appeared in the volume for 1920-21.

Table 52. [56] Schools, according to the Tuition Fee charged.

<i>I.</i>	Council Schools. 2.	Roman Catholic Schools. 3.	Founda- tion and other Schools. 4.	Welsh Inter- mediate Schools. 5.	Total. 6.
1. No Tuition Fee charged	47	—	2	—	49
2. Tuition Fee normally charged per annum to Pupils of 12 years of age—					
(a) Not over 1 guinea	—	—	—	—	—
(b) Over 1, but not over 2 guineas ..	1	—	—	—	1
(c) " 2, " " " 3 " ..	3	—	—	3	6
(d) " 3, " " " 4 " ..	14	1	—	22	37
(e) " 4, " " " 5 " ..	37	—	—	32	69
(f) " 5, " " " 6 " ..	41	5	8	20	74
(g) " 6, " " " 7 " ..	24	—	5	6	35
(h) " 7, " " " 8 " ..	17	4	8	9	38
(i) " 8, " " " 9 " ..	100	25	45	7	177
(k) " 9, " " " 10 " ..	136	7	61	1	205
(l) " 10, " " " 11 " ..	25	2	19	—	46
(m) " 11, " " " 12 " ..	†135	18	†105	—	†258
(n) " 12, " " " 13 " ..	7	—	27	—	34
(o) " 13, " " " 14 " ..	7	2	4	—	13
(p) " 14, " " " 15 " ..	42	5	49	—	96
(q) " 15, " " " 16 " ..	1	1	12	1	15
(r) " 16, " " " 17 " ..	3	—	4	—	7
(s) " 17, " " " 18 " ..	10	2	25	—	37
(t) " 18, " " " 19 " ..	—	—	1	—	1
(u) " 19, " " " 20 " ..	2	1	16	—	19
(v) Over 20 guineas	4	—	79	—	83
3. Total	656	73	470	101	*1,300

* One School, which has no separate Tuition Fee, has not been taken into account for the purposes of this table.

† In two of the Schools (one Council and one Foundation) shown under *Head 2 (m)* the Tuition Fee was 12 guineas for the Boys and 11 guineas for the Girls, and in one Foundation School the Fee was 12l. for the Boys and 10 guineas for the Girls.

ENGLAND AND WALES.

Table 53. [57] Schools, whether for Day Pupils or Boarders.

Schools.					
	For Day Pupils only.	For Boarders only.	For Day Pupils and Boarders.	Total.	
1.	2.	3.	4.	5.	
1. Council Schools	580	—	76	656	
2. Roman Catholic Schools	45	—	28	73	
3. Foundation and other Schools	247	1	223	471	
4. Welsh Intermediate Schools	90	—	11	101	
5. Total	962	1	338	1,301	

Table 54. [58] Schools, by Ages of Full-time Pupils.

31st March, 1926.					
	Council Schools.	Roman Catholic Schools.	Founda- tion and other Schools.	Welsh Inter- mediate Schools.	Total.
1.	2.	3.	4.	5.	6.
Schools containing Full-time Pupils who were—					
(a) under 7 years of age	79	29	123	—	231
(b) " 10 " " ..	298	62	377	12	749
(c) " 12 " " ..	653	73	469	96	1,291
(d) 16 years of age and over, classified according to percentage of number of Pupils of 16 and over to number of Pupils of 12 and over :—					
(i) Under 10 per cent. ..	68	3	18	1	90
(ii) 10 per cent. and under 25 per cent. ..	515	62	338	53	968
(iii) 25 per cent. and over ..	73	8	115	47	243
(iv) Total	656	73	471	101	1,301

ENGLAND AND WALES.

Table 55. [59] Average School Life for certain Schools, based on particulars relating to Full-time Pupils who left during the School Year.

(See Explanatory Notes, page 128.)

I.	Council Schools. 2.	Roman Catholic Schools. 3.	Founda- tion and other Schools. 4.	Welsh Inter- mediate Schools. 5.	Total. 6.
1. Schools in which Boys were taught :					
(a) Number of Schools taken into account	384	17	335	78	814
(b) Number of Schools in which the average length of School Life of Boys (omitting School Life below the age of 12) was—					
Not over 1½ years	—	—	—	—	—
over 1½, but not over 2 years	3	—	—	1	4
" 2, " " 2½ "	8	—	2	5	15
" 2½, " " 3 "	23	2	24	13	62
" 3, " " 4 "	298	14	240	48	600
" 4, " " 5 "	52	1	69	11	133
" 5, " " 6 "	—	—	—	—	—
2. Schools in which Girls were taught :					
(a) Number of Schools taken into account	466	54	206	79	805
(b) Number of Schools in which the average length of School Life of Girls (omitting School Life below the age of 12) was—					
Not over 1½ years	—	—	—	—	—
over 1½, but not over 2 years	3	—	—	2	5
" 2, " " 2½ "	7	2	3	3	15
" 2½, " " 3 "	12	8	5	12	37
" 3, " " 4 "	300	37	128	47	512
" 4, " " 5 "	142	7	68	15	232
" 5, " " 6 "	2	—	1	—	3
" 6 years	—	—	1	—	1

ENGLAND AND WALES.

Table 56. [60] Average Leaving Age for certain Schools, based on particulars relating to Full-time Pupils who left during the School Year.

	Council Schools.	Roman Catholic Schools.	Founda- tion and other Schools.	Welsh Inter- mediate Schools.	Total.
1.	2.	3.	4.	5.	6.
1. Schools in which Boys were taught:—					
(a) Number of Schools taken into account..	384	17	335	78	814
(b) Number of Schools in which the average age at leaving of Boys who left after reaching 12 years of age was—					
Under 14 years	—	—	—	—	—
14 and under 15 years	6	—	—	—	6
15 " " 15½ " " "	16	1	12	5	34
15½ " " 16 " " "	124	9	87	16	236
16 " " 16½ " " "	186	7	143	26	362
16½ " " 17 " " "	50	—	74	24	148
17 " " 18 " " "	2	—	19	7	28
18 " " 19 " " "	—	—	—	—	—
2. Schools in which Girls were taught:—					
(a) Number of Schools taken into account..	466	54	206	79	805
(b) Number of Schools in which the average age at leaving of Girls who left after reaching 12 years of age was—					
Under 14 years	—	—	—	—	—
14 and under 15 years	1	—	1	—	2
15 " " 15½ " " "	14	6	4	5	29
15½ " " 16 " " "	86	15	36	8	145
16 " " 16½ " " "	182	27	73	25	307
16½ " " 17 " " "	146	5	65	32	248
17 " " 18 " " "	36	1	26	9	72
18 " " over	1	—	1	—	2

Table 57. [61]

Classes, by Size.

1.	Number of Classes containing—							Total.
	not over 10.	over 10 but not over 15.	over 15 but not over 20.	over 20 but not over 25.	over 25 but not over 30.	over 30 but not over 35.	over 35.	
	2.	3.	4.	5.	6.	7.	8.	9.
1. Council Schools	956	648	1,013	1,473	2,130	1,892	62	8,174
2. Roman Catholic Schools ..	93	71	119	139	199	191	4	816
3. Foundation and other Schools	669	636	954	1,231	1,479	971	38	5,978
4. Welsh Intermediate Schools	105	72	101	168	290	249	2	987
5. Total	1,823	1,427	2,187	3,011	4,098	3,303	106	15,955

ENGLAND AND WALES.

(ii)—PUPILS.

Table 58. [62] Full-time Pupils in Secondary Schools on the Grant List, compared with Population and with Pupils in Public Elementary Schools.

1.	England. 2.	Wales. 3.	England and Wales. 4.
1. Population, 1921	35,230,225 ..	2,656,474 ..	37,886,699
2. Total number of Full-time Pupils in Secondary Schools on the Grant List, 31 March, 1926	328,074 ..	32,429 ..	360,503
3. Number of Pupils in (2) above per 1,000 of the Population, 1921	9.3 ..	12.2 ..	9.5
<i>Number of Pupils on 31 March, 1925, per 1,000 of the Population in 1921</i>	<i>9.1 ..</i>	<i>11.7 ..</i>	<i>9.3</i>
4. Number of Pupils on the registers of P.E. Schools on 31 March, 1925, aged 10 and under 11	600,087* ..	52,917 ..	653,004*
5. Number of Full-time ex.-P.E.S. Pupils admitted to Sec. Schools on the Grant List during 1925-26	53,087 ..	8,244 ..	61,331
6. Number of Pupils in (5) above per 1,000 of the number of Pupils in (4) above	88.5 ..	155.8 ..	93.9
<i>Number of ex.-P.E.S. Pupils admitted during 1924-25 per 1,000 of the number of Pupils in P.E. Schools on 31 March, 1924, aged 10 and under 11</i>	<i>81.9 ..</i>	<i>159.7 ..</i>	<i>90.9</i>

* These figures include 798 Pupils in non-local Schools not maintained by Local Education Authorities (see Explanatory Notes, page 121).

Table 59. [63] Full-time Pupils, by Sex and Age.

1.	Boys. 2.	Girls. 3.	Total. 4.	Estimated Population, July, 1926.		
				Boys. 5.	Girls. 6.	Total. 7.
1. Under 7	1,228	1,903	3,131	2,500,181	2,437,113	4,937,294
2. 7 and under 8 ..	830	1,545	2,375	271,556	265,483	537,039
3. 8 " " 9 ..	1,632	2,237	3,869	264,082	260,852	524,934
4. 9 " " 10 ..	3,620	3,838	7,458	302,471	297,283	599,754
5. 10 " " 11 ..	6,044	6,070	12,114	324,760	319,476	644,236
6. 11 " " 12 ..	15,540	13,985	29,525	349,200	347,747	696,947
7. 12 " " 13 ..	31,842	27,357	59,199	357,154	357,445	714,599
8. 13 " " 14 ..	35,637	30,101	65,738	355,829	355,386	711,215
9. 14 " " 15 ..	34,192	28,440	62,632	352,735	348,093	700,828
10. 15 " " 16 ..	30,275	24,960	55,235	353,907	351,757	705,664
11. 16 " " 17 ..	17,900	16,851	34,751	360,504	357,403	717,907
12. 17 " " 18 ..	7,739	9,361	17,100	366,240	363,753	729,993
13. 18 " " 19 ..	2,733	3,487	6,220	366,427	365,171	731,598
14. 19 and over* ..	445	711	1,156	708,647	708,883	1,417,530
15. Total	189,657	170,846	360,503	7,233,743	7,135,945	14,369,588

* The Population figures under this head refer to the age group 19 and under 21.

ENGLAND AND WALES.

Table 60. [73]

Full-time Pupils in the Schools, and

by Type I

Reference Number.	Type of Area.	Popula- tion, 1921.	BOYS.											Number drawn from the Area, whether attending Schools in the Area or outside it.	
			Number in the Schools in the Area.										Admitted during		
			31st March, 1925.	31st March, 1926.							Percentage of Col. 9 to Col. 8.	1924- 25.	1925- 26.	31st March, 1926.	Per 1,000 of Population.
				Total.	Free Pupils.	Boarders.	Aged under 11.	Aged 11 and under 16.	Aged 16 and over.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14		
	I.—ENGLAND (except Monmouthshire) :—														
1	(a) Administrative Counties	18,628,610	87,443	90,416	32,418	8,697	6,699	70,941	12,776	18.0	21,788	22,809	96,344	5.2	
2	(b) County Boroughs	12,117,092	63,145	64,701	25,952	1,528	5,204	50,277	9,220	18.3	14,997	15,346	58,364	4.8	
3	(c) London	4,484,523	17,408	17,900	6,259	150	1,400	13,146	3,354	25.5	3,931	4,024	17,079	3.8	
4	(d) Total	35,230,225	167,996	173,017	64,629	10,375	13,303	134,364	25,350	18.9	40,716	42,179	171,791	4.9	
	II.—WALES (with Monmouthshire) :—														
5	(a) Administrative Counties	2,106,866	12,600	13,323	7,379	311	38	10,332	2,953	28.6	3,948	3,898	13,510	6.4	
6	(b) County Boroughs	549,608	3,144	3,317	2,391	—	13	2,790	514	18.4	915	869	3,402	6.2	
7	(c) Total	2,656,474	15,744	16,640	9,770	311	51	13,122	3,467	26.4	4,863	4,767	16,912	6.4	
	III.—ENGLAND and WALES :—														
8	(a) Administrative Counties	20,735,476	100,043	103,739	39,797	9,008	6,737	81,273	15,729	19.4	25,736	26,707	109,858	5.3	
9	(b) County Boroughs	12,666,700	66,289	68,018	28,343	1,528	5,217	53,067	9,734	18.3	15,912	16,215	61,766	4.9	
10	(c) London	4,484,523	17,408	17,900	6,259	150	1,400	13,146	3,354	25.5	3,931	4,024	17,079	3.8	
11	(d) Total	37,886,699	183,740	189,657	74,399	10,686	13,354	147,486	28,817	19.5	45,579	46,946	188,703	5.0	
	IV.—OTHER COUNTRIES :—														
12	(a) Scotland	—	—	—	—	—	—	—	—	—	—	—	54	—	
13	(b) Ireland	—	—	—	—	—	—	—	—	—	—	—	52	—	
14	(c) British Colonies	—	—	—	—	—	—	—	—	—	—	—	542	—	
15	(d) Foreign Countries	—	—	—	—	—	—	—	—	—	—	—	306	—	
16	(e) Total	—	—	—	—	—	—	—	—	—	—	—	954	—	
17	V.—TOTAL	—	183,740	189,657	74,399	10,686	13,354	147,486	28,817	19.5	45,579	46,946	189,657	—	

* Including 124 Boys and 159 Girls, resident in England, who attended Secondary Schools in Wales in 1925-6.

† Including 411 Boys and 131 Girls, resident in Wales, who attended Secondary Schools in England in 1925-6.

ENGLAND AND WALES.

Pupils admitted during the School Year,
of Area.

Reference Number.	GIRLS.											BOYS AND GIRLS.				
	Number in the Schools in the Area.											Number drawn from the Area, whether attending Schools in the Area or outside it.				
	31st March, 1926.								Admitted during							
	31st March 1925.	Total.	Free Pupils.	Boarders.	Aged under 11.	Aged 11 and under 16.	Aged 16 and over.	Percentage of Col. 21 to Col. 20.	1924-25.	1925-26.	31st March, 1926.	Per 1,000 of Population.	Total of Cols. 14 and 26.	Number of Public Elementary School Pupils aged 10 and under 11 on 31st March, 1925.	Number of ex-Public Elementary School Pupils drawn from the Area, admitted to Secondary Schools during 1925-26.	Percentage of Col. 29 to Col. 28.
1	72,829	74,000	27,739	1,821	6,430	54,902	12,668	23·1	16,541	17,462	83,606	4·5	9·7	312,124	29,907	9·6
2	62,235	62,392	25,346	1,400	6,520	45,390	10,482	23·1	13,854	13,987	52,968	4·4	9·2	213,771	18,371	8·6
3	18,377	18,665	6,577	91	2,507	12,659	3,499	27·6	4,240	4,174	17,839	4·0	7·8	73,394	4,768	6·5
4	153,441	155,057	59,662	3,312	15,457	112,951	26,649	23·6	34,635	35,623	*154,463	4·4	9·3	599,289	153,046	8·9
5	12,098	12,347	6,862	314	66	9,180	3,101	33·8	3,462	3,459	12,488	5·9	12·3	42,225	6,766	16·0
6	3,326	3,442	2,319	83	70	2,712	660	24·3	891	880	3,264	5·9	12·1	10,692	1,494	14·0
7	15,424	15,789	9,181	397	136	11,892	3,761	31·6	4,353	4,339	†15,752	5·9	12·3	52,917	58,260	15·6
8	84,927	86,347	34,601	2,135	6,496	64,082	15,769	24·6	20,003	20,921	96,094	4·6	9·9	354,349	36,673	10·3
9	65,561	65,834	27,665	1,483	6,590	48,102	11,142	23·2	14,745	14,867	58,232	4·4	9·3	224,463	19,865	8·9
10	18,377	18,665	6,577	91	2,507	12,659	3,499	27·6	4,240	4,174	17,839	4·0	7·8	73,394	4,768	6·5
11	168,865	170,846	68,843	3,709	15,593	124,843	30,410	24·4	38,988	39,962	170,215	4·5	9·5	652,206	61,306	9·4
12	—	—	—	—	—	—	—	—	—	—	24	—	—	—	2	—
13	—	—	—	—	—	—	—	—	—	—	109	—	—	—	5	—
14	—	—	—	—	—	—	—	—	—	—	372	—	—	—	16	—
15	—	—	—	—	—	—	—	—	—	—	126	—	—	—	2	—
16	—	—	—	—	—	—	—	—	—	—	631	—	—	—	25	—
17	168,865	170,846	68,843	3,709	15,593	124,843	30,410	24·4	38,988	39,962	170,846	—	—	652,206	61,331	9·4

† Including 38 ex-P.E.S. Pupils, resident in England, who were admitted to Secondary Schools in Wales in 1925-6.
‡ Including 55 ex-P.E.S. Pupils, resident in Wales, who were admitted to Secondary Schools in England, in 1925-6.

ENGLAND AND WALES.

Table 62. [65]

Ages on 31st March, 1926, of all

(See Explanatory

Reference Number.	Boys and Girls.				5.	Number and			
	Number.		Percentage.			Totals.			
	31st Mar. 1925.	31st Mar. 1926.	31st Mar. 1925.	31st Mar. 1926.		Number.		Percentage.	
	1.	2.	3.	4.		Boys.	Girls.	Boys.	Girls.
			%	%				%	%
1	9,492	9,336	2.7	2.6	1. FEE-PAYING PUPILS:—				
2	7,273	7,394	2.1	2.1	(a) Under 12 years of age—				
3	12,197	11,430	3.5	3.2	Under 9 years of age	3,675	5,661	1.9	3.3
4	19,684	19,989	5.6	5.5	9 and under 10 years of age	3,585	3,809	1.9	2.2
					10 " " 11 " " "	5,674	5,756	3.0	3.4
					11 " " 12 " " "	10,346	9,623	5.4	5.6
5	48,852	48,129	13.9	13.4	Total	23,280	24,849	12.2	14.5
6	31,538	32,610	8.9	9.0	(b) 12 years of age and over—				
7	37,793	38,037	10.7	10.6	12 and under 13 years of age	17,492	15,118	9.2	8.9
8	37,137	37,501	10.5	10.4	13 " " 14 " " "	20,779	17,258	10.9	10.1
9	30,560	31,606	8.7	8.8	14 " " 15 " " "	20,817	16,684	11.0	9.8
10	17,575	18,202	5.0	5.0	15 " " 16 " " "	17,736	13,870	9.4	8.1
11	7,737	8,025	2.2	2.2	16 " " 17 " " "	9,777	8,425	5.2	4.9
12	2,491	2,642	0.7	0.7	17 " " 18 " " "	3,933	4,092	2.1	2.4
13	544	509	0.2	0.2	18 " " 19 " " "	1,239	1,403	0.7	0.8
					19 years of age and over	205	304	0.1	0.2
14	165,375	169,132	46.9	46.9	Total	91,978	77,154	48.6	45.2
					(c) Total of (a) and (b)—				
15	107,297	109,408	30.5	30.3	(i) Ex-Public Elementary School Pupils	62,496	46,912	33.0	27.5
16	106,930	107,853	30.3	30.0	(ii) Other Pupils	52,762	55,091	27.8	32.2
17	214,227	217,261	60.8	60.3	(iii) Total	115,258	102,003	60.8	59.7
18	30	39	0.0	0.0	2. FREE PUPILS:—				
19	65	64	0.0	0.0	(a) Under 12 years of age—				
20	673	684	0.2	0.2	Under 9 years of age	15	24	0.0	0.0
21	8,733	9,556	2.5	2.7	9 and under 10 years of age	35	29	0.0	0.0
					10 " " 11 " " "	370	314	0.2	0.2
					11 " " 12 " " "	5,194	4,362	2.7	2.6
22	9,501	10,343	2.7	2.9	Total	5,614	4,729	2.9	2.8
23	23,269	26,589	6.6	7.4	(b) 12 years of age and over—				
24	25,363	27,701	7.2	7.6	12 and under 13 years of age	14,350	12,239	7.6	7.2
25	25,810	25,131	7.3	7.0	13 " " 14 " " "	14,858	12,843	7.8	7.5
26	24,890	23,629	7.1	6.5	14 " " 15 " " "	13,375	11,756	7.1	6.9
27	16,313	16,549	4.6	4.6	15 " " 16 " " "	12,539	11,090	6.6	6.5
28	9,226	9,075	2.6	2.5	16 " " 17 " " "	8,123	8,426	4.3	4.9
29	3,379	3,578	0.9	1.0	17 " " 18 " " "	3,806	5,269	2.0	3.1
30	627	647	0.2	0.2	18 " " 19 " " "	1,494	2,084	0.8	1.2
					19 years of age and over	240	407	0.1	0.2
31	128,877	132,899	36.5	36.8	Total	68,785	64,114	36.3	37.5
					(c) Total of (a) and (b)—				
32	132,780	137,622	37.6	38.2	(i) Ex-Public Elementary School Pupils	71,738	65,884	37.8	38.6
33	5,598	5,620	1.6	1.5	(ii) Other Pupils	2,661	2,959	1.4	1.7
34	138,378	143,242	39.2	39.7	(iii) Total	74,399	68,843	39.2	40.3
35	240,177	247,030	68.1	68.5	3. TOTAL OF HEADS 1 AND 2—				
36	112,528	113,473	31.9	31.5	(i) Ex-Public Elementary School Pupils	134,234	112,796	70.8	68.1
					(ii) Other Pupils	55,423	58,050	29.2	33.9
37	352,605	360,503	100.0	100.0	(iii) Total	189,657	170,846	100.0	100.0

ENGLAND AND WALES.

Table 63. [*] Occupations of Fathers of Pupils in the Schools on 31st March, 1926.

(See Explanatory Notes Page 129.)

1.	Area in which Schools are situated.				Totals.		Percentages.	
	Areas under County Councils.	Boroughs and Urban Districts.	County Boroughs.	London.	31st March, 1926.	31st March, 1921.	31st March, 1926.	31st March, 1921.
	2.	3.	4.	5.	6.	7.	8.	9.
1. Number of Boys:—								
(a) Total	60,496	43,243	68,018	17,900	189,657	171,774	100·0	100·0
(b) Classified according to the occupations of their Fathers:—								
(i) Ministers of Religion	963	535	821	145	2,464	2,404	1·3	1·4
(ii) Teachers	1,834	1,533	2,440	680	6,487	5,383	3·4	3·1
(iii) Members of other Professions..	6,738	5,749	7,955	3,187	23,629	20,827	12·5	12·1
(iv) Farmers	5,910	1,673	1,037	37	8,657	9,215	4·6	5·4
(v) Wholesale Traders (Proprietors and Managers)	3,575	2,960	5,500	1,370	13,405	15,443	7·1	9·0
(vi) Retail Traders (Proprietors and Managers)	10,026	6,877	10,916	2,930	30,749	30,625	16·2	17·8
(vii) Traders' Assistants	1,040	801	1,591	357	3,789	1,401	2·0	0·8
(viii) Contractors	1,715	1,177	1,783	409	5,084	3,804	2·7	2·2
(ix) Minor Officials.. .. .	2,430	1,819	2,853	541	7,643	8,312	4·0	4·8
(x) Clerks and Commercial Travellers and Agents	6,330	5,972	11,481	3,127	26,910	24,026	14·2	14·0
(xi) Postmen, Policemen, Seamen and Soldiers.. .. .	2,167	1,853	2,343	881	7,244	6,526	3·8	3·8
(xii) Domestic and other Servants..	1,745	886	1,096	461	4,188	3,020	2·2	1·8
(xiii) Skilled Workmen	12,515	9,290	15,153	2,899	39,857	33,815	21·0	19·7
(xiv) Unskilled Workmen	2,806	1,621	2,492	704	7,623	4,795	4·0	2·8
(xv) No occupation given	702	497	557	172	1,928	2,178	1·0	1·3
2. Number of Girls:—								
(a) Total	46,800	39,547	65,834	18,665	170,846	165,062	100·0	100·0
(b) Classified according to the occupations of their Fathers:—								
(i) Ministers of Religion	721	533	1,019	200	2,473	2,513	1·4	1·5
(ii) Teachers	1,564	1,608	2,486	686	6,344	5,569	3·7	3·4
(iii) Members of other Professions..	4,747	5,360	8,650	3,708	22,465	19,707	13·2	11·9
(iv) Farmers	4,789	1,851	1,256	71	7,967	9,013	4·7	5·5
(v) Wholesale Traders (Proprietors and Managers)	2,385	2,560	5,633	1,368	11,946	14,049	7·0	8·5
(vi) Retail Traders (Proprietors and Managers)	7,295	6,332	9,956	2,923	26,506	27,837	15·5	16·9
(vii) Traders' Assistants	758	772	1,522	419	3,471	1,321	2·0	0·8
(viii) Contractors	1,264	1,037	1,904	387	4,592	3,773	2·7	2·3
(ix) Minor Officials.. .. .	1,847	1,613	2,420	543	6,423	7,867	3·8	4·8
(x) Clerks and Commercial Travellers and Agents	4,742	5,066	10,281	2,716	22,805	21,672	13·3	13·1
(xi) Postmen, Policemen, Seamen and Soldiers.. .. .	1,594	1,654	2,308	970	6,526	6,451	3·8	3·9
(xii) Domestic and other Servants..	1,325	848	1,033	495	3,701	3,172	2·2	1·9
(xiii) Skilled Workmen	10,782	8,303	14,020	3,000	36,105	33,853	21·1	20·5
(xiv) Unskilled Workmen	2,371	1,391	2,402	786	6,950	5,228	4·1	3·2
(xv) No occupation given	616	619	944	393	2,572	3,037	1·5	1·8

* This Table last appeared in the volume for 1920-21.

Table 64. [75]

Statistics of School Life and Leaving Age of Full-time Pupils who left during the School Year 1925-26.

Summary, by Type of Area.

(See Explanatory Notes, page 130.)

ENGLAND AND WALES.

Type of Area. 1.	BOYS.											GIRLS.												
	Pupils who left under 12 years of age.	Pupils who left after reaching 12 years of age.									Average length of School Life (omitting School Life below the age of 12).	Average age at leaving.	Pupils who left under 12 years of age.	Pupils who left after reaching 12 years of age.									Average length of School Life (omitting School Life below the age of 12).	Average age at leaving.
		Total Number.	Percentage who left aged											Total Number.	Percentage who left aged									
			12-13.	13-14.	14-15.	15-16.	16-17.	17-18.	18 and over.	12-13.					13-14.	14-15.	15-16.	16-17.	17-18.	18 and over.				
2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.			
I.—ENGLAND (except Monmouthshire)—			%	%	%	%	%	%	%	y. m.	y. m.			%	%	%	%	%	%	%	y. m.	y. m.		
(a) Administrative Counties	1,244	18,559	3.5	4.8	9.9	19.6	36.3	16.5	9.4	3 8	16 2	757	15,223	3.2	4.6	10.4	16.1	31.7	19.7	14.3	3 10	16 4		
(b) County Boroughs ..	913	12,981	2.8	4.2	9.8	18.9	38.7	16.0	9.6	3 9	16 3	810	12,387	3.4	4.9	11.8	16.4	30.4	18.4	14.7	3 10	16 4		
(c) London	296	3,564	2.9	4.0	8.3	14.9	33.7	20.1	16.1	3 11	16 6	449	3,342	3.9	5.0	10.8	13.9	26.3	17.6	22.5	3 11	16 6		
(d) Total	2,453	35,104	3.1	4.5	9.7	18.9	36.9	16.7	10.2	3 9	16 3	2,016	30,952	3.3	4.8	11.0	16.0	30.6	19.0	15.3	3 10	16 4		
II.—WALES (with Monmouthshire)—																								
(a) Administrative Counties	20	2,958	2.2	5.7	14.4	20.3	23.3	18.1	16.0	3 5	16 3	32	2,965	1.8	4.6	12.8	16.7	21.8	21.4	20.9	3 7	16 6		
(b) County Boroughs ..	6	653	1.7	1.8	15.6	21.4	32.5	16.1	10.9	3 8	16 3	8	755	2.7	5.2	13.4	18.2	26.9	18.0	15.6	3 9	16 4		
(c) Total	26	3,611	2.2	5.0	14.6	20.5	25.0	17.7	15.0	3 6	16 3	40	3,720	1.9	4.7	13.0	17.0	22.8	20.7	19.9	3 7	16 6		
III.—ENGLAND and WALES—																								
(a) Administrative Counties	1,264	21,517	3.3	4.9	10.5	19.7	34.5	16.8	10.3	3 8	16 2	789	18,188	3.0	4.6	10.8	16.2	30.0	20.0	15.4	3 10	16 5		
(b) County Boroughs ..	919	13,634	2.7	4.1	10.1	19.0	38.4	16.0	9.7	3 9	16 3	818	13,142	3.3	5.0	11.9	16.5	30.2	18.4	14.7	3 10	16 4		
(c) London	296	3,564	2.9	4.0	8.3	14.9	33.7	20.1	16.1	3 11	16 6	449	3,342	3.9	5.0	10.8	13.9	26.3	17.6	22.5	3 11	16 6		
(d) Total	2,479	38,715	3.0	4.6	10.2	19.0	35.8	16.8	10.6	3 9	16 3	2,056	34,672	3.2	4.8	11.2	16.1	29.8	19.1	15.8	3 10	16 4		

Table 65. [66]

School Life and Leaving

(See Explanatory)

Reference Number.	Number of Pupils who left under 12 years of age.	Pupils who left after reaching 12 years of age.						Average length of School Life (omitting School Life below the age of 12).	Average age at leaving.	
		Number who left while—				Total.	Yrs. Mths.			Yrs. Mths.
		12 and under 16 years of age.	16 and under 18 years of age.	18 years of age and over.						
1.	2.	3.	4.	5.	6.	7.	8.			
I.—PUPILS WHO LEFT DURING THE YEAR ENDED 31st JULY, 1926 :—										
1. BOYS :—										
	(a) In Council Schools :—									
1		818	4,481	4,672	482	9,635	3 5	15 11		
2		69	2,511	5,040	924	8,475	4 0	16 4		
	(b) In Roman Catholic Schools :—									
3		163	387	313	44	744	3 3	15 9		
4		—	94	216	44	354	4 1	16 6		
	(c) In Foundation and other Schools :—									
5		1,372	4,466	5,687	1,244	11,397	3 6	16 2		
6		39	1,168	3,268	942	5,378	4 5	16 9		
	(d) In Welsh Intermediate Schools :—									
7		9	682	623	211	1,516	3 2	16 2		
8		9	438	532	246	1,216	3 11	16 6		
	(e) Total :—									
9		2,362	10,016	11,295	1,981	23,292	3 5	16 0		
10		117	4,211	9,056	2,156	15,423	4 2	16 6		
11		2,479	14,227	20,351	4,137	38,715	3 9	16 3		
2. GIRLS :—										
	(a) In Council Schools :—									
12		689	4,680	4,775	941	10,396	3 5	16 0		
13		77	2,438	5,869	1,935	10,242	4 3	16 8		
	(b) In Roman Catholic Schools :—									
14		331	868	548	164	1,580	3 1	15 8		
15		20	269	481	204	954	4 4	16 8		
	(c) In Foundation and other Schools :—									
16		881	2,364	2,415	921	5,700	3 6	16 2		
17		26	572	1,690	829	3,091	4 7	17 0		
	(d) In Welsh Intermediate Schools :—									
18		25	678	610	227	1,515	3 2	16 2		
19		7	340	538	316	1,194	4 2	16 9		
	(e) Total :—									
20		1,926	8,590	8,348	2,253	19,191	3 5	16 0		
21		130	3,619	8,578	3,284	15,481	4 4	16 9		
22		2,056	12,209	16,926	5,537	34,672	3 10	16 4		

Age of Full-time Pupils.

(Notes, page 130.)

Reference Number.	Percentage of Pupils (who left after reaching 12 years of age) whose School Life (omitting School Life below the age of 12) was—								Percentage of Pupils (who left after reaching 12 years of age) whose age at leaving was—								
	not over 1 year.	over 1, but not over 2 years.	over 2, but not over 3 years.	over 3, but not over 4 years.	over 4, but not over 5 years.	over 5, but not over 6 years.	over 6, but not over 7 years.	over 7 years.	12 and under 13.	13 and under 14.	14 and under 15.	15 and under 16.	16 and under 17.	17 and under 18.	18 and under 19.	19 and over.	
	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
1	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
2	7.0	11.6	20.1	30.8	21.0	6.9	2.1	0.5	3.9	5.8	12.3	24.5	36.1	12.5	3.8	1.1	
3	3.4	5.2	11.4	29.9	34.0	10.7	4.6	0.8	2.0	2.8	8.4	16.5	43.9	15.6	8.4	2.4	
4	10.9	14.1	18.8	26.5	20.2	7.0	2.1	0.4	4.7	8.5	16.1	22.7	29.5	12.6	3.9	2.0	
5	4.2	6.8	6.5	31.1	35.3	12.7	2.5	9.9	2.5	4.0	5.7	14.4	38.4	22.6	9.6	2.8	
6	7.6	12.4	18.4	23.1	22.5	10.8	4.4	0.8	3.9	5.7	11.0	18.7	31.2	18.7	8.7	2.1	
7	2.5	3.9	8.2	21.8	35.4	17.3	9.1	1.8	1.7	2.2	5.0	12.3	39.3	21.5	13.5	4.0	
8	9.9	19.1	23.9	20.9	16.0	7.1	2.8	0.3	1.8	4.6	16.4	22.5	24.1	17.2	10.4	3.0	
9	5.6	11.9	14.3	23.5	20.9	17.3	5.7	0.8	2.2	5.6	10.4	17.8	23.2	20.6	16.3	3.9	
10	7.6	12.5	19.5	26.3	21.4	8.8	3.3	0.6	3.8	5.7	12.0	21.5	32.7	15.8	6.7	1.8	
11	3.3	5.3	10.4	26.6	33.5	13.5	6.2	1.2	1.9	2.8	7.3	15.3	40.6	18.2	10.8	3.1	
12	5.8	9.7	15.9	26.4	26.2	10.7	4.4	0.9	3.0	4.6	10.2	19.0	35.8	16.8	8.3	2.3	
13	7.3	11.6	21.2	26.9	20.0	8.4	3.9	0.7	3.9	5.5	14.2	21.5	32.0	14.0	7.1	1.8	
14	3.5	5.0	10.3	24.2	32.1	16.7	7.0	1.2	2.0	2.6	7.5	11.8	33.7	23.6	14.4	4.4	
15	11.9	17.1	24.3	20.0	15.7	7.3	3.3	0.4	6.0	9.6	20.3	19.5	23.2	11.8	7.7	1.9	
16	2.6	6.1	11.9	21.3	26.1	21.9	8.6	1.5	1.6	3.1	10.3	13.2	27.3	23.1	16.9	4.5	
17	8.7	14.1	18.7	19.4	18.6	12.1	6.5	1.9	4.9	7.5	12.4	16.7	24.6	17.9	12.0	4.0	
18	2.6	4.4	7.3	17.9	31.3	21.4	12.5	2.6	1.8	2.4	4.7	9.6	29.6	25.1	20.0	6.8	
19	13.3	19.7	20.2	18.9	14.0	9.7	3.5	0.7	2.4	6.3	16.1	20.1	22.4	18.0	11.1	3.6	
20	4.5	10.8	13.3	19.1	24.3	21.4	6.0	0.6	1.7	3.5	10.6	12.7	20.6	24.5	21.5	4.9	
21	8.5	13.4	20.7	23.5	18.8	9.5	4.6	1.0	4.3	6.5	14.3	19.8	28.3	15.3	8.9	2.6	
22	3.3	5.4	10.1	22.4	31.0	18.3	8.1	1.4	1.9	2.6	7.4	11.5	31.5	24.0	16.2	4.9	
23	6.2	9.9	15.9	23.0	24.2	13.4	6.2	1.2	3.2	4.8	11.2	16.1	29.8	19.1	12.2	3.6	

Table 66. [*] Further Education or Occupation of Full-time Pupils who left during the School Year.

Boys and Girls.				5.	Number and Percentage of Pupils who left during 1925-26.											
Total.		Percentage.			Boys.					Girls.						
1920-21.	1925-26.	1920-21.	1925-26.		Council Schools.	Roman Catholic Schools.	Founda- tion and other Schools.	Welsh Inter- mediate Schools.	Total.	Per- centage to Total.	Council Schools.	Roman Catholic Schools.	Founda- tion and other Schools.	Welsh Inter- mediate Schools.	Total.	Per- centage to Total.
1.	2.	3.	4.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	
66,133	73,893	100·0	100·0	1. Total number of pupils of 12 years of age and over who left the Schools to which the statistics relate during the school year.	18,423	1,138	16,775	2,729	39,065	100·0	20,784	2,534	8,791	2,719	34,828	100·0
3,253	3,407	4·9	4·6	2. Number who went to a place of full-time further education, viz. :—												
571	386	0·9	0·5	(a) Other Secondary Schools :—												
2,592	1,890	3·9	2·6	(i) Schools on the Grant List.	859	29	792	158	1,838	4·7	948	93	399	129	1,569	4·5
2,806	{ 3,462 94 }	{ 4·2 0·1 }	{ 4·7 0·1 }	(ii) Other Schools on the Efficient List.	62	1	116	10	189	0·5	68	9	108	12	197	0·6
5,424	6,774	8·2	9·2	(iii) Schools not on the Efficient List.	316	70	408	60	854	2·2	496	84	395	61	1,036	3·0
14,646	16,013	22·1	21·7	(b) Universities	746	26	1,075	242	2,089	5·4	707	66	451	149	1,373	3·9
6,465	5,886	9·8	8·0	(c) University Training Departments.	27	1	9	11	48	0·1	25	1	6	14	46	0·1
				(d) Other Institutions (except Training Colleges for Elementary School Teachers).	987	119	979	154	2,239	5·7	2,587	395	1,353	200	4,535	13·0
				(e) Total	2,997	246	3,379	635	7,257	18·6	4,831	648	2,712	565	8,756	25·1
				3. Number who became Pupil-Teachers, Student-Teachers, Uncertificated Teachers or Supplementary Teachers, or who entered Training Colleges for Elementary School Teachers (other than University Training Departments).	795	69	478	138	1,480	3·8	2,832	353	913	308	4,406	12·6

* This Table last appeared in the volume for 1920-21.

ENGLAND AND WALES.

(28455)

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
				4. Number who entered upon some Professional, Commercial or Clerical Occupation :-												
3,200	2,000	4·9	2·7	(a) Under 15 years of age ..	621	52	344	99	1,116	2·8	572	118	148	46	884	2·5
5,326	4,898	8·0	6·6	(b) 15 and under 16 years of age	1,771	92	1,152	174	3,189	8·2	1,134	137	357	81	1,709	4·9
5,915	12,420	8·9	16·8	(c) 16 " 17 " "	4,237	196	3,291	283	8,067	20·5	3,040	279	948	146	4,413	12·7
3,209	7,557	4·9	10·2	(d) 17 years of age and over ..	1,736	109	2,711	319	4,875	12·5	1,504	150	838	190	2,682	7·7
17,650	26,875	26·7	36·3	(e) Total	8,365	449	7,498	875	17,187	44·0	6,250	684	2,291	463	9,688	27·8
				5. Number who entered upon some Industrial or Manual occupation :-												
1,950	1,125	2·9	1·5	(a) Under 15 years of age ..	487	32	244	128	891	2·3	153	15	38	28	234	0·7
2,552	2,009	3·9	2·7	(b) 15 and under 16 years of age	1,032	34	559	173	1,798	4·6	127	19	43	22	211	0·6
2,034	3,633	3·1	4·9	(c) 16 years of age and over ..	1,642	71	1,286	197	3,196	8·1	303	30	82	22	437	1·2
6,536	6,767	9·9	9·1	(d) Total	3,161	137	2,089	498	5,885	15·0	583	64	163	72	882	2·5
				6. Number who entered upon some Agricultural or Rural Occupation :-												
926	381	1·4	0·5	(a) Under 15 years of age ..	109	5	175	57	346	0·9	18	1	10	6	35	0·1
875	593	1·3	0·8	(b) 15 and under 16 years of age	177	8	296	49	530	1·3	32	4	18	9	63	0·2
772	789	1·2	1·1	(c) 16 years of age and over ..	225	4	408	56	693	1·8	48	6	33	9	96	0·3
2,573	1,763	3·9	2·4	(d) Total	511	17	879	162	1,569	4·0	98	11	61	24	194	0·6
1,437	1,295	2·2	1·8	7. Number who went abroad ..	290	24	337	34	685	1·8	261	61	254	34	610	1·8
				8. Residue :-												
7,811	6,911	11·8	9·4	(a) Remained at home ..	107	5	60	119	291	0·7	3,781	422	1,435	982	6,620	19·1
1,776	1,440	2·7	1·9	(b) Left owing to illness ..	194	23	201	45	463	1·2	508	81	251	137	977	2·8
331	282	0·5	0·4	(c) Known to have died ..	76	12	56	25	169	0·4	67	6	26	14	113	0·3
6,908	6,661	10·4	9·0	(d) Occupation unknown or unclassified.	1,927	156	1,798	198	4,079	10·5	1,573	204	685	120	2,582	7·4
16,826	15,294	25·4	20·7	(e) Total	2,304	196	2,115	387	5,002	12·8	5,929	713	2,397	1,253	10,292	29·6

D 3

Secondary Schools on the Grant List : Teachers, 1925-26.

ENGLAND AND WALES.

(iii)—TEACHERS.

Table 67. [67] Teachers, by Sex and Qualification.
(See Explanatory Notes, page 130.)

1.	31st March, 1926.		
	Men. 2.	Women. 3.	Total. 4.
A. Full-time Teachers:—			
1. Graduate Teachers:—			
(a) Head Teachers:—			
(i) Trained	296	226	522
(ii) Not Trained	512	179	691
(iii) Total	808	405	1,213
(b) Assistant Teachers:—			
(i) Trained	3,213	3,571	6,784
(ii) Not Trained	3,642	2,150	5,792
(iii) Total	6,855	5,721	12,576
(c) Qualified Teachers of Special Subjects	149	81	230
(d) Total Graduate Teachers	7,812	6,207	14,019
2. Non-Graduate Teachers:—			
(a) Head Teachers:—			
(i) Trained	9	31	40
(ii) Not Trained	8	16	24
(iii) Total	17	47	64
(b) Assistant Teachers:—			
(i) Certificated Teachers:—			
(a) Trained	457	677	1,134
(β) Not Trained	125	214	339
(γ) Total	582	891	1,473
(ii) Qualified Teachers of Special Subjects	612	1,274	1,886
(iii) Other Teachers:—			
(a) Trained	114	541	655
(β) Not Trained	584	959	1,543
(γ) Total	698	1,500	2,198
(iv) Total	1,892	3,665	5,557
(c) Total Non-Graduate Teachers	1,909	3,712	5,621
3. All Full-time Teachers:—			
(a) Head Teachers:—			
(i) Graduate	808	405	1,213
(ii) Non-Graduate	17	47	64
(iii) Total	825	452	1,277
(b) Assistant Teachers:—			
(i) Graduate	7,004	5,802	12,806
(ii) Non-Graduate	1,892	3,665	5,557
(iii) Total	8,896	9,467	18,363
(c) Total	9,721	9,919	19,640
B. Part-time Teachers:—			
	1,274	1,467	2,741

ENGLAND AND WALES.

Table 68. [68] Full-time Teachers, by Sex and Qualification, and by Responsible Body of School.*(See Explanatory Notes, page 130.)*

1.	Graduates.			Non-Graduates.			Total. 8.
	Men. 2.	Women. 3.	Total. 4.	Men. 5.	Women. 6.	Total. 7.	
1. Council Schools ..	3,604	3,724	7,328	982	1,920	2,902	10,230
2. Roman Catholic Schools	130	322	452	116	400	516	968
3. Foundation and other Schools	3,542	1,721	5,263	725	1,260	1,985	7,248
4. Welsh Intermediate Schools	536	440	976	86	132	218	1,194
5 Total	7,812	6,207	14,019	1,909	3,712	5,621	19,640

(iv)—COURSES OF INSTRUCTION.

Particulars of certain Courses included in the Curricula.

(See Explanatory Notes, page 131.)

Table 69. [*]

1.	Number of Schools.					Schools for Boys.				Schools for Girls.				Schools for Boys and Girls.		
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
	Total.	Council Schools.	Roman Catholic Schools.	Foundation and Other Schools.	Welsh Intermediate Schools.	Council Schools.	Roman Catholic Schools.	Foundation and Other Schools.	Welsh Intermediate Schools.	Council Schools.	Roman Catholic Schools.	Foundation and Other Schools.	Welsh Intermediate Schools.	Council Schools.	Foundation and Other Schools.	Welsh Intermediate Schools.
1. Total Number of Schools on Last Day of School Year.. ..	1,301	656	73	471	101	172	19	265	21	250	54	136	23	234	70	57
2. Particulars as to certain Specialised Courses :—																
(a) Number of Schools which provided :—																
(i) Commercial Courses :—																
(a) For Boys	11	7	—	3	1	6	—	3	1	—	—	—	—	1	—	—
(b) For Girls	42	26	2	12	2	—	—	—	—	26	2	12	2	—	—	—
(c) For Boys and Girls	14	11	—	1	2	—	—	—	—	—	—	—	—	11	1	2
(ii) Domestic Economy Courses (Girls only)	29	7	—	9	13	—	—	—	—	5	—	8	5	2	1	8
(iii) Rural and Agricultural Courses :—																
(a) For Boys	10	3	—	6	1	2	—	6	1	—	—	—	—	1	—	—
(b) For Girls	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(c) For Boys and Girls	9	5	—	3	1	—	—	—	—	—	—	—	—	5	3	1
(iv) Engineering Courses (Boys only).. ..	9	7	—	2	—	4	—	2	—	—	—	—	—	3	—	—
(b) Number of Schools which provided one or more of the above Courses ..	118	64	2	32	20	12	—	9	2	30	2	19	7	22	4	11

* This Table last appeared in the volume for 1920-21.

Table 70. [*] Particulars of Languages, other than English, included in the Curricula, for the Year ended 31st July, 1926.
(See Explanatory Notes, page 131.)

1.	Number of Schools.					Schools for Boys.				Schools for Girls.				Schools for Boys and Girls.		
	2. Total.	3. Council Schools.	4. Roman Catholic Schools.	5. Foundation and other Schools.	6. Welsh Intermediate Schools.	7. Council Schools.	8. Roman Catholic Schools.	9. Foundation and other Schools.	10. Welsh Intermediate Schools.	11. Council Schools.	12. Roman Catholic Schools.	13. Foundation and other Schools.	14. Welsh Intermediate Schools.	15. Council Schools.	16. Foundation and other Schools.	17. Welsh Intermediate Schools.
1. Total Number of Schools on Last Day of School Year ..	1,301	656	73	471	101	172	19	265	21	250	54	136	23	234	70	57
2. Number of Schools which included in the Curriculum :—																
(a) Latin	1,229	611	69	448	101	164	19	258	21	240	50	134	23	207	56	57
(b) Greek	225	74	7	117	27	28	7	73	10	38	—	42	6	8	2	11
(c) French	1,298	656	73	470	99	172	19	264	21	250	54	136	23	234	70	55
(d) German	395	185	4	187	19	79	2	116	8	67	2	67	6	39	4	5
(e) Spanish	84	47	1	34	2	31	1	26	1	9	—	7	—	7	1	1
(f) Welsh	119	27	—	1	91	5	—	1	20	7	—	—	21	15	—	50
(g) Italian	6	2	—	4	—	1	—	2	—	1	—	2	—	—	—	—
(h) Russian	2	1	—	1	—	1	—	—	—	—	—	—	—	—	1	—
(i) Esperanto	1	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—

* This Table last appeared in the volume for 1920-21.

[Continued over.]

Table 70. Secondary Schools on the Grant List : Courses of Instruction, 1925-26. ENGLAND AND WALES.

Table 70—continued.

1.	Number of Schools.					Schools for Boys.				Schools for Girls.				Schools for Boys and Girls.		
	2. Total.	3. Council Schools.	4. Roman Catholic Schools.	5. Foundation and other Schools.	6. Welsh Intermediate Schools.	7. Council Schools.	8. Roman Catholic Schools.	9. Foundation and other Schools.	10. Welsh Intermediate Schools.	11. Council Schools.	12. Roman Catholic Schools.	13. Foundation and other Schools.	14. Welsh Intermediate Schools.	15. Council Schools.	16. Foundation and other Schools.	17. Welsh Intermediate Schools.
3. Number of Schools, classified according to the Languages included in the Curriculum :—																
(a) No Language	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(b) One Language :—																
(i) Latin	1	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—
(ii) French	66	42	4	20	—	6	—	5	—	10	4	1	—	26	14	—
(iii) Total '	67	42	4	21	—	6	—	6	—	10	4	1	—	26	14	—
(c) Two Languages :—																
(i) Latin and French	647	356	58	224	9	65	10	114	1	143	48	61	2	148	49	6
(ii) French and German	6	3	—	3	—	2	—	2	—	—	—	1	—	1	—	—
(iii) Latin and Welsh	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
(iv) Total	654	359	58	227	10	67	10	116	1	143	48	62	2	149	49	7
(d) Three Languages :—																
(i) Latin, Greek and French	63	27	6	30	—	6	6	22	—	18	—	6	—	3	2	—
(ii) Latin, French and German	211	116	4	90	1	41	2	59	—	46	2	28	—	29	3	1

Table 70.—continued.

ENGLAND AND WALES.

Secondary Schools on the Grant List :

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
(d) Three Languages— <i>contd.</i>																
(iii) Latin, French and Spanish	23	18	—	5	—	12	—	4	—	3	—	—	—	3	1	—
(iv) Latin, French and Welsh	80	25	—	1	54	3	—	1	8	7	—	—	12	15	—	34
(v) Latin, Greek and Welsh	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
(vi) Total	378	186	10	126	56	62	8	86	8	74	2	34	12	50	6	36
(e) Four Languages :—																
(i) Latin, Greek, French and German ..	100	35	—	65	—	14	—	35	—	16	—	30	—	5	—	—
(ii) Latin, French, German and Spanish ..	26	18	—	8	—	11	—	5	—	3	—	3	—	4	—	—
(iii) Latin, Greek, French and Welsh	16	—	—	—	16	—	—	—	4	—	—	—	3	—	—	9
(iv) Latin, French, German and Welsh	9	1	—	—	8	1	—	—	2	—	—	—	3	—	—	3
(v) Latin, Greek, French and Spanish ..	7	3	1	3	—	1	1	2	—	2	—	1	—	—	—	—
(vi) Latin, French, German and Russian ..	1	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—
(vii) Latin, French, German and Italian ..	1	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—
(viii) Latin, French, German and Esperanto ..	1	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—
(ix) Latin, French, Spanish and Welsh	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
(x) Total	162	59	1	77	25	29	1	42	6	21	—	34	6	9	1	13
(f) Five Languages	38	10	—	19	9	8	—	14	5	2	—	5	3	—	—	1
(g) Six Languages	2	—	—	1	1	—	—	1	1	—	—	—	—	—	—	—

ENGLAND AND WALES.

Table 71. [*]

Advanced Courses.

(See Explanatory Note, page 131.)

1.	For Boys. 2.	For Girls. 3.	For Boys and Girls. 4.	Total. 5.	Total. 1920-21. 6.
1. Number of Schools at which Advanced Courses were recognised	168	119	54	341	313
2. Science and Mathematics ..	152	38	41	231	215
3. Classics	36	2	—	38	35
4. Modern Studies	52	106	30	188	152
5. Classical with Modern Studies ..	5	1	1	7	†
6. Geography	4	1	—	5	†
7. Other Combination of Subjects	2	1	—	3	†
8. Total	251	149	72	472	402

* This Table last appeared in the volume for 1920-21.

† There were no recognised Courses in these subjects in 1920-21.

Table 72.

ENGLAND AND WALES.

(v)—APPROVED EXAMINATIONS.

Table 72. [69, 70]

Approved First and Second Examinations.

(See Explanatory Notes, page 131.)

Examining Body. <i>1.</i>	Approved First Examinations.					Approved Second Examinations.				
	Number of Schools. <i>2.</i>	Number of Pupils who			Percentage of Col. 5 to Col. 4. <i>6.</i>	Number of Schools. <i>7.</i>	Number of Pupils who			Percentage of Col. 10 to Col. 9. <i>11.</i>
		Entered. <i>3.</i>	Sat. <i>4.</i>	Passed. <i>5.</i>			Entered. <i>8.</i>	Sat. <i>9.</i>	Passed. <i>10.</i>	
1. Oxford and Cambridge Schools Examination Board	47	1,638	1,621	939	57·9	69	753	742	475	64·0
2. Oxford Delegacy for Local Examinations	258	6,831	6,750	4,579	67·8	81	383	379	208	54·9
3. Cambridge Local Examinations and Lectures Syndicate ..	222	4,965	4,891	3,225	65·9	106	568	556	333	59·9
4. University of Bristol	13	430	424	295	69·6	30	144	143	115	80·4
5. University of Durham	28	972	954	744	78·0	23	112	111	89	80·2
6. University of London	274	10,456	10,318	6,949	67·3	208	1,350	1,331	943	70·8
7. Northern Universities Joint Matriculation Board	332	13,443	13,285	8,888	66·9	350	2,569	2,540	1,831	72·1
8. Central Welsh Board	119	4,387	4,272	2,961	69·3	98	501	483	284	58·8
9. Total	1,293	43,122	42,515	28,580	67·2	965	6,380	6,285	4,278	68·1

ENGLAND AND WALES.

(vi)—OUTPUT TO UNIVERSITIES.

(See Explanatory Notes, page 131.)

Table 73. [71] Schools from which Pupils proceeded to a University (including a University Training Department).

(A). Schools sending one or more Pupils to a University.

1.	Council Schools.		Roman Catholic Schools.		Foundation and other Schools.		Welsh Intermediate Schools.		Total.	
	No.	Per-centage	No.	Per-centage	No.	Per-centage	No.	Per-centage	No.	Per-centage
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1925-26 ..	452	68·9	37	50·7	352	74·7	86	85·1	927	71·3
Five School Years— 1921-1926 ..	554	84·5	58	79·5	440	93·4	100	99·0	1,152	88·5

(B). Schools sending one or more Pupils to Universities,
by number of Pupils sent.

1.	Number of Schools classified according to number of Pupils sent (1925-26 leavers).												Total number of Schools.
	1 Pupil.	2 Pupils.	3 Pupils.	4 Pupils.	5 Pupils.	6 Pupils.	7 Pupils.	8 Pupils.	9 Pupils.	10 Pupils.	11-15 Pupils.	16 or more Pupils.		14.
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. Council Schools ..	106	118	82	45	30	17	18	17	5	4	8	2	452
2. Roman Catholic Schools ..	14	9	4	6	2	—	1	—	1	—	—	—	37
3. Foundation and other Schools ..	76	73	48	46	23	24	18	10	6	3	15	10	352
4. Welsh Intermediate Schools ..	9	23	8	13	4	3	11	1	3	4	6	1	86
5. Total ..	205	223	142	110	59	44	48	28	15	11	29	13	927

ENGLAND AND WALES.

Table 74. [72] Pupils who left during or at the end of the School Year and proceeded to a University (including a University Training Department).

(See Explanatory Notes, page 131.)

1.	Details for School Year 1925-26.															16. Average of the five School Years 1921-26.
	University.															
	Birmingham.	Bristol.	Cambridge.	Durham.	Leeds.	Liverpool.	London.	Manchester.	Oxford.	Reading.	Sheffield.	Wales.	Other Universities.	Total.		
2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.		
I. BOYS.																
1. Ex-P.E.S. Pupils :																
(a) Free	54	49	160	59	81	80	204	76	93	25	38	176	10	1,105	1,026	
(b) Fee-paying ..	10	14	28	21	17	21	41	36	18	2	2	36	2	248	230	
(c) Total	64	63	188	80	98	101	245	112	111	27	40	212	12	1,353	1,256	
2. Other Pupils :																
(a) Free	19	9	48	2	11	6	42	14	41	3	4	8	1	202	177	
(b) Fee-paying ..	30	11	140	25	26	23	145	42	90	11	2	14	23	582	512	
(c) Total	49	14	188	27	37	29	187	56	131	14	6	22	24	784	689	
3. Total :																
(a) Free	73	52	208	61	92	86	246	90	134	28	42	184	11	1,307	1,203	
(b) Fee-paying ..	40	25	168	46	43	44	186	78	108	13	4	50	25	830	742	
(c) Total	113	77	376	107	135	130	432	168	242	41	46	234	36	2,137	1,945	
II. GIRLS																
1. Ex-P.E.S. Pupils :																
(a) Free	33	30	20	27	63	59	176	65	23	48	24	139	5	712	710	
(b) Fee-paying ..	5	2	4	7	7	10	28	9	4	7	5	36	1	125	109	
(c) Total	38	32	24	34	70	69	204	74	27	55	29	175	6	837	819	
2. Other Pupils :																
(a) Free	18	14	20	7	8	16	76	10	16	15	5	15	4	224	195	
(b) Fee-paying ..	8	12	27	6	10	31	142	21	43	18	7	19	14	358	330	
(c) Total	26	26	47	13	18	47	218	31	59	33	12	34	18	582	525	
3. Total :																
(a) Free	51	44	40	34	71	75	252	75	39	63	29	154	9	936	906	
(b) Fee-paying ..	13	14	31	13	17	41	170	30	47	25	12	55	15	483	438	
(c) Total	64	58	71	47	88	116	422	105	86	88	41	209	24	1,419	1,344	

ENGLAND AND WALES.

3.—HISTORICAL TABLES.—SCHOOLS ON THE GRANT LIST.

(i)—SCHOOLS.

Table 75. [—] Schools, by Type of Responsible Body.

Year.	Council Schools.	Roman Catholic Schools.	Foundation and other Schools.	Welsh Intermediate Schools.	Total.
1.	2.	3.	4.	5.	6.
1913-14 ..	433	45	450	99	1,027
1918-19 ..	467	45	469	100	1,081
1921-22 ..	595	67	486	101	1,249
1922-23 ..	617	67	479	101	1,264
1923-24 ..	627	68	476	99	1,270
1924-25 ..	643	68	473	100	1,284
1925-26 ..	656	73	471	101	1,301

Table 76. [—] Schools, by Size.

Year.	Number of Schools classified according to number of Full-time Pupils.												Total.
	Under 50	50 and under 75.	75 and under 100.	100 and under 125.	125 and under 150.	150 and under 200.	200 and under 250.	250 and under 300.	300 and under 400.	400 and under 500.	500 and under 600.	600 and over.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1913-14	23	113	129	133	109	167	134	77	80	38	19	5	1,027
1918-19	10	31	71	91	78	182	155	135	184	79	42	23	1,081
1921-22	5	26	47	94	97	140	167	171	257	140	58	47	1,249
1922-23	9	29	50	85	107	151	166	162	267	129	65	44	1,264
1923-24	8	27	64	82	104	167	161	178	261	116	64	38	1,270
1924-25	6	32	58	90	108	158	182	163	276	108	66	37	1,284
1925-26	8	29	68	79	95	166	184	166	278	127	65	36	1,301

Table 77. [—] Classes, by Size.

1st Oct.	Number of Classes containing							Total.
	Not over 10.	Over 10 but not over 15.	Over 15 but not over 20.	Over 20 but not over 25.	Over 25 but not over 30.	Over 30 but not over 35.	Over 35	
1.	2.	3.	4.	5.	6.	7.	8.	9.
1913 ..	1,553	1,348	1,587	1,873	2,382	652	16	9,411
1918 ..	1,306	1,205	1,565	2,076	3,129	2,304	162	11,747
1921 ..	1,415	1,309	1,856	2,786	4,594	3,204	102	15,266
1922 ..	1,448	1,252	1,933	2,879	4,366	3,316	117	15,311
1923 ..	1,607	1,347	2,102	3,020	4,046	3,235	80	15,437
1924 ..	1,761	1,445	2,103	2,913	4,068	3,234	92	15,616
1925 ..	1,823	1,427	2,187	3,011	4,098	3,303	106	15,955

ENGLAND AND WALES.

(ii) PUPILS.

Table 78. [—] Pupils, by Age.

1st Oct. 1.	Under 10. 2.	10-12. 3.	12-14. 4.	14-16. 5.	16-18. 6.	18 & over. 7.	Total. 8.
1913 ..	13,811	30,062	71,449	55,681	15,537	1,107	187,647
1918 ..	23,307	50,852	103,712	73,058	18,162	796	269,887
1921 ..	29,018	64,762	132,822	103,050	30,727	1,646	362,025
1922 ..	26,203	61,772	130,586	109,146	34,042	1,968	363,717
1923 ..	23,559	61,726	126,707	109,860	34,427	2,252	358,531
1924 ..	21,794	65,892	124,972	109,561	35,005	2,397	359,621
1925 ..	21,494	69,272	129,135	110,132	35,080	2,451	367,564

Table 79. [—] Pupils, by Age.
(Percentage Table.)

1st Oct. 1.	Under 10. 2.	10-12. 3.	12-14. 4.	14-16. 5.	16-18. 6.	18 & over. 7.	Total. 8.
	%	%	%	%	%	%	%
1913 ..	7.4	16.0	38.1	29.7	8.3	0.5	100.0
1918 ..	8.6	18.9	38.4	27.1	6.7	0.3	100.0
1921 ..	8.0	17.9	36.7	28.5	8.5	0.4	100.0
1922 ..	7.2	17.0	35.9	30.0	9.4	0.5	100.0
1923 ..	6.6	17.2	35.3	30.7	9.6	0.6	100.0
1924 ..	6.1	18.3	34.7	30.5	9.7	0.7	100.0
1925 ..	5.9	18.8	35.1	30.0	9.5	0.7	100.0

Table 80. [—] Free Places awarded to ex-Public Elementary School Pupils under Article 20 of the Regulations.

(See Explanatory Notes, page 131).

1st Oct. 1.	Total number of Free Places held, expressed as a percentage of the total number of Pupils in the Schools. 2.	Number of Free Places awarded at the beginning of the School Year, expressed as a percentage of the number of Pupils admitted during the <i>previous</i> School Year. 3.
	%	%
1913 ..	32.6	29.9
1918 ..	30.5	29.1
1921 ..	34.0	33.3
1922 ..	35.6	30.9
1923 ..	35.7	32.1
1924 ..	35.8	36.5
1925 ..	36.5	37.1

Table 81.

ENGLAND AND WALES.

(iii)—TEACHERS.

Table 81. [—] Teachers, by Sex and Qualification.

1.	Men.			Women.			Men and Women.			Total.		
	Graduates. 2.	Non-Graduates. 3.	Total. 4.	Graduates. 5.	Non-Graduates. 6.	Total. 7.	Graduates. 8.	Non-Graduates. 9.	Total. 10.	Men. 11.	Women. 12.	Total. 13.
31st Jan., 1914 ..	3,938	1,509	5,447	2,891	2,486	5,377	6,829	3,995	10,824	5,447	5,377	10,824
1st April, 1919 ..	4,073	1,749	5,822	4,802	3,875	8,677	8,875	5,624	14,499	5,822	8,677	14,499
31st March, 1921 ..	5,647	2,241	7,888	5,397	4,383	9,780	11,044	6,624	17,668	7,888	9,780	17,668
31st March, 1922 ..	6,268	2,427	8,695	5,669	4,600	10,269	11,937	7,027	18,964	8,695	10,269	18,964
31st March, 1923 ..	6,510	2,153	8,663	5,668	4,154	9,822	12,178	6,307	18,485	8,663	9,822	18,485
31st March, 1924 ..	6,809	2,057	8,866	5,788	4,004	9,792	12,597	6,061	18,658	8,866	9,792	18,658
31st March, 1925 ..	7,213	1,997	9,210	5,936	3,923	9,859	13,149	5,920	19,069	9,210	9,859	19,069
31st March, 1926 ..	7,812	1,909	9,721	6,207	3,712	9,919	14,019	5,621	19,640	9,721	9,919	19,640

Table 82. [—]

Teachers, by Sex and Qualification.

(Percentage Table.)

1.	Men.			Women.			Men and Women.			Total.		
	Graduates.	Non-Graduates.	Total.	Graduates.	Non-Graduates.	Total.	Graduates.	Non-Graduates.	Total.	Men.	Women.	Total.
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
	%	%	%	%	%	%	%	%	%	%	%	%
31st Jan., 1914 ..	72·3	27·7	100·0	53·8	46·2	100·0	63·1	36·9	100·0	50·3	49·7	100·0
1st April, 1919 ..	70·0	30·0	100·0	55·3	44·7	100·0	61·2	38·8	100·0	40·2	59·8	100·0
31st March, 1921 ..	71·6	28·4	100·0	55·2	44·8	100·0	62·5	37·5	100·0	44·6	55·4	100·0
31st March, 1922 ..	72·1	27·9	100·0	55·2	44·8	100·0	62·9	37·1	100·0	45·9	54·1	100·0
31st March, 1923 ..	75·1	24·9	100·0	57·7	42·3	100·0	65·9	34·1	100·0	46·9	53·1	100·0
31st March, 1924 ..	76·8	23·2	100·0	59·1	40·9	100·0	67·5	32·5	100·0	47·5	52·5	100·0
31st March, 1925 ..	78·3	21·7	100·0	60·2	39·8	100·0	69·0	31·0	100·0	48·3	51·7	100·0
31st March, 1926 ..	80·4	19·6	100·0	62·6	37·4	100·0	71·4	28·6	100·0	49·5	50·5	100·0

(iv) OUTPUT OF SECONDARY SCHOOLS TO UNIVERSITIES.

Table 83. [—] Pupils who left during or at the end of the School Year and proceeded to a University or University Training Department.

University.	1921-22.			1922-23.			1923-24.			1924-25.			1925-26.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Birmingham	131	77	208	111	68	179	101	98	199	102	78	180	113	64	177
Bristol	84	61	145	74	49	123	87	69	156	55	49	104	77	58	135
Cambridge	250	53	303	293	70	363	303	70	373	310	65	375	376	71	447
Durham	90	65	155	94	79	173	72	45	117	74	60	134	107	47	154
Leeds	151	96	247	126	73	199	124	75	199	109	85	194	135	88	223
Liverpool	141	114	255	106	97	203	110	102	212	102	109	211	130	116	246
London	390	345	735	407	386	793	412	368	780	437	387	824	432	422	854
Manchester	185	150	335	154	137	291	160	123	283	141	129	270	168	105	273
Oxford	179	86	265	161	72	233	188	86	274	233	105	338	242	86	328
Reading	*	*	*	*	*	*	*	*	*	*	*	*	*	41	129
Sheffield	60	49	109	56	57	113	63	47	110	56	42	98	46	41	87
Wales	234	204	438	276	224	500	238	224	462	264	208	472	234	209	443
Other Universities ..	24	24	48	15	12	27	25	17	42	29	13	42	36	24	60
Total	1,919	1,324	3,243	1,873	1,324	3,197	1,883	1,324	3,207	1,912	1,330	3,242	2,137	1,419	3,556

* The Charter to Reading University was granted 17th March, 1926.

ENGLAND AND WALES.

D.—TECHNICAL SCHOOLS, SCHOOLS OF ART, AND OTHER FORMS OF PROVISION OF FURTHER EDUCATION.

(See Explanatory Notes, page 132.)

1.—TECHNICAL INSTITUTION COURSES AND COURSES OF ADVANCED INSTRUCTION IN ARTS.

(See Explanatory Notes, page 134.)

Table 84. [77] Number of Institutions conducting such Courses.

1.	Under the direction of the L.E.A.	Not under the direction of the L.E.A.	Total.
2.	3.	4.	
1. Administrative Counties	3	2	5
2. County Boroughs	24	3	27
3. London	10	1	11
4. Total	37	6	43

Table 85. [78] Number and Age of Students attending such Courses.

1.	15-16.	16-18.	18-21.	21 and over.	Total.
2.	3.	4.	5.	6.	
A.—Boys and Men.					
1. Administrative Counties	11	72	168	92	343
2. County Boroughs	114	698	962	427	2,201
3. London	49	360	393	324	1,126
4. Total	174	1,130	1,523	843	3,670
B.—Girls and Women.					
1. Administrative Counties	1	5	2	2	10
2. County Boroughs	4	47	73	45	169
3. London	2	30	123	77	232
4. Total	7	82	198	124	411
Total of A and B.. .. .	181	1,212	1,721	967	4,081

ENGLAND AND WALES.

Table 86. [79]

Particulars of Courses and Students.

(See Explanatory Notes, page 134.)

Type of Course.	Number of Courses.	Students who attended at any time during the year					Number of Student-hours.
		Number of Students.					
		15-16.	16-18.	18-21.	21 and over.	Total.	
1.	2.	3.	4.	5.	6.	7.	8.
1. Particulars relating to Students attending full-time—							
Architecture and Building	10	12	135	160	118	425	390,381
Arts	4	1	39	45	37	122	84,862
Boot and Shoe Manufacture	3	3	5	8	4	20	19,034
Carriage and Motor Body Building	1	23	9	3	—	35	32,282
Chemistry and Applied Chemistry	21	13	106	102	61	282	228,026
(a) Engineering	31	35	226	394	106	761	597,858
" Civil	3	—	2	28	10	40	34,204
" Electrical	13	—	23	54	23	100	89,872
" Mechanical	11	24	27	41	31	123	105,406
General Science	16	11	76	86	41	214	176,741
Leather Trades	2	1	9	12	14	35	34,334
Medical	8	—	14	42	101	157	104,722
Mining	11	—	12	84	58	154	116,640
Naval Architecture	1	—	1	4	5	10	7,885
Physical Training	1	—	5	70	11	86	81,514
(b) Preliminary	5(b)	8	123	50	22	203	132,682
Printing and Photography	2	—	—	1	5	6	3,314
Technical Optics	1	1	7	6	3	17	14,308
Textile Trades	12	11	61	54	17	143	109,837
Total	151	143	880	1,244	667	2,934	2,363,902
2. Particulars relating to Students attending part-time—							
Architecture and Building	5	1	12	10	7	30	3,902
Arts	3	3	18	17	22	60	10,454
Boot and Shoe Manufacture	3	1	12	16	7	36	7,401
Chemistry and Applied Chemistry	10	9	29	47	35	120	14,904
(a) Engineering	22	11	91	136	71	309	45,400
" Civil	1	—	3	4	1	8	738
" Electrical	4	—	2	6	9	17	1,720
" Mechanical	4	2	17	18	10	47	4,813
General Science	14	9	80	101	53	243	24,231
Leather Trades	1	—	—	1	6	7	668
Medical	8	4	13	41	31	89	11,448
Mining	2	—	1	1	4	6	2,280
Physical Training	1	—	—	—	4	4	51
(b) Preliminary	4(b)	1	8	14	4	27	6,194
Printing and Photography	2	—	2	14	16	32	4,281
Technical Optics	1	—	—	4	3	7	1,121
Textile Trades	11	7	64	70	30	171	36,047
Total	92	38(d)	332(d)	477(d)	300(d)	1,147(d)	175,653
3. Total of Heads 1 and 2 ..	160(c)	181	1,212	1,721	967	4,081	2,539,555

(a) Including Courses in the following combinations:—Civil, Mechanical and Electrical Engineering; Engineering and Science; Mechanical and Civil Engineering; Mechanical and Electrical Engineering; Mechanical and Marine Engineering.

(b) The Preliminary Courses were attended by First or Second Year Students proceeding to the later years of other Courses separately accounted for in the table. They are accordingly not included in the totals of the number of Courses.

(c) This number is the total number of distinct Courses. With the exception of nine Courses, all the Courses taken into account under Head 2 are also taken into account under Head 1.

(d) These totals, which show the number of individual Students, are in each case less than the sum of the corresponding items, since several of the Students attended more than one Course.

ENGLAND AND WALES.

2.—JUNIOR TECHNICAL SCHOOLS.

(See Explanatory Notes, page 134.)

Table 87. [80] Number of Schools.

1.	For which the Responsible Body was a L.E.A.			For which the Responsible Body was other than a L.E.A.			Total.		
	For Boys.	For Girls.	Total.	For Boys.	For Girls.	Total.	For Boys.	For Girls.	Total.
	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Administrative Counties	25	2	27	1	—	1	26	2	28
2. County Boroughs	33	5	38	4	—	4	37	5	42
3. London	9	5	14	5	3	8	14	8	22
4. Total	67	12	79	10	3	13	77	15	92

Table 88. [81] Number and Age of Pupils.

1.	Under 13.	13-14.	14-15.	15-16.	16 and over.	Total.
	2.	3.	4.	5.	6.		7.
A.—Boys.						
1. Administrative Counties	404	1,184	1,182	551	116	3,437
2. County Boroughs	878	2,054	1,982	551	24	5,489
3. London	39	701	651	410	58	1,859
4. Total	1,321	3,939	3,815	1,512	198	10,785
B.—Girls.						
1. Administrative Counties	—	50	157	73	1	281
2. County Boroughs	5	122	123	96	16	362
3. London	—	115	667	467	27	1,276
4. Total	5	287	947	636	44	1,919
Total of A. and B.	1,326	4,226	4,762	2,148	242	12,704

Table 89. [82] Duration of Courses.

1.	Of 3 years' duration.		Of 2 years' duration.		All Courses.		Total.
	For Boys.	For Girls.	For Boys.	For Girls.	For Boys.	For Girls.	
	2.	3.	4.	5.	6.	7.		8.
1. Administrative Counties	15	—	11	4	26	4	30
2. County Boroughs	14	3	23	6	37	9	46
3. London	11	—	5	30	16	30	46
4. Total	40	3	39	40	79	43	122

ENGLAND AND WALES.

Table 90. [83] Occupations for which the Courses prepare.

Occupations. <i>1.</i>	Number of Courses. <i>2.</i>		Number of Pupils.	
			Boys. <i>3.</i>	Girls. <i>4.</i>
1. Constructive Trades (including Building, Engineering and Woodwork) ..	70	..	10,290	.. —
2. Painting and Decorating	1	..	40	.. —
3. Silversmithing	1	..	21	.. —
4. Book-Production	1	..	96	.. —
5. Photo-engraving and Photography ..	2	..	78	.. 27
6. Nautical	2	..	103	.. —
7. Tailoring	10	..	33	.. 293
8. Dressmaking	14	..	—	.. 936
9. Millinery	5	..	—	.. 141
10. Embroidery	4	..	—	.. 135
11. Cookery	3	..	108	.. 56
12. Laundry-work	1	..	—	.. 15
13. Upholstery	4	..	—	.. 153
14. Domestic Service	1	..	—	.. 98
15. Other Industrial Occupations ..	3	..	16	.. 65
16. Total	122	..	10,785	.. 1,919

3.—DAY TECHNICAL CLASSES.

(See Explanatory Notes, page 134.)

Table 91. [84] Number of Institutions conducting such Classes.

<i>1.</i>	Under the direction of the L.E.A.		Not under the direction of the L.E.A.		Total. <i>4.</i>
	<i>2.</i>	<i>3.</i>	<i>3.</i>	<i>4.</i>	
1. Administrative Counties	18	..	8	..	26
2. County Boroughs	48	..	7	..	55
3. London	16	..	5	..	21
4. Total	82	..	20	..	102

ENGLAND AND WALES.

Table 92. [85] Number and Age of Students attending such Classes.

1.	Under		18-21.	21 and over.	Total.
	15.	15-18.			
	2.	3.	4.	5.	6.
A.—Boys and Men.					
1. Administrative Counties	249	170	214	263	896
2. County Boroughs ..	1,427	953	615	1,631	4,626
3. London	268	493	255	533	1,549
4. Total	1,944	1,616	1,084	2,427	7,071
B.—Girls and Women.					
1. Administrative Counties	879	549	120	188	1,736
2. County Boroughs ..	1,285	1,085	474	453	3,297
3. London	360	451	389	709	1,909
4. Total	2,524	2,085	983	1,350	6,942
Total of A. and B. ..	4,468	3,701	2,067	3,777	14,013

Table 93. [86] Particulars of Courses and Students.
(See Explanatory Notes, page 134.)

1. Type of Course.	2. Number of Courses.	3. Number of Students who attended at any time during the year		5. Student hours per Student.
		Boys and Men.	Girls and Women.	
		3.	4.	
1. Full-time Courses :—				
(a) Senior (mainly for Students of 15 years and over at date of admission) :—				
Commercial	20	297	473	683
Domestic	22	—	380	546
Industrial	16	321	43	763
Miscellaneous	13	106	140	779
Pharmacy	16	115	65	753
Total	87	839	1,101	690
(b) Junior (mainly for Students under 15 years of age at date of admission) :—				
Commercial	40	1,681	2,638	873
Domestic	15	—	780	764
Industrial	11	544	—	805
Miscellaneous	4	270	20	832
Total	70	2,495	3,438	850
(c) Total of (a) and (b)	157	3,326*	4,520*	814

* These totals, which show the number of individual students, are in each case less than the sum of the corresponding items, since some of the students attended more than one Course.

[Continued over.]

ENGLAND AND WALES.

Table 93—continued.

Type of Course.	Number of Courses.	Number of Students who attended at any time during the year.		Student hours per Student.
		Boys and Men.	Girls and Women.	
1.	2.	3.	4.	5.
2. Part-time Courses :—				
(a) Attended continuously during part of the year :—				
Commercial	4	84	21	503
Domestic	39	—	509	290
Industrial	17	229	35	97
Miscellaneous	12	114	171	161
Nautical	10	2,003	—	212
Pharmacy	6	53	6	480
Total	88	2,483	742	225
(b) Attended during varying periods and for varying numbers of meetings in the week :—				
Commercial	20	95	187	212
Domestic	57	—	1,255	166
Industrial	53	1,085	62	151
Miscellaneous	18	296	306	115
Pharmacy	18	242	82	177
Total	166	1,718	1,892	157
(c) Total of (a) and (b)	254	3,745*	2,422*	210
3. Total of Heads 1 and 2	411	7,071	6,942	552

* These totals, which show the number of individual students, are in each case less than the sum of the corresponding items, since some of the students attended more than one Course.

4.—SCHOOLS OF NAUTICAL TRAINING.

(See Explanatory Notes, page 135.)

Table 94. [87]

Number of Schools and Pupils.

1. Number of Schools	6
2. Number of Pupils who attended at any time during the year, and their ages on 31st July, 1925.	
(a) Under 13 years of age	85
(b) 13 and under 14 years of age	402
(c) 14 " " 15 " "	551
(d) 15 " " 16 " "	355
(e) 16 years of age and over	88
Total	1,481
3. Number of Pupils who left in the year	637
4. Number of Pupils who joined the Royal Navy	226
5. Number of Pupils who joined the Mercantile Marine	299
6. Number of Pupils who did not enter a Nautical occupation	112

Note :—There are no Schools of Nautical Training in Wales.

ENGLAND AND WALES.

5.—SCHOOLS OF ART.

(See Explanatory Notes, page 135.)

Table 95. [88]

Number of Schools*.

1.	Under the direction of the L.E.A.		Not under the direction of the L.E.A.		Total.
	2.	3.	4.	5.	
1. Administrative Counties ..	81	..	3	..	84
2. County Boroughs	71	..	6	..	77
3. London	14	..	—	..	14
4. Total	166	..	9	..	175

* Including 12 Branch Schools of Art which are regarded in this table as forming parts of the main Schools of which they are branches.

Table 96. [89]

Number and Age of Students.

1.	Under 15.	15-18.	18-21.	21 and over.	Total.
	2.	3.	4.	5.	6.
A.—Boys and Men.					
1. Administrative Counties ..	1,408	2,309	1,256	1,360	6,333
2. County Boroughs	2,681	5,582	3,698	3,235	15,196
3. London	219	791	781	1,396	3,187
4. Total	4,308	8,682	5,735	5,991	24,716
B.—Girls and Women.					
1. Administrative Counties ..	977	1,560	1,243	3,717	7,497
2. County Boroughs	1,791	3,111	2,706	6,062	13,670
3. London	131	489	646	2,276	3,542
4. Total	2,899	5,160	4,595	12,055	24,709
Total of A. and B. ..	7,207	13,842	10,330	18,046	49,425

ENGLAND AND WALES.

Table 97 [90] Analysis of Types of Students.

Type of Student.	Students.		Student-hours.		
	Number.	Percentage to Total Number.	Number.	Percentage to Total Number.	Average Number of Student-hours per Student.
1.	2.	3.	4.	5.	6.
1. In Junior Art Departments:—		%		%	
(a) Full-time ..	1,574	3·2	1,506,305	18·0	957
(b) Part-time ..	251	0·5	23,725	0·3	95
2. Other Students:—					
(a) Full-time ..	4,642	9·4	3,202,511	38·3	690
(b) Part-time ..	42,958	86·9	3,631,830	43·4	85
3. Total	49,425	—	8,364,371	—	169

6.—ART CLASSES.

(See Explanatory Notes, page 135.)

Table 98. [91] Number of Classes.

1.	Under the direction of the L.E.A.		Not under the direction of the L.E.A.		Total.
	2.	3.	4.	5.	6.
1. Administrative Counties	44	..	1	..	45
2. County Boroughs	1	..	—	..	1
3. London	1	..	—	..	1
4. Total	46	..	1	..	47

Table 99. [92] Number and Age of Students.

1.	Under 15.	15–18.	18–21.	21 and over.	Total.
	2.	3.	4.	5.	6.
A.—Boys and Men.					
1. Administrative Counties	249	418	214	295	1,176
2. County Boroughs	5	23	19	10	57
3. London	17	21	2	29	69
4. Total	271	462	235	334	1,302
B.—Girls and Women.					
1. Administrative Counties	215	457	375	1,350	2,397
2. County Boroughs	2	10	2	11	25
3. London	1	—	2	19	22
4. Total	218	467	379	1,380	2,444
Total of A. and B.	489	929	614	1,714	3,746

ENGLAND AND WALES.

7.—ART EXAMINATIONS.

(See Explanatory Notes, page 136.)

Table 100. [93] Subjects and Results.

Subject. 1.	Candidates. 2.	Passes. 3.
I.—Drawing	286	135
II.—Painting	31	20
III.—Modelling	5	2
IV.—Pictorial Design	49	22
V.—Industrial Design—		
(a) Whole Examination	115	46(*)
(b) Part I only	99	69(†)
(c) Part II only	61	45(††)
Total	646	339

(*)—One of these passed with Distinction.

(†)—Includes 26 who entered for the whole examination, but passed in one part only.

(††)—Includes 14 who entered for the whole examination, but passed in one part only.

Table 101. [94] Crafts in relation to which Candidates at the Industrial Design Examination were examined, and the Number of Candidates examined in each Craft.

Craft. 1.	Number of Candidates. 2.
Book Binding	5
Cabinet Work	7
Carpet Weaving	1
Cotton Printing	16
Cotton Weaving	4
Die Sinking	1
Dress Design	20
Embroidery	87
Enamelling	6
Glass Painting or Stained Glass	3
Gold and Silver Smithing	4
Illumination	37
Jewellery	2
Leather Work	8
Lithography	27
Mosaic	1
Painting and Decorating	7
Pottery	8
Process Reproduction	14
Stone Carving	2
Tapestry	1
Typography	1
Wall-paper Manufacture	4
Wood Carving	7
Wood Inlaying	2
Total	275

ENGLAND AND WALES.

8.—PART-TIME TECHNICAL AND OTHER INSTRUCTION.

(See Explanatory Notes, page 136.)

Table 102. [95] Number of Schools.

1.	Under the direction of the L.E.A.		Not under the direction of the L.E.A.		Total.		All Schs.
	Large Schs.	Small Schs.	Large Schs.	Small Schs.	Large Schs.	Small Schs.	
	2.	3.	4.	5.	6.	7.	
1. Administrative Counties ..	31	3,225	1	12	32	3,237	3,269
2. County Boroughs ..	60	755	10	17	70	772	842
3. London	20	259	2	9	22	268	290
4. Total	111	4,239	13	38	124	4,277	4,401

Table 103. [96] Number of Schools with Ordinary Continuation or Technical Courses.

1.	Under the direction of the L.E.A.		Not under the direction of the L.E.A.		Total.		All Schs.
	Large Schs.	Small Schs.	Large Schs.	Small Schs.	Large Schs.	Small Schs.	
	2.	3.	4.	5.	6.	7.	
1. Administrative Counties ..	31	3,218	1	10	32	3,228	3,260
2. County Boroughs ..	60	743	10	16	70	759	829
3. London	20	247	2	9	22	256	278
4. Total	111	4,208	13	35	124	4,243	4,367

Table 104. [97] Number of Schools with Day Continuation Courses.

1.	Constituting separate Schools.	Constituting parts of Schools.		Total.			
		Large Schools.	Small Schools.				
		3.	4.				
1. Administrative Counties ..	9	..	5	..	8	..	22
2. County Boroughs ..	13	..	6	..	10	..	29
3. London	12	..	4	..	4	..	20
4. Total	34	..	15	..	22	..	71

Note:—There are no Schools with Day Continuation Courses in Wales.

ENGLAND AND WALES.

Table 105. [98] Number of Students in Schools in Table 102.

1.	Large Schools.		Small Schools.		All Schools.		
	Boys and Men. 2.	Girls and Women. 3.	Boys and Men. 4.	Girls and Women. 5.	Boys and Men. 6.	Girls and Women. 7.	Total. 8.
1. Administrative Counties	16,186	7,744	128,676	110,377	144,862	118,121	262,983
2. County Boroughs	72,303	25,129	94,516	90,777	166,819	115,906	282,725
3. London	26,813	9,982	62,901	89,566	89,714	99,548	189,262
4. Total	158 157		576,813		401,395	333,575	734,970

Table 106. [99] Number of Students attending Ordinary Continuation or Technical Courses.

1.	Large Schools.		Small Schools.		All Schools.		
	Boys and Men. 2.	Girls and Women. 3.	Boys and Men. 4.	Girls and Women. 5.	Boys and Men. 6.	Girls and Women. 7.	Total. 8.
1. Administrative Counties ..	15,623	7,744	127,161	109,303	142,784	117,047	259,831
2. County Boroughs	71,778	24,773	90,848	85,777	162,626	110,550	273,176
3. London	26,534	9,982	57,690	83,449	84,224	93,431	177,655
4. Total	156,434		554,228		389,634	321,028	710,662

Table 107. [100] Number of Students attending Day Continuation Courses.*

1.	Large Schools.		Small Schools.		All Schools.		
	Boys. 2.	Girls. 3.	Boys. 4.	Girls. 5.	Boys. 6.	Girls. 7.	Total. 8.
1. Administrative Counties ..	563	—	1,515	1,074	2,078	1,074	3,152
2. County Boroughs	525	356	3,668	5,000	4,193	5,356	9,549
3. London	279	—	5,211	6,117	5,490	6,117	11,607
4. Total	1,723		22,585		11,761	12,547	24,308

* See footnote to Table 104.

ENGLAND AND WALES.

Table 108. [101] Age-distribution of Students attending Ordinary Continuation or Technical Courses.

1.	Under 12.	12-13.	13-14.	14-15.	15-16.	16-17.	17-18.	18-19.	19-20.	20-21.	21 and over.	Total.
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
A.—Boys and Men.												
1. Adm. Counties—												
(a) Large Schools ..	—	—	48	773	1,558	2,588	2,512	1,956	1,479	1,075	3,634	15,623
(b) Small Schools ..	70	208	2,897	23,405	20,398	17,424	12,682	8,832	6,301	4,368	30,576	127,161
2. County Boroughs—												
(a) Large Schools ..	12	22	63	1,127	3,943	9,338	10,906	9,726	8,024	6,159	22,458	71,771
(b) Small Schools ..	17	54	4,413	23,428	17,999	13,801	9,454	5,557	3,553	2,364	10,208	90,842
3. London—												
(a) Large Schools ..	4	1	3	261	822	2,073	3,086	3,028	2,668	2,251	12,337	26,532
(b) Small Schools ..	—	3	11	12,952	7,390	6,441	5,050	3,695	2,631	1,873	17,644	57,699
4. Total—												
(a) Large Schools ..	16	23	114	2,161	6,323	13,999	16,504	14,710	12,171	9,485	38,429	113,932
(b) Small Schools ..	87	265	7,321	59,785	45,787	37,666	27,186	18,084	12,485	8,605	58,428	275,699
B.—Girls and Women.												
1. Adm. Counties—												
(a) Large Schools ..	—	1	64	721	722	991	926	684	495	431	2,709	7,747
(b) Small Schools ..	44	212	2,508	16,611	12,103	9,790	7,297	5,247	3,832	2,980	48,679	109,300
2. County Boroughs—												
(a) Large Schools ..	5	18	39	383	1,287	2,309	2,490	2,117	1,707	1,377	13,041	24,777
(b) Small Schools ..	9	44	4,473	20,074	12,889	9,222	6,241	4,397	3,072	2,290	23,066	85,777
3. London—												
(a) Large Schools ..	4	4	7	82	138	312	418	454	493	533	7,537	9,980
(b) Small Schools ..	—	5	41	15,748	8,938	7,836	6,640	4,634	3,652	2,917	33,038	83,443
4. Total—												
(a) Large Schools ..	9	23	110	1,186	2,147	3,612	3,834	3,255	2,695	2,341	23,287	42,497
(b) Small Schools ..	53	261	7,022	52,433	33,930	26,848	20,178	14,278	10,556	8,187	104,783	278,522
Total of A. and B. ..	165	572	14,567	115,565	88,187	82,125	67,702	50,327	37,907	28,618	224,927	710,661

Table 109. [102] Age-distribution of Students attending Day Continuation Courses.*

1.	Under 16.	16-18.	18 and over.	Total.
	2.	3.	4.	5.
A.—Boys.				
1. Administrative Counties				
(a) Large Schools ..	510	48	5	563
(b) Small Schools ..	1,209	263	43	1,515
2. County Boroughs				
(a) Large Schools ..	340	100	85	525
(b) Small Schools ..	2,556	960	152	3,668
3. London				
(a) Large Schools ..	126	129	24	279
(b) Small Schools ..	4,333	855	23	5,211
4. Total				
(a) Large Schools ..	976	277	114	1,367
(b) Small Schools ..	8,098	2,078	218	10,394
B.—Girls.				
1. Administrative Counties				
(a) Large Schools ..	—	—	—	—
(b) Small Schools ..	998	76	—	1,074
2. County Boroughs				
(a) Large Schools ..	353	3	—	356
(b) Small Schools ..	3,561	1,320	119	5,000
3. London				
(a) Large Schools ..	—	—	—	—
(b) Small Schools ..	4,936	1,181	—	6,117
4. Total				
(a) Large Schools ..	353	3	—	356
(b) Small Schools ..	9,495	2,577	119	12,191
Total of A. and B. ..	18,922	4,935	451	24,308

* See footnotes to Table 104.

ENGLAND AND WALES.

Table 110. [103] Ordinary Continuation and Technical Courses. Particulars of Student-hours per Student, Class-hours, and Student-hours per Class-hour.*(See Explanatory Notes, page 136.)*

1.		Student-hours per Student.	Class- hours.	Student- hours per Class- hour.
		2.	3.	4.
1. Administrative Counties ..	(a) Large Schools ..	88	159,179	13
	(b) Small Schools ..	51	973,475	12
	(c) All Schools ..	54	1,132,654	12
2. County Boroughs ..	(a) Large Schools ..	88	615,077	14
	(b) Small Schools ..	70	836,180	15
	(c) All Schools ..	76	1,451,257	14
3. London ..	(a) Large Schools ..	72	180,722	15
	(b) Small Schools ..	58	599,869	14
	(c) All Schools ..	61	780,591	14
4. Total ..	(a) Large Schools ..	84	954,978	14
	(b) Small Schools ..	59	2,409,524	14
	(c) All Schools ..	64	3,364,502	14

Table 111. [104] Day Continuation Courses. Particulars of Student-hours per Student, Class-hours, and Student-hours per Class-hour.**(See Explanatory Notes, page 136.)*

1.		Student- hours per Student.	Class- hours.	Student- hours per Class- hour.
		2.	3.	4.
1. Administrative Counties ..	(a) Large Schools ..	184	7,628	14
	(b) Small Schools ..	194	33,964	15
	(c) All Schools ..	193	41,592	15
2. County Boroughs ..	(a) Large Schools ..	129	10,341	11
	(b) Small Schools ..	204	93,483	19
	(c) All Schools ..	197	103,824	18
3. London ..	(a) Large Schools ..	316	7,275	12
	(b) Small Schools ..	229	138,216	19
	(c) All Schools ..	231	145,491	18
4. Total ..	(a) Large Schools ..	177	25,244	12
	(b) Small Schools ..	215	265,663	18
	(c) All Schools ..	213	290,907	18

* See footnotes to Table 104.

ENGLAND AND WALES.

Table 112. [105] Ordinary Continuation and Technical Courses.
Subjects of Instruction.

(See Explanatory Notes, page 137.)

Subject.	Number of Schools.	Number of Classes.	Subject.	Number of Schools.	Number of Classes.
1.	2.	3.	1.	2.	3.
I. ENGLISH	2,693	11,346	VII. INDUSTRIAL SUBJECTS—		
II. LANGUAGES—			(a) <i>Mining—</i>		
Arabic	2	3	Coal Mining (including Quarrying)	281	1,008
Chinese	1	2	Metalliferous Mining	2	7
Danish	2	7	(b) <i>Chemical Trades—</i>		
Dutch	3	5	Treatment of Coal Tar Products		
Esperanto	15	26	(including Dye Making)	8	9
French	530	2,452	Gas Manufacture	28	75
Gaelic	2	2	Glass Manufacture	1	2
German	130	427	Iron and Steel Manufacture	20	42
Greek	5	13	Leather Manufacture and Dyeing	6	16
Hebrew	3	9	Metallurgy (Non-Ferrous)	5	12
Icelandic	1	2	Metallurgy	38	165
Irish	1	1	Treatment of Oils and Fats	8	24
Italian	41	165	Manufacture of Painters' Oils		
Japanese	1	1	and Colours	8	35
Latin	51	87	Pottery and Porcelain Manu-		
Norwegian	3	6	facture	5	34
Portuguese	5	15	Textile Chemistry	22	57
Russian	13	41	Other Chemical Trades	28	67
Spanish	141	404	(c) <i>Engineering and Metal Trades—</i>		
Swedish	4	6	General, Civil and Mechanical		
Welsh	77	91	Engineering	517	3,959
Yiddish	1	2	Engineers' Pattern Making and		
			Moulding	30	45
			Shipbuilding	21	61
			Motor Engineering	52	163
			Vehicle and Motor Body Building	17	47
			Rail Carriage Building	14	22
			Aeronautics	3	7
			General Electrical Engineering	210	1,079
			Telegraphy and Telephony	44	193
			Wireless (Telegraphy and Tele-		
			phony)	33	62
			Optical Industries and Scientific		
			Instrument Making	4	24
			Watch and Clock Making	4	14
			Miscellaneous Engineering and		
			Metal Trades	45	143
			(d) <i>Textile Trades—</i>		
			Cotton Spinning and Manu-		
			facture	47	584
			Wool and Worsted Spinning and		
			Manufacture	22	321
			Textile Bleaching, Dyeing and		
			Printing	22	84
			Other Textile Processes	31	118
			(e) <i>Clothing Trades—</i>		
			Boot and Shoe Manufacture	25	269
			Ladies' Tailoring	139	304
			Men's Tailoring	11	43
			Trade Dressmaking	1	2
			Other Clothing Trades	28	33
			(f) <i>Food and Drink Trades—</i>		
			Baking and Confectionery	24	95
			Flour Milling	9	14
			Brewing	2	5
III. SOCIAL SCIENCES—					
History	300	538			
Economics and Industrial His-					
tory	269	542			
Sociology and Political Science	90	148			
Public Administration	22	41			
Other Subjects	2	8			
IV. MENTAL AND MORAL					
SCIENCES	45	89			
V. MATHEMATICS (including					
Practical Mathematics)	2,656	15,587			
VI. NATURAL SCIENCES—					
General Science	1,119	2,021			
Physics	453	1,622			
Chemistry	239	1,329			
Geology	65	126			
Biology	140	373			

ENGLAND AND WALES.

Ordinary Continuation and Technical Courses.

Table 112.—continued. Subjects of Instruction.

Subject.	Number of Schools.	Number of Classes.	Subject.	Number of Schools.	Number of Classes.
1.	2.	3.	1.	2.	3.
<i>(g) Book, Printing and Paper Trades—</i>			PROFESSIONAL AND COMMERCIAL SUBJECTS— <i>contd.</i>		
Engraving and Lithography	7	75	Commodities from Commercial standpoint	68	199
Paper Making	10	18	Shorthand	1,448	6,063
Photography	30	87	Typewriting	418	1,811
Printing	16	205	Pharmacy	23	106
Bookbinding	11	50	Other Subjects	69	150
<i>(h) Building, Woodworking, and Furniture Trades—</i>			X. RURAL SUBJECTS—		
Building Construction (including Structural Engineering and Ferro-Concrete)	338	1,106	Rural Science and Rural Economy	58	64
Brickwork and Masonry (including Plastering)	33	108	Gardening	34	79
Carpentry and Joinery (including Woodwork Machining)	156	509	Basket Making	72	86
Plumbing (including Sanitation, Heating, Ventilation, and Gas Fitting)	131	629	XI. DOMESTIC SUBJECTS—		
Electric Wiring and Installation Work	47	107	Cookery	1,032	2,274
Painting and Decorating	40	109	Laundrywork	32	64
Surveying (including Builders' Quantities, Valuation, Specification, Builders' Bookkeeping and Estimating)	123	277	Housecraft	319	606
Architecture (including Architectural Drawing and Design)	31	81	Needlework and Embroidery	1,319	2,749
Cabinet Making (including Design, Woodcarving, French Polishing and Pianoforte Making)	21	78	Dressmaking	1,458	3,954
Upholstery	82	134	Millinery	690	1,717
<i>(i) Home Industries</i>	57	122	XII. AMBULANCE, MIDWIFERY, HOME NURSING AND INFANT CARE—		
<i>(j) Miscellaneous Trades</i>	116	309	Ambulance	580	844
VIII. NAUTICAL SUBJECTS AND SUBJECTS FOR FISHERMEN—			Midwifery, Home Nursing and Infant Care	402	587
Fishery Subjects	1	14	Hygiene	215	463
Navigation and Nautical Astronomy	10	22	XIII. PHYSICAL TRAINING—		
Nautical Cookery	5	5	Physical Exercises	838	4,303
Other Nautical Subjects (including Seamanship and Nautical Handicraft)	10	29	Dancing	214	418
IX. PROFESSIONAL AND COMMERCIAL SUBJECTS			Swimming	12	20
Banking Practice and Law	37	84	Miscellaneous	21	63
Currency and Theory of Banking	32	92	XIV. MANUAL SUBJECTS—		
Commercial and Industrial Law	124	435	Woodwork	888	2,015
Law (other than Commercial and Industrial Law)	29	121	Metalwork	115	209
Factory Administration	3	3	General Handwork	365	696
Insurance	21	144	XV. ART—		
Statistics	8	10	Drawing and Painting	123	264
Transport	13	54	Design	39	70
Bookkeeping and Accountancy	1,318	4,934	Modelling	10	12
Business Economics	414	1,383	Woodcarving	86	121
Commercial Correspondence, Office Routine and Business Methods	476	1,355	Repoussé Work	12	33
Geography	576	1,285	Other Artistic Craft Work	28	44
			History and Appreciation of Art	22	72
			General Art	213	419
			XVI. MUSIC—		
			Singing and Voice Production (Singing)	598	1,391
			Elocution and Voice Production (Speaking)	225	564
			Instrumental Music	133	394
			Theory of Music	56	96
			Appreciation of Music	69	122
			XVII. MISCELLANEOUS—		
			Classes for individual study and tuition,	35	83
			Others	118	350

ENGLAND AND WALES.

9.—TEACHERS IN TECHNICAL, ETC., SCHOOLS.

Table 113. [108] Teachers returned to the Board as being, on 31st March, 1926, in regular full-time employment in Schools recognised under the Regulations for Technical Schools, etc., and in Schools of Nautical Training.

(See *Explanatory Notes*, page 137.)

1.	Men. 2.	Women. 3.	Total. 4.
1. In Technical, etc., Schools under the direction of Local Education Authorities	2,391	708	3,099
2. In Technical, etc., Schools not under the direction of Local Education Authorities	127	44	171
3. In Schools of Nautical Training	64	—	64
4. Total	2,582	752	3,334

Table 114. [—]

10. HISTORICAL TABLE.
Comparative Figures for Technical, etc., Schools and Schools of Nautical Training.
(See Explanatory Notes, page 137).

School Years.	Technical Institution Courses.				Junior Technical Schools.				Day Technical Classes.				Schools of Nautical Training.		Schools of Art.				Art Classes.			Part time Technical and other Instruction. §§			University and Advanced Tutorial Classes.			Total.		
	1.	2.	Number of Students.		6.	7.	Number of Students.		10.	11.	Number of Students.		14.	15.	16.	Number of Students.		19.	Number of Students.		22.	Number of Students.		25.	26.	27.	28.	29.	30.	
			Boys and Men.	Girls and Women.			Boys.	Girls.			Boys and Men.	Girls and Women.				Boys.	Girls and Women.		Boys and Men.	Girls and Women.		Boys and Men.	Girls and Women.							Men.	Women.	Boys and Men.	Girls and Women.	Total.
1912-13	27	81	1,383	112	—	—	—	—	113	285	7,488	5,715	—	—	216	20,191	20,696	50	1,157	1,927	6,876	467,240	331,641	—	—	—	497,457	360,091	857,548	
1913-14	29	78*	1,211*	—	37	56	2,056	840	91	—	—	—	5	1,395	208	19,696	21,086	56	1,184	2,090	6,793	793,194	—	122	2,146	601	—	—	845,499†	
1914-15	29	—	1,283	139	49	67	3,420	1,072	97	—	3,918	4,713	5	1,435	205	16,405	18,832	59	1,234	2,088	6,155	381,837	380,874	145	2,211	763	411,743	408,481	820,224	
1915-16	30	—	934	156	53	75	3,798	1,215	102	—	3,453	5,355	6	1,949	195	13,071	17,371	53	829	1,824	4,441	286,140	307,069	114	1,492	714	311,664	333,704	645,368	
1916-17	28	—	932	177	55	78	4,511	1,190	86	—	3,604	4,771	6	1,928	188	12,076	15,832	50	780	1,635	3,734	263,051	293,777	92	1,090	749	287,972	318,131	606,103	
1917-18	29	—	1,071	242	62	89	5,598	1,061	92	—	4,078	5,555	6	1,705	186	13,020	17,053	50	979	1,825	3,949	277,581	317,180	113	1,607	982	305,639	343,898	649,537	
1918-19	32	—	2,573	250	71	97	6,955	1,127	95	—	5,586	5,725	6	1,626	186	16,290	19,401	49	1,117	2,035	3,669	288,324	331,417	147	1,939	1,465	324,410	361,420	685,830	
1919-20	39	131	5,249	386	80	105	8,649	1,289	119	418	7,867	6,978	6	1,660	188	22,586	22,610	53	1,449	2,607	4,831	419,877	377,663	226	3,712	1,873	470,049	413,406	883,455	
1920-21	43	139	5,594	420	87	116	9,762	1,602	123	400	8,131	7,845	6	1,534	189	24,076	24,033	51	1,338	2,273	5,333	447,209	419,358	299	4,896	2,201	502,540	457,732	960,272	
1921-22	46	150	5,167	419	89	118	10,487	1,769	109	393	6,459	7,003	6	1,380	186	22,856	23,422	52	1,444	2,447	5,102	432,427	393,833	342	5,284	2,462	485,504	431,355	916,859	
1922-23	43	144	4,135	407	89	119	10,613	1,793	104	369	6,239	6,354	6	1,375	181	22,643	22,596	49	1,393	1,994	4,129	355,210	304,726	336	5,090	2,461	406,698	340,331	747,029	
1923-24	43	150	3,707	420	87	118	10,190	1,798	103	370	6,504	6,341	6	1,529	175	22,811	23,053	50	1,507	2,068	4,356	372,403	317,525	366	5,491	2,833	424,142	354,038	778,180	
1924-25	44	157	3,637	457	89	118	10,141	1,813	123	437‡	7,499	7,583	6	1,576	174	23,514	24,149	49	1,563	2,402	4,551§	394,887	340,706	**	—	—	442,817	377,090	819,907	
1925-26	43	160	3,670	411	92	122	10,785	1,919	131	522‡	7,816	8,580	6	1,481	175	24,716	24,709	47	1,302	2,444	4,901§	408,897	361,482	**	—	—	458,867	399,545	858,212	

* Full-time Courses only.

† Excludes Students who attended at Day Technical Classes.

‡ Includes Courses for Teachers of the type shown in the first footnote to Table 167, which in previous and succeeding years are included under the heading of Technical, etc., Schools.

§§ The figures under this head, for the years prior to 1924-25, include classes, other than University and Advanced Tutorial Classes, now recognised under the Adult Education Regulations (see Tables 115-117).

** These Classes are now recognised under the Adult Education Regulations (see Table 115, columns 5 to 10).

ENGLAND AND WALES.

11.—CLASSES RECOGNISED UNDER THE ADULT EDUCATION REGULATIONS.

(See Explanatory Notes, page 137.)

Table 115. [109] Extra-mural and similar Courses supervised by Universities or University Colleges, other than University Extension and Vacation Courses.

Particulars of the various types of Class and Students for individual Responsible Bodies.

(See Explanatory Notes, page 138.)

University or University College.	Preparatory Classes.			Three Year Tutorial Classes.			Advanced Tutorial Classes.			Total.			No. of Students who qualified for Grant
	No. of Classes	No. of Students.		No. of Classes	No. of Students.		No. of Classes	No. of Students.		No. of Classes	No. of Students.		
		Men	Women		Men	Women		Men	Women		Men	Women	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. Birmingham ..	—	—	—	33	400	265	1	2	10	34	402	275	438
2. Bristol ..	3	40	18	15	140	181	1	18	—	19	193	199	271
3. Cambridge ..	2	6	38	20	234	217	—	—	—	22	240	255	279
4. Durham :													
(a) Durham Division ..	7	155	18	23	281	129	—	—	—	30	436	147	393
(b) Newcastle Division ..	1	11	13	20	244	190	—	—	—	21	255	203	322
5. Leeds ..	1	6	19	40	509	298	1	8	3	42	523	320	591
6. Liverpool ..	5	57	57	44	506	349	—	—	—	49	563	406	634
7. London ..	3	33	35	37	410	273	7	53	15	47	496	323	533
8. Manchester ..	4	50	33	37	471	279	1	8	5	42	529	317	604
9. Nottingham University College..	12	113	139	52	521	414	—	—	—	64	634	553	850
10. Oxford ..	5	76	26	23	334	166	3	32	6	31	442	198	435
11. Reading University College..	—	—	—	3	20	45	—	—	—	3	20	45	34
12. Sheffield ..	—	—	—	28	504	207	1	10	2	29	514	209	454
13. Southampton University College	—	—	—	5	59	22	—	—	—	5	59	22	65
14. University College of the South-West of England	—	—	—	—	—	—	—	—	—	—	—	—	—
University College of Exeter ..	3	37	14	5	47	50	—	—	—	8	84	64	76
15. University College of Wales — Aberystwyth ..	7	122	75	22	339	150	—	—	—	29	461	225	463
16. University College of North Wales — Bangor ..	6	84	32	17	232	93	—	—	—	23	316	125	337
17. University College of South Wales and Monmouthshire ..	8	104	105	36	522	250	1	9	1	45	635	356	628
18. Swansea University College ..	5	103	38	17	312	76	—	—	—	22	415	114	329
Total 1925-26	72	997	660	477	6,085	3,654	16	140	42	565	7,222	4,356	7,736
Total 1924-25	73	1,097	548	412	5,591	3,217	9	80	43	494	6,768	3,808	7,087

ENGLAND AND WALES.

Table 116. [110] Part-time Courses under the control and direction of Approved Associations for Adult Education, other than Vacation Courses.

Particulars of the various types of Course and Students for individual Responsible Bodies,

(See Explanatory Notes, page 138.)

Responsible Body.	Terminal Courses.			One Year Courses.			Total.			No. of Students who qualified for Grant.
	No. of Classes.	No. of Students.		No. of Classes.	No. of Students.		No. of Classes.	No. of Students.		
		Men	Women		Men	Women		Men	Women	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Durham University Joint Committee (Newcastle Division) ..	1	10	15	—	—	—	1	10	15	17
2. Nottingham University College Joint Committee	—	—	—	25	261	282	25	261	282	372
3. Cornwall Adult Education Joint Committee	11	154	152	—	—	—	11	154	152	172
4. National Industrial Alliance ..	—	—	—	22	430	36	22	430	36	210
5. Educational Settlements Association	14	142	199	13	110	134	27	252	333	346
6. Workers' Educational Association :-										
(a) Yorkshire Division ..	19	247	228	8	116	77	27	363	305	494
(b) West Lancs. and Cheshire Division	31	340	369	21	278	191	52	618	560	829
(c) North Eastern Division ..	3	48	16	25	396	151	28	444	167	385
(d) North Western Division ..	28	230	376	23	258	190	51	488	566	745
(e) North Staffs Division ..	2	24	37	4	61	18	6	85	55	90
(f) East Midland Division ..	2	15	45	—	—	—	2	15	45	47
(g) West Midland Division ..	5	73	20	13	216	71	18	289	91	229
(h) Eastern Division	24	187	429	9	88	109	33	275	538	551
(i) London Division	55	308	937	3	47	36	58	355	973	973
(j) South Eastern Division ..	9	51	143	4	43	26	13	94	169	187
(k) Southern Division	17	190	241	14	149	102	31	339	343	415
(l) South Western Division ..	25	330	351	1	7	10	26	337	361	387
(m) Western Division	47	633	906	9	109	62	56	742	968	1,183
7. University College of North Wales, Bangor	—	—	—	11	203	56	11	203	56	157
8. Workers' Educational Association—										
(a) North Wales Division ..	7	116	34	1	18	4	8	134	38	143
(b) Wales Division	18	348	26	5	96	29	23	444	55	308
9. Welsh National Council of Y.M.C.As.	5	96	28	—	—	—	5	96	28	65
Total 1925-26	323	3,542	4,552	211	2,886	1,584	534	6,428	6,136	8,305
Total 1924-25	262	3,062	3,498	185	2,311	1,643	447	5,373	5,141	6,727

ENGLAND AND WALES.

Table 117. [111] University Extension Courses.

Particulars of Courses and Students for individual Responsible Bodies,

(See Explanatory Notes, page 138.)

University or University College.	No. of Classes.	No. of Students.		No. of Students who qualified for Grant.
		Men.	Women.	
1.	2.	3.	4.	5.
1. Birmingham	9	86	92	78
2. Bristol	3	38	45	67
3. Cambridge	26	141	354	262
4. Durham:				
(a) Durham Division ..	6	64	47	72
(b) Newcastle Division ..	14	187	84	181
5. Leeds	2	18	20	16
6. Liverpool	12	318	—	246
7. London	29	200	403	306
8. Manchester	1	7	25	8
9. Nottingham University College	13	129	139	168
10. Oxford	1	9	10	12
11. Sheffield	3	23	83	49
12. University College of the South-West of England: University College of Exeter.. ..	6	46	96	95
Total 1925-26	125	1,266	1,398	1,560
Total 1924-25	56	599	585	704

Table 118. [112] Extra-mural and similar Courses supervised by Universities or University Colleges and Courses under the control and direction of Approved Associations for Adult Education, other than Vacation Courses.

Classification of Subjects.

(See Explanatory Notes, page 138.)

Subject.	Preparatory and Three Year and Advanced Tutorial Classes.				University Extension Courses.				Courses under the control and direction of Approved Associations.			
	No. of Classes.	No. of Students.			No. of Classes.	No. of Students.			No. of Classes.	No. of Students.		
		Men.	Women.	Total.		Men.	Women.	Total.		Men.	Women.	Total.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Literature and Language ..	147	1,359	1,742	3,101	33	162	506	668	175	1,613	2,355	3,968
2. Economics and Industrial History (including Geography) ..	194	3,018	861	3,879	26	454	99	553	162	2,691	878	3,569
3. History ..	47	627	321	948	23	197	265	462	57	716	929	1,645
4. Aesthetics (including Music, Art, etc.) ..	23	180	283	463	23	239	299	538	25	145	514	659
5. Natural Science (including Biology) ..	18	190	140	330	11	121	90	211	18	235	159	394
6. Sociology ..	54	864	287	1,151	1	22	—	22	51	516	700	1,216
7. Philosophy and Psychology ..	81	960	714	1,674	7	61	117	178	45	498	597	1,095
8. Miscellaneous ..	1	24	8	32	1	10	22	32	1	14	4	18
Total ..	565	7,222	4,356	11,578	125	1,266	1,398	2,664	534	6,428	6,136	12,564

ENGLAND AND WALES.

Table 119 [113] Vacation Courses supervised by Universities or University Colleges.
(See Explanatory Notes, page 139.)

Place at which held, and Name of Class. 1.	Responsible Body. 2.	Number of Students.		
		Men. 3.	Women 4.	Total 5.
1. Ambleside Vacation Courses	Durham, Leeds and Sheffield Universities Joint Committees.	90	74	164
2. Bristol Vacation Courses ..	Bristol University Joint Committee ..	29	21	50
3. Cambridge Vacation Courses	Cambridge University Board of Extra Mural Studies.	40	35	75
4. Chester Vacation Courses ..	Liverpool University Joint Committee and District W.E.A.	40	28	68
5. Little Easton Vacation Courses.	London University Joint Committee for the Promotion of the Higher Education of Working People.	23	24	47
6. Malvern Vacation Courses ..	Birmingham University Joint Committee.	34	28	62
7. North Stoke, Stoke Rochford Vacation Courses.	Nottingham University College Joint Committee.	45	61	106
8. Oxford Vacation Courses ..	Oxford University Joint Committee..	86	34	120
9. Reading Vacation Courses ..	Oxford University Joint Committee (Holybrook Board of Studies).	20	6	26
10. Bangor Vacation Courses ..	Manchester and Wales Joint Committees (Joint University Tutorial Class Committee).	98	36	134
	Total 1926	505	347	852
	Total 1925	509	285	794

Note.—One Vacation Course, attended by 17 students, was held in 1924-25 at Canterbury under the Workers' Educational Association.

Table 120. [114] Residential Colleges.
(See Explanatory Notes, page 139.)

Name of College. 1.	Number of Students.		
	Men. 2.	Women. 3.	Total. 4.
Bournville, Fircroft College	15	—	15
Oxford, Catholic Workers' College	5	2	7
Oxford, Ruskin College	25	8	33
Total	45	10	55

ENGLAND AND WALES.

E.—SCHOLARSHIPS AWARDED BY THE BOARD
AND MAINTENANCE ALLOWANCES.

1.—STATE SCHOLARSHIPS.

(See Explanatory Notes, page 139.)

Table 121. [116]. State Scholarships held during the Academic Year, by University attended.

	University.							Boys.	Girls.
	1.							2.	3.
1. Oxford	63	28
2. Cambridge	101	32
3. Durham	—	9
4. London	13	56
5. Manchester	9	13
6. Birmingham	3	8
7. Liverpool	7	13
8. Leeds	4	9
9. Sheffield	9	2
10. Bristol	2	3
11. Wales	8	14
12. Total	219	187

Table 122. [117]. State Scholarships held during the Academic Year, by course of study taken.

	Course of Study.							Boys.	Girls.
	1.							2.	3.
1. Classics (including Oxford Lit. Hum.)	38	14
2. Oriental Languages	—	1
3. Modern Languages	23	44
4. English	11	48
5. Welsh	1	—
6. History	13	32
7. Economics	7	2
8. Law	4	—
9. Geography	—	1
10. General Arts Course	—	1
11. Commerce	1	—
12. Mathematics	47	24
13. Science	53	17
14. Engineering	13	—
15. Medicine	6	2
16. Theology	2	—
17. Household and Social Science	—	1
18. Total	219	187

ENGLAND AND WALES.

Table 123. [118, 119]. Degrees obtained by State Scholars in 1926.

(See Explanatory Notes, page 139.)

	Degrees obtained.				Boys.	Girls.	Total.
	1.				2.	3.	4.
1. Honours degree, 1st Class	8	2	10
2. " " 2nd Class	6	2	8
3. " " 3rd Class	1	1	2
4. Pass degree	1	—	1
5. Failed in degree examination..	—	—	—
6. Total	16	5	21

Table 124. [115] State Scholarships: Entrants and Scholarships awarded from the inception of the scheme to 1926.

(See Explanatory Notes, page 139.)

Year of Award.	Entrants.			Awards.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
1.	2.	3.	4.	5.	6.	7.
1920	703	387	1,090	104	93	197
1921	1,268	751	2,019	100	100	200
1922	—	—	—	—	—	—
1923	—	—	—	—	—	—
1924	1,904	1,138	3,042	148	117	265
1925	1,760	1,267	3,027	105	93	198
1926	2,105	1,405	3,510	108	92	200

Table 125. [—] State Scholarships: Analysis of Awards, by Type of Secondary School Pupil.

(See Explanatory Notes, page 139.)

Year of Award.	Awards gained by							
	Ex-Public Elementary School Pupils.				Other Pupils.			
	Free.		Fee-Paying.		Free.		Fee-Paying.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
1.	2.	3.	4.	5.	6.	7.	8.	9.
1920	76	60	3	2	18	8	7	23
1921	66	56	5	3	16	15	13	26
1922	—	—	—	—	—	—	—	—
1923	—	—	—	—	—	—	—	—
1924	103	68	1	9	23	18	21	22
1925	72	61	9	3	11	16	13	13
1926	78	53	4	7	14	23	12	9

Awards in Science, Historical Table.—Whitworth Scholarships.

ENGLAND AND WALES.

2.—AWARDS IN SCIENCE.

Table 126. [120]

Competitors and Awards.

(See Explanatory Notes, page 140.)

Year.	Competitors for Royal Scholarships and Free Studentships.		Awards.		Local Science Exhibitions.*	
	Men.	Women.	Royal Scholarships.	Free Studentships.	Awards.	
					Men.	Women.
1.	2.	3.	4.	5.	6.	7.
1920	67	—	9	3	24	3
1921	86	1	12	7†	26	2
1922	88	—	8	6	13	1
1923	129	—	16	8	26	—
1924	178	—	20	8	21	—
1925	169	3	20	10	20	—
1926	189	5	20	8	13	—

* Now described as "Additional Free Studentships."

† Includes 1 award to a woman competitor.

3.—WHITWORTH SCHOLARSHIPS.

(Provided from Trust Funds administered by the Board.)

Table 127. [120]

Competitors and Awards.

(See Explanatory Notes, page 140.)

	Number of Competitors.	Number of New Awards.
1.	2.	3.
(1) Whitworth Senior Scholarships	10	2
(2) Whitworth Scholarships	70	7*

* Includes one Honorary Award.

4. SCHOLARSHIPS, EXHIBITIONS AND STUDENTSHIPS IN ART.

Table 128. [122]

Scholarships, Exhibitions and Studentships awarded.
(See Explanatory Notes, Page 140.)

Year.	Royal College of Art Entrance Awards.†								Local Scholarships tenable at local Art Schools.†	Princess* of Wales' Scholar- ships.†	Royal College of Art Internal Awards.							
	Royal Exhibitions.		National Scholarships.		Free Studentships.		Free Admis- sions to holders of L.E.A. Awards.‡				Continuation Scholarships.		Travelling Scholarships.		Student Demon- strator- ships.	Free Admissions.		
	Men. 2.	Women. 3.	Men. 4.	Women. 5.	Men. 6.	Women. 7.	Men. 8.	Women. 9.			Men. 10.	Women. 11.	Women. 12.	Men. 13.	Women. 14.	Men. 15.	Women. 16.	Men. 17.	Men. 18.	Women. 19.
1920 ..	2	—	—	—	8	1	2	2	12	9	1	15	7	4	—	—	23	6
1921 ..	5	1	—	—	3	4	4	5	9	5	2	9	5	3	1	—	21	16
1922 ..	6	1	3	—	4	2	8	4	4	12	1	23	6	2	—	—	16	26
1923 ..	2	2	2	—	5	4	2	4	5	13	1	10	6	2	1	1	15	26
1924 ..	6	3	—	1	10	11	3	1	8	18	1	14	17	3	—	2	18	27
1925 ..	5	4	—	—	9	7	5	6	3	12	1	10	13	3	—	—	22	23
1926 ..	3	5	1	1	7	8	10	5	4	7	1	13	4	2	2	—	24	31

* Provided from Trust Funds administered by the Board.

† See Table 100 which gives the total number of candidates at the Board's Art Examinations in 1926, the greater number of whom are competitors for one or other of the Awards

‡ Certain of these awards were based on works submitted by persons not taking the Board's Examinations in Art.

ENGLAND AND WALES.

5.—STUDENTSHIPS FOR TEACHERS.

Table 129. [121] Applicants and Awards.

(See Explanatory Notes, page 141.)

1.	Applicants.		Awards.	
	Men. 2.	Women. 3.	Men. 4.	Women. 5.
1. Full-time Studentships	1	4	1	4
2. Part-time Studentships	84	24	73	19

6.—MAINTENANCE ALLOWANCES.

(See Explanatory Notes, page 142.)

Table 130. [123] Maintenance Allowances: Summary of Awards, by Type of Institution at which held.

Awards held at 1.	1925–26.			1924–25.		
	Expiring within the year. 2.	Continuing throughout the year. 3.	Taken up during the year. 4.	Expiring within the year. 5.	Continuing throughout the year. 6.	Taken up during the year. 7.
1. Universities	809	1,955	1,023	725	1,812	889
2. Secondary Schools :—						
(a) Minor Awards :—						
(i) Not limited to in- tending teachers	8,926	28,305	13,555	8,441	26,082	11,393
(ii) Limited to intend- ing teachers ..	2,461	1,668	1,419	2,384	2,207	684
(b) Intermediate Awards :						
(i) Not limited to in- tending teachers	1,656	1,902	2,328	1,536	1,942	1,988
(ii) Limited to intend- ing teachers ..	2,844	1,291	2,828	3,739	1,467	4,087
3. Technical, etc., Schools ..	4,620	3,126	9,886	4,042	2,708	8,928
Total	21,316	38,247	31,039	20,867	36,218	27,969
<i>Note.</i> —The figures for Technical, etc., Schools above include :—						
(i) Continuation Awards ..	3,191	843	4,848	2,905	599	4,069
(ii) Special Awards	312	123	2,316	185	82	2,653

ENGLAND AND WALES.

Table 131. [—] Maintenance Allowances.

Year.	Awards held at											
	Universities.			Secondary Schools.			Technical, etc., Schools and Other Awards			Total.		
	Expiring within the year.	Continuing throughout the year.	Taken up during the year.	Expiring within the year.	Continuing throughout the year.	Taken up during the year.	Expiring within the year.	Continuing throughout the year.	Taken up during the year.	Expiring within the year.	Continuing throughout the year.	Taken up during the year.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1920-21	426	1,440	842	8,394	22,767	16,235	2,679	2,760	8,800	11,499	26,962	25,877
1921-22	528	1,580	819	14,150	28,843	21,063	3,429	3,516	7,650	18,107	33,939	29,532
1922-23	625	1,604	711	17,027	29,884	16,907	3,974	3,882	6,675	21,626	35,370	24,293
1923-24	554	1,722	903	17,297	29,119	16,043	4,210	2,754	6,444	22,061	33,595	23,390
1924-25	725	1,812	889	16,100	31,698	18,152	4,042	2,708	8,928	20,867	36,218	27,969
1925-26	809	1,955	1,023	15,887	33,166	20,130	4,620	3,126	9,886	21,316	38,247	31,039

Table 132. [—] Maintenance Allowances : Awards taken up during the year.

Year.	Universities.		Secondary Schools.		Technical, etc., Schools and Other Awards.		Total.	
	Day.	Residential.	Day.	Residential.	Day.	Residential.	Day.	Residential.
	1.	2.	3.	4.	5.	6.	7.	8.	9.
1920-21 ..	842*	—	16,099	136	8,709	91	25,650	227
1921-22 ..	375	444	20,915	148	6,952	698	28,242	1,290
1922-23 ..	311	400	16,809	98	6,416	259	23,536	757
1923-24 ..	430	473	15,955	88	6,205	239	22,590	800
1924-25 ..	397	492	18,075	77	8,276	652	26,748	1,221
1925-26 ..	454	569	20,010	120	9,381	505	29,845	1,194

Note.—* Includes Residential Awards.

F.—PRELIMINARY EDUCATION, TRAINING, EXAMINATION AND SUPPLY OF TEACHERS.

ENGLAND AND WALES.

1.—PRELIMINARY EDUCATION AND TRAINING OF TEACHERS.

(See Explanatory Notes, page 142.)

(i)—PUPILS IN PREPARATORY CLASSES, PUPIL-TEACHERS AND STUDENT-TEACHERS.

Table 133. [126] Pupils in Preparatory Classes, Pupil-Teachers and Student-Teachers.

1.	Boys and Men.	Girls and Women.	Total.
2.	3.	4.	5.
1. Preparatory Class Pupils	90	556	646
2. Pupil-Teachers in Centres	495	1,502	1,997
3. Pupil-Teachers not in Centres	137	764	901
4. Student-Teachers	1,075	3,540	4,615
5. Total	1,797	6,362	8,159

Table 134. [127] Pupil-Teachers and Student-Teachers recognised for the first time in each of the five years 1921-25.

Year beginning 1st August.	Pupil-Teachers commencing.				Student-Teachers.		Total.
	In Centres.		Not in Centres.		Men.	Women.	
	Boys.	Girls.	Boys.	Girls.			
1.	2.	3.	4.	5.	6.	7.	8.
1921	356	1,509	61	502	747	3,501	6,676
1922	328	1,283	56	283	842	4,012	6,809
1923	246	932	36	206	991	4,022	6,433
1924	275	893	36	218	1,033	3,690	6,145
1925	245	680	48	252	1,075	3,540	5,840

Table 135. [129] Pupil-Teacher Centres, by their Kind and by Sex of Pupils.

(See Explanatory Notes, page 144.)

1.	For Boys only.	For Girls only.	For Boys and Girls.	Total
2.	3.	4.	5.	6.
1. Centres forming integral parts of Secondary Schools	41	47	57	145
2. Centres attached to Elementary Schools	1	14	8	23
3. Separately Organised Centres	1	7	1	9
4. Total	43	68	66	177

ENGLAND AND WALES.

Table 136. [130] Full-time Teachers on staff of separately organised Centres, by Qualification and Training.

(See Explanatory Notes, page 144.)

1.	Head Teachers.		Assistant Teachers.		Total.	
	Men. 2.	Women. 3.	Men. 4.	Women. 5.	Men. 6.	Women. 7.
1. Graduates :—						
(a) Trained ..	—	5	—	14	—	19
(b) Not trained ..	—	1	1	2	1	3
(c) Total	—	6	1	16	1	22
2. Non-Graduates :—						
(a) Trained ..	—	1	—	10	—	11
(b) Not trained ..	—	—	1	1	1	1
(c) Total	—	1	1	11	1	12
3. Total	—	7	2	27	2	34

Table 137. [131] Pupil-Teachers, by Organisation of Instruction.

1.	In Pupil-Teacher Centres.				Total. 5.	Not in Pupil-Teacher Centres. 6.
	Forming integral parts of Sec. Schs. 2.	Attached to Elem. Schs. 3.	Separately organised. 4.			
1. Boys.. ..	404	54	37	495	137	
2. Girls ..	880	382	240	1,502	764	
3. Total ..	1,284	436	277	1,997	901	

Table 138. [134] Pupil-Teachers recognised for the first time during the year, by Type of School last attended as a pupil.

1.	Public Elementary School. 2.	Preparatory Class. 3.	Sec. Sch. on the Efficient List. 4.	Other place of Instruction. 5.	Total. 6.
1. Boys.. ..	78	2	184	29	293
2. Girls ..	449	79	386	18	932
3. Total ..	527	81	570	47	1,225

ENGLAND AND WALES.

Table 139. [135] After-Careers of Pupil-Teachers whose recognition terminated during the year ended 31st July 1924.*(See Explanatory Notes, page 144.)*

1.	Numbers.				Percentages.			
	Entered T.C.	Became U.Ts.	Resi- due.	Total.	Entered T.C.	Became U.Ts.	Resi- due.	Total.
	2.	3.	4.	5.	6.	7.	8.	9.
1. In Pupil-Teacher Centres :—					%	%	%	%
(a) Boys	226	15	60	301	75.1	5.0	19.9	100.0
(b) Girls	557	419	293	1,269	43.9	33.0	23.1	100.0
(c) Total ..	783	434	353	1,570	49.9	27.6	22.5	100.0
2. Not in Pupil-Teacher Centres :—								
(a) Boys	27	14	11	52	51.9	26.9	21.2	100.0
(b) Girls	37	263	206	506	7.3	52.0	40.7	100.0
(c) Total ..	64	277	217	558	11.5	49.6	38.9	100.0

Table 140. [—] After-Careers of Student-Teachers whose recognition terminated during the year ended 31st July, 1924.*(See Explanatory Notes, page 144.)*

1.	Numbers.				Percentages.			
	Entered T.C.	Became U.Ts.	Resi- due.	Total.	Entered T.C.	Became U.Ts.	Resi- due.	Total.
	2.	3.	4.	5.	6.	7.	8.	9.
1. Men ..	744	61	100	905	82.2	6.7	11.1	100.0
2. Women ..	2,302	1,072	325	3,699	62.2	29.0	8.8	100.0
3. Total ..	3,046	1,133	425	4,604	66.2	24.6	9.2	100.0

ENGLAND AND WALES.

**(ii)—PRELIMINARY EXAMINATION FOR THE ELEMENTARY SCHOOL
TEACHERS' CERTIFICATE.**

(See Explanatory Notes, page 144.)

Table 141. [140] Results of the Examination in December, 1925.

1.	Boys and Men. 2.	Girls and Women. 3.	Total. 4.
1. Candidates presented for the whole examination :—			
(a) Presented	270	1,126	1,396
(b) Passed	133	433	566
(c) Failed	137	693	830
(d) Percentage of failures	50·7%	61·5%	59·5%
2. Candidates who, having already passed a part of a previous examination, were presented for the remaining part :—			
(a) Presented	43	215	258
(b) Passed	31	161	192
(c) Failed	12	54	66
(d) Percentage of failures	27·9%	25·1%	25·6%
3. Total of Candidates who have passed (Heads 1 (b) and 2 (b))..	164	594	758
4. Candidates presented for a part of the examination with a view to completing subsequently :—			
(a) Presented	2	65	67
(b) Passed	2	30	32
(c) Failed	—	35	35
(d) Percentage of failures	—	53·8%	52·2%

Table 142. [141] Analysis of Candidates presented for the whole or any part of the Examination, 1925, by Type of Candidate.

Type of Candidate.	Number presented.	Number who passed.	Number who failed.	Percent- age of failures.	Qualified for recognition as Uncertificated Teachers.
1.	2.	3.	4.	5.	6.
1. Pupil-Teachers instructed in Secondary Schools ..	34	26	8	%	26
2. Other Pupils in Secondary Schools	20	9	11	55·0	9
3. Pupil-Teachers instructed in separate Centres	170	131	39	22·9	131
4. Rural Pupil-Teachers	325	219	106	32·6	202
5. Other Candidates	1,172	405	767	65·4	390
6. Total	1,721	790	931	54·1	758

ENGLAND AND WALES.

2.—TRAINING AND CERTIFICATION OF TEACHERS.

(See Explanatory Notes, page 145.)

(i)—GENERAL.

Table 143. [143] Institutions recognised as Training Colleges.

(See Explanatory Notes, page 145.)

1.	Provided by Local Education Authorities.	Provided by Other Bodies.		Total.
		3. Recognised for grant.	4. Not recog- nised for grant.	
1. University Training Departments	1	15	—	16
2. Other Training Colleges :—				
(a) Two-Year Colleges	21	52	2	75
(b) Post-graduate Colleges ..	—	2	4	6
(c) Colleges for Domestic Subjects	9	3	—	12
3. Total	31	72	6	109

Table 144. [144] Students in Training, by Type of Institution attended.

(See Explanatory Notes, page 145.)

1.	Provided by Local Education Authorities.	Provided by Other Bodies.		Total.
		3. Recog- nised for grant.	4. Not recog- nised for grant.	
1. At University Training Departments	573	4,029	—	4,602
2. At other Training Col- leges :—				
(a) Two-Year Colleges	3,803	7,737	121	11,661
(b) Post-graduate Col- leges	—	62	49	111
(c) Colleges for Do- mestic Subjects..	496	261	—	757
3. Total at Training Colleges	4,872	12,089	170	17,131
4. At Institutions other than Training Colleges				21
5. Total Students in Training				17,152

Table 145. [145] Students in Training, by Type of Course.

1.	Men.	Women.	Total.
	2.	3.	4.
Students in Training :—			
1. For Elementary Schools	4,840	10,635	15,475
2. For Secondary Schools	354	563	917
3. As Teachers of Domestic Subjects	—	760	760
4. Total	5,194	11,958	17,152

ENGLAND AND WALES.

(ii)—TRAINING OF TEACHERS FOR ELEMENTARY SCHOOLS.

Table 146. [146]

Training Colleges.

(See Explanatory Notes, page 145.)

1.	Colleges for			Total. 5.
	Men & Women. 2.	Men only. 3.	Women only. 4.	
1. University Training Depts. provided by:—				
(a) A University or a Constituent College of a University ..	13	2	—	15
(b) A Local Education Authority ..	1	—	—	1
2. Two-Year Training Colleges provided by:—				
(a) A University	1	—	—	1
(b) A University College	4	—	—	4
(c) A Local Education Authority ..	5	2	14	21
(d) Some Other Body:—				
(i) Church of England ..	—	10	18	28
(ii) Roman Catholic ..	—	1	7	8
(iii) Wesleyan	—	1	1	2
(iv) Undenominational ..	1	1	9	11
3. Total	25	17	49	91

Table 147. [147] Students in Training, by Type of Institution attended.

(See Explanatory Notes, page 146.)

1.	Men. 2.	Women. 3.	Total. 4.
1. At University Training Departments provided by:—			
(a) A University or a Constituent College of a University ..	1,656	1,738	3,394
(b) A Local Education Authority	192	263	455
(c) Total	1,848	2,001	3,849
2. At Two-Year Training Colleges provided by:—			
(a) A University	205	318	523
(b) A University College ..	340	461	801
(c) A Local Education Authority	585	3,218	3,803
(d) Some Other Body:—			
(i) Church of England ..	1,366	2,559	3,925
(ii) Roman Catholic ..	190	789	979
(iii) Wesleyan	158	149	307
(iv) Undenominational ..	146	1,131	1,277
(e) Total	2,990	8,625	11,615
3. In Training elsewhere	2	9	11
4. Total Students in Training ..	4,840	10,635	15,475

ENGLAND AND WALES.

Table 148. [148] Students in Training, by nature of Residence.*(See Explanatory Notes, page 146.)*

1.	Men. 2.	Women. 3.	Total. 4.
1. At University Training Departments :—			
(a) Students resident in Hostels	427*	918*	1,345*
(b) Day Students	1,421	1,083	2,504
(c) Total	1,848	2,001	3,849
2. At Two-Year Training Colleges :—			
(a) Students resident :—			
(i) in the Training College	1,938	4,872	6,810
(ii) in Hostels	668	2,330	2,998
(b) Day Students	384	1,423	1,807
(c) Total	2,990	8,625	11,615
3. In Training elsewhere :—			
(a) Resident or Hostel Students	1	8	9
(b) Day Students	1	1	2
4. Total Students in Training	4,840	10,635	15,475

* These numbers include students at Oxford and Cambridge who were members of Colleges of the University.

Table 149. [149] Recognised and Private Students.*(See Explanatory Notes, page 146.)*

1.	Men. 2.	Women. 3.	Total. 4.
1. Recognised Students	4,778	10,405	15,183
2. Private Students taking Ordinary Courses	13	207	220
3. Private Students taking other Courses	49	23	72
4. Total	4,840	10,635	15,475

ENGLAND AND WALES.

Table 150. [150] Types of Courses followed by Students in the year.

(See Explanatory Notes, page 146.)

Type of Course.	Students.		
	Men.	Women.	Total.
1.	2.	3.	4.
1. Four-Year Courses	1,910	2,021	3,931
2. Two-Year Courses	2,708	8,406	11,114
3. One-Year Courses:—			
(a) Advanced Students ..	15	28	43
(b) Certificated Students ..	9	36	45
(c) Total	24	64	88
4. Third-Year Courses:—			
(a) Degree Courses ..	133	74	207
(b) Other continuous Courses	16	29	45
(c) Deferred Courses ..	—	16	16
(d) Total	149	119	268
5. Short Courses	—	2	2
6. Other Courses (Private Students)	49	23	72
7. Total Students in Training ..	4,840	10,635	15,475

Table 151. [153] Students admitted to Training Colleges, by Age.

(See Explanatory Notes, page 146.)

Age on admission.	Men.	Women.	Total.
1.	2.	3.	4.
1. 17 and under 18	129	176	305
2. 18 " 19	1,137	2,861	3,998
3. 19 " 20	536	1,301	1,837
4. 20 " 21	132	395	527
5. 21 " 22	40	104	144
6. 22 " 23	33	51	84
7. 23 " over	89	157	246
8. Total	2,096	5,045	7,141

ENGLAND AND WALES.

Table 152. [154] Students admitted to Training Colleges in the five years 1921 to 1925, by previous Status as Teachers.

(See Explanatory Notes, page 146.)

Year of Admission.	Certificated Teachers.		Uncertificated Teachers.		Student-Teachers.		Pupil Teachers.		Not previously Recognised as Teachers.		Total.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1921	27	81	396	1,399	472	1,895	195	649	1,794	1,468	2,884	5,492
1922 ..	20	41	299	948	558	2,039	236	522	936	1,501	2,049	5,051
1923 ..	12	21	210	671	602	2,190	256	519	769	1,385	1,849	4,786
1924 ..	12	25	195	534	770	2,209	231	508	790	1,579	1,998	4,855
1925 ..	7	38	244	707	742	2,081	179	413	924	1,806	2,096	5,045

Table 153. [155] Students admitted to Training Colleges, by Previous Education.

(See Explanatory Notes, page 146.)

1.	Men.	Women.	Total.
1.	2.	3.	4.
1. Educated in Secondary Schools on the Efficient List :—			
(a) Recognised as Pupil-Teachers ..	151	337	488
(b) Other Pupils	1,732	4,235	5,967
2. Educated in Pupil-Teacher Centres ..	53	219	272
3. Pupil-Teachers under Schemes for Rural Areas	22	47	69
4. Other Persons	138	207	345
5. Total	2,096	5,045	7,141

Table 154. [156] Students admitted to Training Colleges, by Qualifying Examination passed.

(See Explanatory Notes, page 146 and 147.)

1.	University Training Departments.	Two-Year Training Colleges.	Total
1.	2.	3.	4.
1. Preliminary Examination for the Certificate	—	259	259
2. Approved Secondary School First Examination or Matriculation	574	4,997	5,571
3. Approved Secondary School Second Examinations	719	385	1,104
4. Final Examinations for a Degree	74	30	104
5. Certificate Examination for Acting Teachers	2	42	44
6. Other Examinations	3	56	59
7. Total	1,372	5,769	7,141

ENGLAND AND WALES.

Table 155. [157] Students who completed Courses of Training.
(See Explanatory Notes, page 147.)

1.	1925-26.			1924-25.	1923-24.	1922-23.	1921-22.
	Men.	Women.	Total.	Total.	Total.	Total.	Total.
	2.	3.	4.	5.	6.	7.	8.
1. Candidates for recognition as Certificated Teachers who—							
(a) Qualified	1,380	3,988	5,368	5,537	5,475	6,377	5,672
(b) Failed to qualify and were—							
(i) Recognised temporarily as Certificated Teachers	259	489	748	620	673	913	674
(ii) Recognised as Uncertificated Teachers.. ..	1	17	18	19	34	46	24
(iii) Refused all recognition	—	—	—	—	2	1	1
(c) Postponed their Final Examination	165	76	241	214	209	117	52
2. Certificated Students not previously trained who—							
(a) Completed their Course satisfactorily	9	35	44	41	35	73	114
(b) Failed to complete their Course satisfactorily	—	—	—	1	—	—	1
(c) Postponed their Final Examination	—	—	—	—	—	—	2
3. Ex-Service Students who completed a Special Course satisfactorily	—	—	—	1	—	—	12
4. Total of Heads 1-3 ..	1,814	4,605	6,419	6,433	6,428	7,527	6,552
5. Third-Year Students taking Continuous Courses*	11	28	39	40	53	132	249
6. Third-Year Students taking Deferred Courses	—	14	14	8	9	22	46
7. Private Students taking Special Courses	19	4	23	14	17	10	11
8. Total of Heads 4-7 ..	1,844	4,651	6,495	6,495	6,507	7,691	6,858

* In addition there were the following Third-Year Students who are included in Head 1. (See Explanatory Note, page 147.)

In 1925-26 ..	212 students.
1924-25 ..	204 ..
1923-24 ..	115 ..
1922-23 ..	30 ..

ENGLAND AND WALES.

Table 156. [159] Final Examinations taken by Students who completed Courses.
(See Explanatory Notes, page 147.)

1.	Men.	Women.	Total.
1.	2.	3.	4.
1. Four-Year Students who completed Full Course, and :—			
(a) Qualified for recognition as Certificated Teachers—			
(i) Passed Final Examination for a Degree ..	215	284	499
(ii) Did not pass Final Examination for a Degree	44	49	93
(b) Failed to qualify—			
(i) Failed in Degree Examination only	2	3	5
(ii) Failed in Professional Examination only ..	12	2	14
(iii) Failed in both Examinations	5	3	8
(c) Total of (a) and (b)	278	341	619
2. Four-Year Students who completed Reduced Course, and :—			
(a) Qualified for recognition as Certificated Teachers..	7	5	12
(b) Failed to qualify	29	14	43
(c) Total of (a) and (b)	36	19	55
3. Two-Year Students who took the Board's Final Examination, and :—			
(a) Qualified for recognition as Certificated Teachers—			
(i) By Examination	672	2,809	3,481
(ii) Were excused their Final Examination ..	3	18	21
(b) Failed to qualify	143	383	526
(c) Total of (a) and (b)	818	3,210	4,028
4. Two-Year Students who took an Alternative College Examination, and :—			
(a) Qualified for recognition as Certificated Teachers—			
(i) By Examination	216	692	908
(ii) Were excused their Final Examination ..	—	3	3
(b) Failed to qualify	34	77	111
(c) Total of (a) and (b)	250	772	1,022

ENGLAND AND WALES.

Table 156—continued. Final Examinations taken by Students who completed Courses.

1.	Men.	Women.	Total.
2.	3.	4.	
5. Two-Year Students who took a Degree Examination, and :—			
(a) Qualified for recognition as Certificated Teachers..	78	28	106
(b) Failed to qualify—			
(i) Failed in Degree Examination only	20	17	37
(ii) Failed in Professional Examination only ..	6	3	9
(iii) Failed in both Examinations	2	3	5
(c) Postponed their Final Examination.. .. .	165	75	240
(d) Total of (a), (b) and (c)	271	126	397
6. One-Year Students (Advanced), who :—			
(a) Qualified for recognition as Certificated Teachers..	14	26	40
(b) Failed to qualify	1	1	2
(c) Total of (a) and (b)	15	27	42
7. One-Year Students (Certificated), who :—			
(a) Completed Course satisfactorily	9	35	44
(b) Did not complete Course satisfactorily	—	—	—
(c) Total of (a) and (b)	9	35	44
8. Third-Year Students not recognised as Certificated Teachers at the end of their second year of training who completed a Degree Course, and :—			
(a) Qualified for recognition as Certificated Teachers..	131	74	205
(b) Failed to qualify	6	—	6
(c) Postponed their Final Examination	—	1	1
(d) Total of (a), (b) and (c)	137	75	212
9. Total Number of Students who completed Courses ..	1,814	4,605	6,419

ENGLAND AND WALES.

Table 157. [160] Results of the Examination held by the Board for Students who finished their Period of Training in 1926.*(See Explanatory Notes, page 147).*

(A.) By Type of Student.

1.	Entered.			Passed.			Failed.		
	Men. 2.	Women. 3.	Total. 4.	Men. 5.	Women. 6.	Total. 7.	Men. 8.	Women. 9.	Total. 10.
1. Two-Year Students taking the whole Examination	818	3,210	4,028	675	2,827	3,502	143	383	526
2. One-Year Students (Advanced)	5	12	17	5	11	16	—	1	1
3. One-Year Students (Certificated) ..	7	28	35	7	28	35	—	—	—
4. Other Students taking the Examination ..	183	270	453	177	266	443	6	4	10
5. Total of Heads 1-4 ..*	1,013	3,520	4,533	864	3,132	3,996	149	388	537
6. Ex-Students re-examined	236	421	657	139	272	411	97	149	246
7. Total *	1,249	3,941	5,190	1,003	3,404	4,407	246	537	783

* These figures include 26 Students (4 Men and 22 Women) who were unable to enter for the Examination owing to sickness or some other sufficient reason. Of these, 24 Students (4 Men and 20 Women) were regarded as having passed the Examination.

ENGLAND AND WALES.

Table 157—continued.

(B.) By Subject of Examination, 1926.

1.	Entered.			Obtained Distinction.			Obtained Pass with Credit (Ord.).			Percentage of	
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Distinction.	Total Marks of Distinction or Credit.
	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Professional Subjects:—											
Principles of Teaching	1,006	3,503	4,509	14	95	109	—	—	—	2.4	2.4
Hygiene	1,007	3,497	4,504	8	55	63	—	—	—	1.4	1.4
Physical Training ..	1,007	3,546	4,553								
General Subjects:—											
GROUP A.											
English—											
Ordinary Course ..	668	2,653	3,321	—	—	—	12	51	63	—	—
Advanced Course ..	158	544	702	6	34	40	—	—	—	5.7	—
Total	826	3,197	4,023	6	34	40	12	51	63	—	2.6
History—											
Ordinary Course ..	210	1,303	1,513	—	—	—	16	74	90	—	—
Advanced Course ..	122	313	435	7	19	26	—	—	—	6.0	—
Total	332	1,616	1,948	7	19	26	16	74	90	—	6.0
Geography—											
Ordinary Course ..	236	1,062	1,298	—	—	—	6	32	38	—	—
Advanced Course ..	204	338	542	14	16	30	—	—	—	5.5	—
Total	440	1,400	1,840	14	16	30	6	32	38	—	3.7
Mathematics—											
Ordinary Course ..	323	539	862	—	—	—	73	87	160	—	—
Advanced Course ..	85	67	152	20	11	31	—	—	—	20.4	—
Total	408	606	1,014	20	11	31	73	87	160	—	18.8
Elementary Science..											
Advanced Science ..	163	372	535	20	49	69	—	—	—	12.9	12.9
French	71	322	393	5	38	43	—	—	—	10.9	10.9
Latin	4	1	5	—	—	—	—	—	—	—	—
Welsh—											
Ordinary Course ..	50	59	109	—	—	—	11	11	22	—	—
Advanced Course ..	18	32	50	1	1	2	—	—	—	4.0	—
Total	68	91	159	1	1	2	11	11	22	—	15.1
GROUP B.											
Theory of Music—											
Ordinary Course ..	534	1,659	2,193	—	—	—	73	342	415	—	—
Advanced Course ..	59	224	283	10	22	32	—	—	—	11.3	—
Total	593	1,883	2,476	10	22	32	73	342	415	—	18.1
Drawing—											
Ordinary Course ..	840	2,097	2,937	—	—	—	64	248	312	—	—
Advanced Course ..	64	308	370	20	100	120	—	—	—	32.4	—
Total	904	2,403	3,307	20	100	120	64	248	312	—	13.1
Needlework											
Gardening	—	2,907	2,907	—	—	—	—	355	355	—	12.2
Housecraft	77	143	220	12	13	25	—	—	—	11.4	11.4
Handwork	—	53	53	—	4	4	—	—	—	7.5	7.5
	123	145	268	4	30	34	—	—	—	12.7	12.7

ENGLAND AND WALES.

Table 158. [161] University Degree Examinations passed by Students, by Universities.

(See Explanatory Notes, page 147.)

University Type of Student. 1.	Honours Degrees.			Pass Degrees.		
	Men. 2.	Women. 3.	Total. 4.	Men. 5.	Women. 6.	Total. 7.
1. Four-Year Students :						
Oxford	1	—	1	3	2	5
Cambridge	—	—	—	4	—	4
Durham	1	1	2	19	20	39
London	10	24	34	2	6	8
Manchester	9	9	18	11	21	32
Birmingham	5	2	7	13	8	21
Liverpool	—	4	4	19	35	54
Leeds	28	38	66	14	15	29
Sheffield	—	—	—	8	20	28
Bristol	—	—	—	13	22	35
Wales	—	8	8	66	51	117
Belfast	—	—	—	1	—	1
Total.. ..	54	86	140	173	200	373
2. Two-Year and Third- Year Students :						
Durham	—	—	—	10	—	10
London	20	16	36	25	17	42
Total.. ..	20	16	36	35	17	52
3. Total	74	102	176	208	217	425

Table 159. [165] Teachers on Staff of Training Colleges on 31st March, 1926.

(See Explanatory Notes, page 148.)

1.	Men. 2.	Women. 3.	Total. 4.
1. Full-time Teachers :—			
(a) Graduates :—			
(i) Trained	121	251	372
(ii) Certificated but not trained	4	11	15
(iii) Others	64	82	146
(b) Non-Graduates :—			
(i) Certificated and trained	7	68	75
(ii) Certificated but not trained	—	3	3
(iii) Others	21	164	185
(c) Total	217	579	796
2. Part-time Teachers	141	129	270

Note.—The Staffs of the University Training Departments (*i.e.*, the Training Colleges included under Head 1 of Table 146) are not included in this table.

ENGLAND AND WALES.

(iii)—TRAINING OF TEACHERS FOR SECONDARY SCHOOLS.

(See Explanatory Notes, page 148.)

Table 160. [166] Training Colleges.

1.	Colleges for			Total. 5.
	Men and Women. 2.	Men only. 3.	Women. only. 4.	
1. University Training Departments ..	14	2	—	16
2. Other Training Colleges—				
(a) On the Grant List	3	—	3	6
(b) Not on the Grant List	1	1	2	4
3. Total	18	3	5	26

Table 161. [167] Students taking Courses of Secondary Training.

1.	Men. 2.	Women. 3.	Total. 4.
1. At University Training Departments	345	408	753
2. At other Training Colleges	9	148	157
3. At Secondary Schools (R.T.T. Art. 69)	—	7	7
4. Total	354	563	917

Table 162. [168] Students taking Courses of Secondary Training, by Qualification on Entrance.

1.	Men. 2.	Women. 3.	Total. 4.
1. Students with an Honours Degree :—			
(a) Transferred from a Four-Year Course	271	229	500
(b) Other Students	80	272	352
2. Students with a Pass Degree	2	55	57
3. Students with other qualifications	1	7	8
4. Total	354	563	917

ENGLAND AND WALES.

Table 163. [169] Students taking Courses of Secondary Training, by Qualification on leaving in the five years 1921-22 to 1925-26.

1.	Students who obtained a University Teaching Diploma or Certificate.			Other Students who completed their Course successfully.			Students who failed to complete their Course successfully.			Total.		
	Men. 2.	Women. 3.	Total. 4.	Men. 5.	Women. 6.	Total. 7.	Men. 8.	Women. 9.	Total. 10.	Men. 11.	Women. 12.	Total. 13.
1921-22 ..	*	*	*	*	*	*	*	*	*	213	265	478
1922-23 ..	286	291	577	27	30	57	14	11	25	327	332	659
1923-24 ..	205	324	529	29	38	67	14	7	21	248	369	617
1924-25 ..	258	454	712	30	29	59	8	24	32	296	507	803
1925-26 ..	310	508	818	30	22	52	11	23	34	351	553	904

* Figures not available.

(iv)—TRAINING OF TEACHERS OF DOMESTIC SUBJECTS.

(See Explanatory Notes, page 148.)

Table 164. [170] Training Colleges.

1.	Colleges for Women. 2.
1. Training Colleges provided by Local Education Authorities.. ..	9
2. Training Colleges provided by Other Bodies	3
3. Total	12

ENGLAND AND WALES.

Table 165. [171] Students in Training, by Type of Course.

1.	Women. 2.
1. Diploma Course Students	582
2. Third-Year Students :—	
(a) Taking Continuous Courses	133*
(b) Taking Deferred Courses	10†
3. Private Students taking Special Courses	35
4. Total Students in Training	760

* One of these was at an Institution other than a Training College.

† Two of these were at an Institution other than a Training College.

Table 166. [173] Students who completed Courses of Training in Domestic Subjects.

(See Explanatory Notes, page 149.)

1.	Passed. 2.	Failed. 3.	Total. 4.
1. Students completing Two-Year Courses	229	42	271
2. Students completing Continuous Third-Year Courses	130	3	133
3. Students completing Deferred Third-Year Courses	9	—	9
4. Total	368	45	413

ENGLAND AND WALES.

(v) OTHER COURSES FOR TEACHERS.

Table 167. [174, 175] Courses, Subjects, and Number of Teachers attending.

(See Explanatory Notes, page 149.)

Subject.	Courses in each subject.	Teachers attending.
1.	2.	3.
1. Short Full-time Courses* :—		
English	6	265
Welsh	2	43
Latin	1	38
French	2	78
History and Geography	7	210
Pedagogy	18	1,230
Mathematics	3	92
Science	18	581
Commercial	1	37
Rural Science	8	189
Domestic	25	558
Physical Training (including Dancing and Hygiene)	18	504
Handwork	29	416
Art	15	365
Music	5	216
2. Part-time Courses† :—		
(a) In preparation for the Board's Certificate Examination		
Examination	36	1,027
Preliminary Certificate Examination	27	393
(b) Other Courses :—		
English	35	3,507
Welsh	41	925
French	1	125
Modern Languages	1	65
History and Geography	25	1,737
Pedagogy	50	3,884
Mathematics	12	473
Science	19	943
Commercial	4	61
Rural Science	32	1,453
Domestic	79	2,224
Physical Training (including Dancing and Hygiene)	334	12,151
Handwork	95	2,071
Art	28	1,719
Music	35	3,044
Mining	1	11

* Of these, 47 were provided by the Board of Education, 61 by Local Education Authorities, and 50 by other Bodies.

† Of these, 6 were provided by the Board of Education and 849 by Local Education Authorities.

ENGLAND AND WALES.

3.—TEACHERS RECOGNISED.

Table 168. [—] Teachers recognised during the years 1924, 1925 and 1926.

(See Explanatory Notes, page 149.)

Year.	Certificated.			Uncertificated.			Teachers of Special Subjects.				
	Men.	Women.	Total.	Men.	Women.	Total.	Handicraft.	Domestic Subjects.	Other Subjects.		
<i>1.</i>	<i>2.</i>	<i>3.</i>	<i>4.</i>	<i>5.</i>	<i>6.</i>	<i>7.</i>	<i>8.</i>	<i>9.</i>	<i>10.</i>	<i>11.</i>	<i>12.</i>
1924	1,949	5,151	7,100	451	3,285	3,736	86	478	5	11	16
1925	2,212	5,734	7,946	507	3,116	3,623	91	408	4	9	13
1926	2,041	5,245	7,286	446	2,529	2,975	82*	288	3	4	7

* Includes one woman.

Table 169. [177, 178] Persons recognised as Certificated Teachers during the years 1924, 1925 and 1926.

(See Explanatory Notes, page 150.)

<i>1.</i>	1926.			1925.			1924.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
<i>1.</i>	<i>2.</i>	<i>3.</i>	<i>4.</i>	<i>5.</i>	<i>6.</i>	<i>7.</i>	<i>8.</i>	<i>9.</i>	<i>10.</i>
1. Trained in recognised Courses for Elementary Schools	1,574	4,362	5,936	1,586	4,518	6,104	1,565	4,513	6,078
2. Trained in recognised Courses for Secondary Schools	155	244	399	164	223	387	104	92	196
3. Recognised as trained otherwise	45	138	183	35	150	185	44	99	143
4. Total trained	1,774	4,744	6,518	1,785	4,891	6,676	1,713	4,704	6,417
5. Certificated <i>not</i> trained	267	501	768	427	843	1,270	236	447	683
6. Total	2,041	5,245	7,286	2,212	5,734	7,946	1,949	5,151	7,100

II.—EXPLANATORY NOTES.

INTRODUCTORY.

The period to which this Volume of Statistics refers, stated on the title page as the year 1925-26, comprises varying periods (usually of one year) between 1st April, 1925, and 31st July, 1926. Where it is not indicated in the tables themselves, the precise period or the precise date in the case of statistics related to a particular day for each of the main branches of education will be found in a note under each of the main sections below.

It should be understood that the notes refer throughout to the conditions existing and the Regulations in force during the period to which the statistics relate; it must not be assumed that the same conditions or Regulations are operative at the present time.

In tables showing pupils by age, the heading 3-4 means 3 and under 4 years old; 4-5 means 4 and under 5 years old, and so on.

The Historical Tables have been compiled from the figures for the year 1925-26 and those of preceding years, selected in each case so as to give as far as possible a true picture of important developments. With some exceptions these tables include the figures for the last five years, covering the period since the last publication of historical tables in the volumes for 1920-21.

A.—GENERAL TABLES.

TABLE 1.

The Council of every Administrative County and of every County Borough is the Local Education Authority for that County or County Borough for both Elementary and Higher Education; except that the Council of every Borough with a population of over 10,000, and of every Urban District with a population of over 20,000 (calculated in either case according to the Census of 1901), is the Local Education Authority for that Borough or Urban District for Elementary Education (Section 3 of the Education Act, 1921).

The population is given according to the Censuses of 3rd April, 1911, and 19th June, 1921. In all cases of alteration of boundary occurring after 3rd April, 1911, up to the date to which the table relates, the figures, both for 1911 and for 1921, relate to the new area. In other respects the table relates to 31st March, 1926.

B.—PUBLIC AND OTHER ELEMENTARY SCHOOLS.

TABLES 3-45.

Period to which the statistics relate.

From 1919-20 onwards the school year has been a uniform school year ending for all schools on 31st March; previously it had varied with individual schools. All the particulars given in the Tables for 1919-20 and later years relate to the facts as existing in

all schools on the last day of the school year, viz., 31st March, except in respect of average attendance, average number on the registers, and leavers during the year, which relate to the whole year.

All figures for years prior to 1919-20 are for the facts as existing in each school on the last day of the school year* for that school which ended within the statistical year (*i.e.*, within the period from the 1st August to the following 31st July), except the figures relating to the number on the registers for 1913-14 which are for the single date 31st January, 1914, and those relating to accommodation for 1905-6, 1910-11, and 1913-14 which are for the single dates 31st July, 1906, 1911 and 1914 respectively.

Explanation of Terms.

It will be convenient to explain here the meaning of certain terms used in the tables, and to draw attention to one or two general points which affect the statistics in these tables.

An *Elementary School* is defined by Section 170 (1) of the Education Act, 1921, as a school "at which elementary education is the principal part of the education there given." But it is provided in Section 20 of that Act that courses of advanced instruction shall be provided for older children.

A *Public Elementary School* is a school which satisfies certain further requirements imposed by Section 27 (1) of the Education Act, 1921, namely, that certain conditions as to attendance at religious observance and instruction shall be observed, that the school shall be open to inspection, and that it shall be conducted in accordance with the conditions laid down in the Code of Regulations for Public Elementary Schools in force for the time being.

The term *Non-Local Schools* applies to certain Public Elementary schools, not maintained by the Local Education Authority, which are attached to Boarding Institutions, and the Managers of which receive grants direct from the Board of Education, in accordance with Section 25 of the Education Act, 1921.

Special Schools include Certified Schools for Blind, Deaf, Mentally Defective, Physically Defective or Epileptic Children (*see* notes on Tables 27-30).

The term *Certified Efficient School* is applied to a school which is an Elementary School within the meaning of the Act of 1921, and which, although it does not receive grants and is not required to comply with the conditions for a Public Elementary School, is open to inspection and is certified efficient by the Board of Education. The term is defined in Section 170 (2) of the Education Act, 1921.

Council and Voluntary Schools.—Under the Act of 1902 (*see* Section 17 of the 1921 Act) a Public Elementary School must, except in the case of certain schools attached to institutions, be maintained by the Local Education Authority. If the buildings are also provided by the Local Education Authority the school is

* *See* the description of the term "school year," given in the Explanatory Notes to the Statistical Volume for 1913-14, page 190.

termed a Council School (or in the phraseology of the Act, a school provided by the Local Education Authority); otherwise it is called a Voluntary School (or in the phraseology of the Act, a school not provided by the Local Education Authority).

For the purpose of the figures shown under Denominations, Voluntary Schools have been classified according to the nature of the Religious Instruction given.

Urban and Rural.—In some of the tables the figures for areas under County Councils are shown separately for the Urban and Rural parts. For this purpose the urban portion of each County comprises all the Municipal Boroughs and Urban Districts in its area which are not Local Education Authorities under Section 3 of the Education Act, 1921.

Age of School Attendance.—Under the present law of school attendance, as contained in Part IV of the Education Act, 1921, every child in England and Wales is liable to remain at school till the end of the school term in which he attains the age of 14. Local Education Authorities have, however, power to make bye-laws requiring children to remain at school till the end of the term in which they attain the age of 15, and a small number of Authorities have passed bye-laws accordingly. The power to provide instruction in a Public Elementary School is limited (except by consent of the Board of Education) to the provision of instruction for pupils who, at the close of the school year,* will not be more than 16 years of age [Education Act, 1921, Sections 26 (1) and 138 (1)]. In the case of Certified Schools for Blind, Deaf, Defective, or Epileptic Children, not only the power to provide instruction but the period of compulsory attendance is extended to the end of the term in which the scholar completes 16 years of age.†

Department.—A department is a portion of a school which normally has a separate head teacher. "Infants' Departments" may be taken to be departments for younger pupils between the ages of 3 and about 9. Other departments are described as either "Boys', Girls', or Mixed Departments" and these are sub-divided into Junior and Senior, Junior Departments generally containing pupils up to the age of 11-12, and Senior Departments pupils over 11.

Accommodation.—This is the accommodation as recognised by the Board. The figures given should, however, be received with caution, as the accommodation of many schools was last assessed at a time when rooms were recognised for classes larger than it is now the practice to allow.

Class.—A class is the whole group of pupils normally under the charge of one teacher.

The *Average Number of Pupils on the Registers* is the average of the number on the registers in each week of the year,

* Under Section 26 (2) of the Education Act, 1921, "the close of the educational year" may, on the application of the Local Education Authority, be substituted for this purpose for "the close of the school year."

† Education Act 1921, Sections 61 and 138 (1).

and should be a very close approximation to the average of the number on the registers on each day in the year during which the school was open.

The *Average Attendance* is the average number of pupils in attendance at each meeting of the school during the year (*see* Article 24 of the Code).

The Board publish periodically a list of Public Elementary and Certified Efficient Schools, which contains certain information about each school (*see* No. 10 in the List of Publications on page 153).

Alterations made in Tables.

As regards the Elementary School tables generally, some of the former tables have been omitted altogether as obsolete or redundant (Nos. 7, 8, 9, 13, in the last volume) and several of the former Teacher tables have been combined into a new omnibus table (Table 14, *see* note on page 124) which provides in a convenient form information which has hitherto been contained in the separate tables.

Minor alterations have been made in Tables 6, 8, 21 and 22: Table 16 of the last volume has been split up (now Tables 11 and 12) so as to show the number of Public Elementary School pupils who proceeded to Secondary Schools and other full-time institutions respectively, and two new tables have been added, one of which, (No. 19) shows the number of departments as now organised; whilst the other (No. 23) shows the number of P.I. Centres with the Contributory Schools and the subjects taught.

TABLE 7.

This table gives, for the various types of area, information as to the age range of Public Elementary School pupils, already given for the country as a whole in Table 4. In particular it shows how the various types of area are in fact educating pupils below and above the normal admission and leaving ages of 5 and 14 respectively.

TABLE 9.

The object of this Table is to indicate the general regularity of attendance which prevails in the various types of school and area, the average attendance being compared for this purpose with the average number on the registers.

TABLE 10.

This table is intended to show the total number of pupils who left the public elementary school system for whatever reason—*i.e.*, it includes in addition to pupils shown in Tables 11, 12 and 13, pupils who left school for various reasons either unclassified (*e.g.*, emigration) or unknown and those who died.

TABLE 13.

This Table is intended to include pupils who left for employment, including apprenticeship and employment at home, even though they did not immediately find employment.

Teacher Tables.

TABLES 14-16.

Certificated Teachers, Uncertificated Teachers and Teachers of Special Subjects are teachers who have held the qualifications

required by the Regulations in force at the time and have been recognised individually as such by the Board. A teacher recognised in one of these capacities and employed full-time is in contributory service and eligible for benefits under the Teachers' Superannuation Acts. The qualifications for recognition have been modified from time to time. Those at present required are set out in Schedule I of the Code of 1st August, 1926.

Supplementary Teachers are not subject to the provisions of the Teachers' Superannuation Acts. They are suitable women over 18 years of age whose employment, which is now practically confined to teaching younger children in Rural Schools, is subject to the approval by H.M. Inspector of the general arrangements made by the Local Education Authority for staffing their schools. The number whose employment can be approved in any area is limited.

Student-Teachers and Pupil-Teachers are described on page 143. In the table relating to Public Elementary Schools, only those student-teachers and pupil-teachers are included who were employed in those schools on March 31st, 1926.

Other teachers. Under this heading are included a few teachers without any recognised status under the Code, and monitors.

TABLE 14.

This table shows by types of area the number of men and women teachers of the various grades employed in Public Elementary Schools with percentages showing what proportions of the total number of Certificated, Uncertificated and Supplementary teachers are Certificated, Uncertificated and Supplementary respectively. Certificated teachers are sub-divided into College-trained, and others, a College-trained teacher being a teacher who has completed satisfactorily a course of training approved by the Board under the Regulations for the Training of Teachers. The number of Special Subjects teachers who are not also Certificated or Uncertificated is given separately instead of being included under "Others" as has been the practice previously.

TABLE 15.

This table shows the numbers of Certificated, Uncertificated and Supplementary teachers, men and women, employed in the different types of department.

TABLE 16.

This table shows the staff per 1,000 pupils in average attendance in the various types of area and for the country as a whole. It is intended to show in a convenient form the relative numerical strength of the adult teaching staff employed. Under each head is given, not the actual number of teachers, but the proportionate number for each group of 1,000 pupils. The figures for each Local Education Authority which, with particulars of the size of classes, were given in Table 39 of the 1924-25 volume, have this year been issued as a separate publication, viz., List 44.

The above tables relate only to full-time teachers employed in Public Elementary Schools. They do not include teachers employed in Practical Instruction Centres. Information as to the number of these teachers for 1925-26 is not available. In 1924-25 the number was 3,881.

TABLE 17.

The limits of average attendance adopted in this table are based on the limit of 30 named in Section 19 (1) of the Education Act, 1921, and on the grading of departments adopted by the Standing Joint Committee on Standard Scales of Salaries for Teachers in Public Elementary Schools.

TABLE 18.

This table shows the sizes of departments in the different types of area. Similar figures for each Local Education Authority which were given in Table 37 of the volume for 1924-25 have been dropped.

TABLES 20 AND 22.

In Tables 20 and 22 classes have been classified according to the age of the bulk of the pupils in each class.

TABLES 24-26.

These tables give summary figures relating to Certified Efficient Schools. The certification of these schools is now governed by Rules 16. They are all maintained by voluntary Bodies.

Certified Special Schools.

TABLES 27-30.

Part V of the Education Act, 1921, Sections 51-69, codifies the provisions of previous Acts with regard to the education of Blind, Deaf, Defective and Epileptic Children; and there are special Regulations of the Board (viz. Grant Regulations No. 19) applying to these particular types of schools. The Certified Day Schools and Boarding Schools, of which statistics are given in these tables, are schools certified by the Board as suitable for providing elementary education for Blind, Deaf, Mentally Defective, Physically Defective or Epileptic Children, as the case may be, under these provisions, and complying with the requirements of the special Regulations of the Board referred to. The schools are collectively described in the tables as "Special Schools."

The Mentally Defective, Physically Defective, or Epileptic Children, for whom provision is made in the Certified Schools to which the statistics given in these tables relate, are children ascertained to be defective or epileptic, as the case may be, within the meaning of the Education Act, 1921. Under Section 55 (1) (a) of that Act, Defective Children are defined as children who, "not being imbecile, and not being merely dull or backward, are

defective, that is to say . . . by reason of mental or physical defect, are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but are not incapable by reason of that defect of receiving benefit from instruction in such special classes or schools as under this part of this Act may be provided for Defective Children."

Under Section 55 (1) (b) of the same Act, Epileptic Children are defined as children who, "not being idiots or imbeciles, are unfit by reason of severe epilepsy to attend the ordinary public elementary schools."

In the case of Certified Schools for Blind, Deaf, Mentally Defective, Physically Defective, or Epileptic Children, not only the power to provide education but also the period of compulsory attendance is extended to the end of the term in which the child completes 16 years of age. The Board have power to pay grant under their Regulations in respect of such children who have completed two years of age.

The Board publish periodically a List of Special Schools containing certain statistical information relating to each school (List 42.)

TABLES 31-37.

(Historical Tables.)

The Elementary historical tables last given in the volume for 1920-21 have been brought up to date, some additional information as to Specialist Teachers being also given in Table 36. Two new historical tables have been introduced, one, No. 37, showing the progress that has been made in recent years in reducing the size of classes, the other, No. 35, the extent to which schools and departments have been reorganised into Junior and Senior in accordance with a movement which has now become common with many Authorities who are seeking in this way to provide greater facilities for the advanced instruction of the older children.

C.—SECONDARY AND PREPARATORY SCHOOLS ON THE EFFICIENT LIST.

TABLES 46-83.

The statistics given in these tables relate to the school year ending on 31st July; except that in the case of a few Secondary Schools on the Grant List the figures relate to the seven months ending 31st July.

A Secondary School, in the sense in which the term is used in the Board's Regulations, must offer to its pupils a progressive course of general education (with the requisite organisation, curriculum, teaching staff, and equipment) of a kind and amount suitable for pupils of an age-range at least as wide as from 12 to 17.

The provision, if any, made for pupils below the main school must be similarly suitable, and in proper relation to the work done in the main school.

A Preparatory School is defined as one which makes similar provision for boys or girls of an age-range at least as wide as from 9 to 13, and from which the pupils normally proceed to continue their education at a Secondary School or an institution of similar type.

For Secondary Schools the Regulations require that an adequate proportion of the pupils must normally remain at least four years at school, and that the school life of the pupils must normally extend at least to the age of 16.

When the above conditions are satisfied, and the school has been inspected by the Board and is regarded as providing efficient instruction and possessing adequate premises, it may be placed on the list of Secondary Schools recognised by the Board as efficient, described for brevity in the tables as "Secondary Schools on the Efficient List." If in addition certain further conditions are satisfied, *e.g.*, as to management, religious tests, financial position, scale of fees, &c., a Secondary School, but not a Preparatory School, may, on the application of the Body responsible for its conduct, be recognised as eligible for grant. Tables 47-83 of the Secondary School tables relate to schools so recognised, which are described as "Schools on the Grant List." Table 46 includes, in addition, particulars relating to the remainder of the "Secondary Schools on the Efficient List and Preparatory Schools" which are described as "Schools not on the Grant List." It must be remembered that the volume does not include tables relating to the large number of Secondary and Preparatory Schools which have not been inspected by the Board, or to the schools which after inspection have not been recognised as efficient.

The summarised classification of the schools on the Grant List (*see* Table 47) is based on the type of Body responsible for the school. The following are the categories adopted:—

- (1) Council Schools, *i.e.*, schools for which Local Authorities are responsible.
- (2) Roman Catholic Schools, which are classed separately as forming a specially homogeneous group.
- (3) Foundation and other Schools: this group includes all schools subject to educational trusts which do not fall into groups (1), (2), or (4), and some other schools.
- (4) Welsh Intermediate Schools, *viz.*, schools regulated by County or County Borough Schemes made under the Welsh Intermediate Education Act, 1889.

The schools are also classified in these tables under the headings of Schools for Boys, Schools for Girls, and Schools for Boys and Girls. A school for boys and girls means a school which is organised as a single whole, both the boys and the girls being

under the charge of one Head Master or Head Mistress, although the different sexes may be taught in separate classes, either throughout the school or in certain parts of it.

The particulars relating to pupils are for the most part given in respect of full-time pupils only; accordingly they do not include Student-Teachers, Pupil-Teachers, or other part-time pupils. For information with regard to Pupil-Teachers and Student-Teachers, reference should be made to the general note on Tables 133-140, page 142. As regards the distinction between full-time and part-time teachers, *see* the note on Tables 67 and 68 below. The particulars relating to full-time pupils in schools on the Grant List have for the most part been compiled from the entries made by the schools in the Admission Registers supplied to them by the Board.

The Board publish a list of all the schools on the Efficient List, giving for each school the responsible Body, the name of the Head Master or Head Mistress, and certain statistical information (*see* No. 19 in the List of Publications on page 154).

TABLE 47.

The term "Council Schools," wherever it occurs in relation to Secondary Schools on the Grant List in England, includes not only schools provided by Local Authorities singly or jointly, but also Endowed Schools municipalised as to government and finance for which a Council is the Responsible Body.

TABLE 50.

This table shows the percentage of free-places required by the Board under Article 20 of the Regulations for Secondary Schools.

TABLE 55.

[This note should be read in conjunction with the note on Table 64, page 130.]

In view of the fact that some schools have few or no pupils under the age of 12, all school life below the age of 12 has been ignored, a starting-point thus being obtained for the computation of school life which can fairly be applied generally.

For the purpose of this table each school has been taken separately and the school life of every pupil who left the school within the period has been ascertained, and the sum of the school lives of these pupils has been divided by the number of these pupils. The figure thus obtained has been taken as the "average length of school life" of that school for the period in question.

Head 1 of the table deals with boys, and *Head 2* with girls; schools for boys and girls furnish separate average school lives and

leaving ages for boys and girls respectively. Those schools which had not, at the beginning of the period to which the figures relate, had a normal Secondary School existence of at least two years have been disregarded in order to prevent the statistics from being vitiated by the inclusion of figures relating to schools working under abnormal conditions, and the table is accordingly described as relating to "certain schools" only. Subject to these omissions, all the schools on the Grant List for the year have been taken into account.

Pupils who became Pupil-Teachers or Student-Teachers are regarded for the purposes of these statistics as having left school at the dates on which their attendance as full-time pupils ceased. If a pupil proceeded from one Secondary School to another, the periods spent in each school have been treated as separate school lives; except that, where two institutions, such as a Secondary School and a Pupil-Teacher Centre, or two Secondary Schools (whether recognised for grant or not) have been amalgamated, the school life in both institutions has been regarded as forming a single continuous whole. In all cases the period of school life has been regarded as extending from the date of admission, or of reaching the age of 12, whichever was the later, to the date of leaving, allowance being made where necessary for school holidays immediately previous to entry, or immediately subsequent to leaving.

TABLES 61 AND 62.

For the purpose of these tables a free pupil means a pupil who was exempt from payment of any tuition fee either on 31st March, in the case of Table 62, or at or about the time of admission, as regards Table 61. It must not be assumed that all these pupils had free places secured to them for the whole of their school life, or that the conditions under which their fees were remitted were in all cases identical with the conditions governing the award of free places for the purpose of compliance with Article 20 of the Regulations for Secondary Schools.

An ex-Public Elementary School pupil means a pupil who had attended a Public Elementary School for at least two years immediately preceding his admission to the Secondary School.

TABLE 63.

In this table the pupils are classified according to the occupation of their fathers at the time of the admission of the pupil to the school. If at that date the father was dead or had retired, the classification is based on his last occupation when living or engaged in work.

TABLE 64.

[*This note should be read in conjunction with the notes on Tables 55 and 64, pages 128 and 130.*]

The principles stated in the first paragraph of the note on Table 65 below have been applied in arriving at the figures given in *Columns 11 and 22* as the "average length of school life" and in *Columns 12 and 23* as the "average age at leaving."

TABLE 65.

[*This note should be read in conjunction with the note on Table 55, page 128.*]

The figure given in *Column 7* as the "average length of school life" is arrived at by dividing the sum of the school lives of the pupils who left school during the period by the number of those pupils. The figure given in *Column 8* as the "average age at leaving" has been arrived at by dividing the sum of the ages at leaving by the number of the pupils leaving. The schools taken into account in these two columns include all the schools on the Grant List with the exception of those schools which had not, at the beginning of the period to which the figures relate, had a normal Secondary School existence of at least two years; school life under 12 is not counted; only pupils of 12 and over are taken into consideration. The calculation is restricted to the pupils who left school during the year ended 31st July, 1926.

The principles stated in the last paragraph of the note on Table 55, page 128 have also been applied to the compilation of this table.

Before use is made of the figures in *Columns 7 and 8* as indicating definite characteristics of the various groups of Secondary Schools named, or of the whole of the schools included in the table, it must be remembered that a large number of schools, designed for pupils of whom the majority do not stay beyond 16, are combined in the calculation with other schools, which are designed to provide for pupils a substantial proportion of whom will stay well beyond that age, many even up to 18. As the schools of the former kind are more numerous and the individual schools usually larger than those of the latter kind, care must be taken in drawing inferences from the "average" figures given for the groups of schools in the table, or for the whole of the schools, in the absence of further analytical information of a kind which cannot be presented in a purely statistical table in which the schools are grouped, not into their various educational grades or types, but under various forms of management.

TABLES 67 AND 68.

The classification of teachers as "full-time" or "part-time" and as "trained" or "not trained" is based upon returns made by the School Authorities.

The term "training" covers any accepted course of training in teaching of at least one year's duration.

Teachers classified as "Qualified Teachers of Special Subjects" are teachers returned to the Board as full-time teachers of Art, Music, Physical Training, Domestic Subjects and Handicraft.

A part-time teacher is counted in this table once for each employer under whom he or she was serving on 31st March, 1926, and the figures given in the table are accordingly somewhat greater than the actual number of part-time teachers.

TABLES 69 AND 70.

A school is not included under *Head 2 (a)* of Table 69 as providing a specialised course, unless the course was fairly comprehensive and extended in duration, and was provided with the object of preparing pupils to take up a definite vocation on leaving school.

A school is not included under *Heads 2 and 3* of Table 70 in respect of a language taught, outside the curriculum, to one or more individual pupils.

TABLE 71.

An Advanced Course is an organised course of advanced and specialised instruction extending over two years for pupils who have completed the main Secondary course and passed an approved First Examination.

TABLE 72.

The examinations referred to are recognised by the Board as approved First and Second Examinations, *i.e.*, as examinations to be taken at the end of the main Secondary course and after two more years of advanced work respectively.

TABLES 73 AND 74.

The figures given for the school year 1925-26 relate only to pupils who left during that year, and do not include pupils who proceeded to a University or University Training Department after an interval.

The heading "Other Universities" has been used to cover any generally recognised University outside England and Wales.

TABLE 80.

[*This note should be read in conjunction with the note on Tables 61 and 62, page 129.*]

This table shows the percentage of pupils awarded free places under the conditions of Article 20 of the Regulations for Secondary Schools at the beginning of each year, and the percentage of the total number of pupils in each year who held free places under that Article.

D.—TECHNICAL SCHOOLS, SCHOOLS OF ART, AND OTHER FORMS OF PROVISION OF FURTHER EDUCATION

(including Courses and Classes recognised under the Adult
Education Regulations).

TABLES 84-120.

General Notes.

The statistics given in these tables relate to the school year 1st August, 1925–31st July, 1926, except in the case of certain Junior Technical Schools with school years ending at dates intermediate between those dates, in which case they relate to the school year ended between those dates.

Since the issue of the Regulations for Further Education, which came into operation on 1st August, 1926, the types of school described in the Schedule to those Regulations have superseded those formerly recognised under the Regulations for Technical Schools; but for the purpose of these statistics (for the year 1925–26 when the Regulations for Technical Schools were still in force) the old nomenclature has been retained.

The relative correspondence of the types in the former Regulations with those in the Regulations now in force is exhibited in the following statement:—

<i>Type of Work.</i>	<i>Classification under Regulations for Technical Schools.</i>	<i>Classification under Regulations for Further Education.</i>
Part-time day course for young persons (general, or general and vocational).	Chapter II.—Evening Schools and similar Schools and Classes.	Day Continuation School.
Evening School specially for young persons under 16 or 17.	Do. do.	Junior Evening Institute.
Other Evening Schools outside the important institutions to which Art. 33 of the former Regulations applies.	Do. do.	Senior Evening Institutes.
Evening Classes in the institutions to which Art. 33 applies.	Do. do.	College (Evening Classes).
Part-time course of technical instruction (normally for employed persons attending by arrangement with employer).	Do. do.	Technical Day Classes.
Full-time advanced course in Science, or Science and Art, with or without technological subjects.	Chapter III.—Technical Institution Course.	College (Full-time Course).
Full-time advanced course in Arts.	Chapter III.—Course of Advanced Instruction in Arts.	College (Full-time Course).
Full-time commercial course (post-elementary for pupils under 16 or 17 at end of course).	Chapter III. — Day Technical Classes.	Junior Technical School.
Full-time domestic course (post-elementary for pupils under 16 or 17 at end of course).	Do. do.	Junior House-wifery School.

<i>Type of Work.</i>	<i>Classification under Regulations for Technical Schools.</i>	<i>Classification under Regulations for further Education.</i>
Full-time commercial course (post-secondary).	Chapter III. — Day Technical Classes.	College (Full-time Course).
Part-time course of technical, commercial or domestic instruction for persons not yet in employment.	Do. do.	Technical Day Classes.
Full-time course in preparation for industrial or domestic employment (post-elementary for pupils who will be under 16 or 17 at end of course).	Part II.—Junior Technical School.	Junior Technical School.

The term " Art Schools " will in general be used under the new Regulations for arrangements described under the former Regulations as " Schools of Art " (including their Branches) or as " Art Classes." Those arrangements which are recognised under the former Regulations as " full-time Junior Departments " attached to " Schools of Art " will be recognised as " Junior Art Departments " of " Art Schools."

It may be useful here to describe briefly the main types of instruction to which the present tables relate, viz. :—

- (a) *Technical Institution Courses and Courses of Advanced Instruction in Arts.* The characteristic of this type of provision is full-time advanced instruction in Science or Arts.
- (b) *Junior Technical Schools.* These are day schools providing courses for boys and girls during two or three years after leaving Public Elementary Schools, in which a continued general education is combined with a definite preparation for some industrial or domestic employment.
- (c) *Day Technical Classes.* This category comprises full-time and part-time courses of various types, including industrial, commercial, domestic, nautical, etc.
- (d) *Schools of Art,* providing instruction of all kinds in Fine and Applied Art.
- (e) *Art Classes,* a relatively small category of classes giving instruction in Art.
- (f) *Part-time Technical and Other Instruction,* including that given in part-time technical courses, in evening continuation courses and in day continuation courses. So far as possible separate figures are given for day continuation courses. The other courses, constituting the bulk of the part-time provision of further education, are referred to as " Ordinary Continuation and Technical Courses."

Readers of these tables will do well to bear in mind that more variation in standard and character is possible between the individual schools, classes, and courses which are dealt with in this portion of the volume than in the case of Elementary Schools, Secondary Schools, and Training Colleges, and that the dividing line between different types is frequently less clearly defined.

The references in the tables to " Large Schools " are to those institutions which were aided under Article 33 of the Regulations

for Technical Schools, &c. These are defined in that article as schools, occupying a definite, stable and important place in the educational organisation of an area, and providing approved senior or advanced courses of instruction.

Technical Institution Courses and Courses of Advanced Instruction in Arts.

TABLES 84-86.

These were recognised under Chapter 1 and Articles 35-41 of Chapter 3 of the Board's Regulations for Technical Schools, &c. The courses must be of at least two years' duration, and only students of suitable age and previous education may be admitted. The bulk of the students attend full-time, but a few students attend part-time, taking certain subjects only of the complete course.

The age classification is based upon the age of the student at the date of first registration for the session.

The number of student-hours given in *Column 8* of Table 86 is the sum-total of the number of hours of instruction received during the school year by each student included in *Column 7* of the table.

Junior Technical Schools.

TABLES 87-90.

Junior Technical Schools were recognised under Part II. of the Regulations for Technical Schools, &c.

The age classification is based on the age of the pupil on the day preceding the beginning of the school year.

Day Technical Classes.

TABLES 91-93.

Day Technical Classes were recognised under Chapter 1 and Articles 42 and 43 of Chapter 3 of the Regulations for Technical Schools, &c., where they are defined as either detached classes for advanced work or grouped classes affording organised instruction in related subjects adapted to the technical requirements of the students. They are either full-time or part-time day classes.

The age classification is based upon the age of the student at the date of first registration for the session.

TABLE 93.

Full-time courses, within the meaning of this table, are courses which are attended by students continuously (*i.e.*, at least for nine half-days in the week) throughout the year. They are classified as senior or junior according as the normal age of admission

to the course is fifteen or over, or under fifteen. Under the head of part-time courses those which are attended continuously for certain periods of the year are separately classified. All other part-time courses, *e.g.*, those attended on certain days of the week only, or in the morning or afternoon only, are treated together as part-time courses attended "during varying periods and for varying numbers of meetings in the week."

Schools of Nautical Training.

TABLE 94.

Schools of Nautical Training are recognised under special Regulations for such schools. A "School of Nautical Training," as defined in them, is a day school providing a continued full-time education under school conditions for pupils from Elementary Schools in preparation for employment at sea.

Schools of Art.

TABLES 95-97.

Schools of Art were recognised under Chapter 1 and Articles 44-51 of Chapter 4 of the Regulations for Technical Schools, &c. A "School of Art," as there defined, is an institution giving organised courses of instruction, including advanced instruction, in ornamental and decorative art. The work must be carried on in day and evening classes for not less than thirty-six weeks in the year. The arrangements for instruction and practice in the several subjects must be adequate. The day classes must meet on at least two days a week, and the evening classes on at least three evenings a week. The school must be open for not less than fourteen hours each week, of which at least six must be in the daytime. There may also be instruction in general subjects, forming part of the course of a Junior Department, or in literary or pedagogic subjects, forming part of a specially approved course.

A Branch School of Art must be under the same Managers, and in the same district, as the School of Art of which it is a branch. It must have evening classes open on at least three evenings a week for not less than twenty-eight weeks in the year.

The age classification is based upon the age of the student at the date of first registration for the session.

Art Classes.

TABLES 98 AND 99.

These were recognised under Chapter 1 and Article 54 of Chapter 4 of the Regulations for Technical Schools, &c. They do not include classes in Art held in Schools of Art or Technical Schools.

An "Art Class," as defined by the Regulations, is an institution giving, in day or in day and evening meetings, an organised course of Art instruction, including advanced instruction in ornamental

and decorative Art, in design for manufactures, or in Art handicraft. It must meet at least three times a week for not less than twenty-eight weeks in the year.

The age classification is based upon the age of the student at the date of first registration for the session.

Art Examinations.

TABLES 100 AND 101.

The Examinations in Art are based upon the Rules and Syllabuses for Examinations in Art (Rules 110). The examinations, which are a series of examinations held by the Board for the first time in 1913, are of a comprehensive character suited to the needs of students who have reached a fairly advanced standard in their studies.

Part-time Technical and Other Instruction.

TABLES 102-112.

This category comprises the schools and classes recognised under Chapters 1 and 2 of the Regulations for Technical Schools, etc., which qualified for grant.

The distinguishing feature of these schools is that they are intended to provide educational facilities for persons engaged in some occupation which takes up the greater part of their time. The usual time of meeting is therefore in the evening, unless the conditions of employment or other circumstances render a different time more convenient. The instruction varies widely in character and scope.

It includes that given in part-time technical courses, in evening continuation courses and in day continuation courses. Information is given separately so far as possible for day continuation courses: the residue, constituting by far the greater part of the total amount of part-time instruction dealt with in this section of the volume, is referred to as "Ordinary Continuation and Technical Courses."

The schools referred to in these tables as "Large Schools" were those aided under Article 33 of the Regulations. They are defined in that Article as schools occupying a definite, stable, and important place in the educational organisation of the area and providing approved senior or advanced courses of instruction.

The age classification is based upon the age of the student at the date of first registration for the session.

TABLES 110 AND 111.

The number of class-hours given in these tables is the sum-total of the hours of instruction given in all the various classes, except that periods during which a teacher conducted two or more classes concurrently are only counted once.

TABLE 112.

Where two or more subjects falling under the same sub-head were combined to form one course, they are treated as one subject for the purpose of this table; but where two or more subjects falling under different sub-heads were so combined, each is entered under its appropriate heading.

Teachers in Technical, &c., Schools.

TABLE 113.

The figures include some full-time teachers who are mainly employed in teaching in Technical etc. Schools but who, for part of their time, teach in other types of school.

TABLE 114.

The year 1912-13 has been selected as the initial year for this table as being the last year for which full figures are available prior to the war. In 1913-14 (i) Junior Technical Schools, (ii) Schools of Nautical Training, and (iii) University Tutorial Classes were first recognised as such. Previously the first two were recognised as Day Technical Classes, and the Tutorial Classes were recognised under Chapter 2 of the Regulations; for the year 1912-13 they are accordingly included in the figures in *Columns 10 to 13 and 22 to 24* of the table.

During the years 1914-15 to 1917-18 the natural effect of the war on Technical Schools is particularly noticeable. The omission of certain figures for the years 1913-14 to 1918-19 is due to the partial suspension of the Board's statistical work during the war.

Courses and Classes recognised under the Adult Education Regulations.

TABLES 115-120.

The Adult Education Regulations came into force on the 1st August, 1924, and made provision for the payment of grant in respect of the liberal education of adults in:—

(a) Extra-mural and similar courses supervised by Universities or University Colleges, viz.:—

- (i) Classes Preparatory to Three Year Tutorial Classes;
- (ii) Three Year Tutorial Classes;
- (iii) Advanced Tutorial Classes;
- (iv) Tutorial Class Vacation Courses;
- (v) University Extension Courses.

These courses must be conducted under the control and direction of the University or University College which may be exercised

directly, or through a committee or delegacy, or through a joint committee containing representatives of the University or University College and constituted expressly for the purpose.

(b) Part-time Courses under the control and direction of Approved Associations for Adult Education, viz. :—

- (i) Terminal Courses;
- (ii) One Year Courses;
- (iii) Vacation Courses.

(c) Residential Colleges.

TABLES 115 AND 118.

Three Year Tutorial Classes are part-time courses in subjects of general, as distinct from vocational, education and must be such as reasonably to demand the attendance of students in a continuous and progressive study extending over three years. The Course must occupy at least two hours a week for 24 weeks in each year, at least one-half of the time being devoted to class work.

Advanced Tutorial Classes are part-time courses planned to provide work of a distinctly more advanced standard than that of ordinary Three Year Tutorial Classes. Of the students enrolled at least two-thirds must have passed, with satisfaction to their Tutors and to the Board, through a Three Year Tutorial Class in the same or a related subject.

Preparatory Classes are part-time courses giving a suitable preparation for students intending to proceed to Three Year Tutorial Classes, and must occupy not less than 2 hours a week for 24 weeks of the year, not less than one-half of each meeting being devoted to class work.

TABLES 116 AND 118.

Terminal Courses are part-time courses which provide meetings of not less than $1\frac{1}{2}$ hours' duration (or in special circumstances of not less than $1\frac{1}{4}$ hours' duration) in not less than 12 weeks in the year.

One Year Courses are part-time courses which provide meetings of not less than $1\frac{1}{2}$ hours' duration in not less than 20 weeks in the year. In each meeting half the time must be given to class work. The instruction must be of a standard comparable with that of a Preparatory Class (*see above*) but need not be arranged as a preparation for Three Year Tutorial Classes.

TABLES 117 AND 118.

University Extension Courses are part-time courses which in order to be recognised under the Regulations must provide not less than 18 hours of instruction in meetings of not less than $1\frac{1}{2}$ hours' and not more than 2 hours' duration, which may be divided into lecture periods and class periods.

TABLE 119.

Vacation Courses are short full-time courses for selected students organised either in connection with Tutorial Classes or with Terminal or One year Courses.

Residential Colleges.

TABLE 120.

A residential college, not being a University College or a constituent college of a University, must, in order to be recognised under these Regulations, provide full-time instruction of a University standard in subjects of liberal education to adult students, whose full-time education has been interrupted by employment. A substantial number of students must take a full-time course of at least one year's duration. A college may also provide Part-time Courses, organised apart from the Full-time Courses of the college.

E.—SCHOLARSHIPS AWARDED BY THE BOARD AND MAINTENANCE ALLOWANCES.

State Scholarships.

TABLES 121–125.

State Scholarships are awarded annually to pupils in Secondary Schools in England and Wales, which are recognised by the Board for the purposes of payment of grant. They are awarded on the results of the approved second examinations and on the recommendations of the examining bodies. They are tenable at any University in England or Wales for three years and may in certain circumstances be extended for a fourth year. The number of Scholarships which have been open for competition each year since 1920, when the scheme was started, is 200, except that in 1922 and 1923 no awards were made and in 1924 additional scholarships were awarded. The holder of a Scholarship may receive a grant in aid of approved fees and a grant not exceeding £80 a year towards maintenance at the University. The amount of the grant is determined by the Board after consideration of the financial circumstances of the scholar and is liable to alteration.

The names of candidates awarded State Scholarships are published annually in List 154 and List 154 Wales.

In connection with Table 125 attention is directed to Table 74 which gives the total numbers of pupils of the same types who left Secondary Schools for a University.

The State Scholars who completed their degrees in 1926 (Table 123) were, with two exceptions, candidates who were awarded scholarships in 1920 or 1921 and postponed taking them up till 1922 or 1923. As no new awards were made in the latter years the number who finished their courses in 1926 is abnormally small.

*Awards in Science.***TABLE 126.**

Royal Scholarships and Free Studentships tenable at the Imperial College of Science and Technology are open to British subjects and are awarded annually on the results of the Science Scholarships Examination held by the Board in the Spring. For students to whom Local Education Authorities are prepared to award adequate maintenance allowance covering the approved course and who satisfy the Board that they reach the required standard, additional Free Studentships (previously known as Local Science "Free Place" Exhibitions) may be offered if the funds available for awards permit.

A Royal Scholarship or Free Studentship entitles the holder to payment by the Board of the fees for admission to the lectures and laboratory and other work appropriate to the approved course at the Imperial College of Science and Technology. A Royal Scholarship also includes such maintenance allowance at a rate not exceeding £80 a year as the Board think fit having regard to the scholar's needs.

The names of successful candidates are given in a list (List 153) issued annually by the Board.

*Whitworth Scholarships.***TABLE 127.**

Whitworth Scholarships, which were founded by Sir Joseph Whitworth in 1868, are awarded annually by the Board. The Regulations for 1926 provided for the award of two Senior Scholarships of an annual value of £250 tenable for two years and six Whitworth Scholarships of an annual value of £125 (which may be increased if the Board think fit) tenable for three years.

The Board issue annually a list (List 152) of the names of those to whom these Scholarships are awarded.

*Awards in Art.***TABLE 128.**

The scholarships and other awards of which statistics are given in this table are open to British subjects generally.

Columns 2-9.—If there are candidates of sufficient merit, 10 Royal Exhibitions, 6 National Scholarships and not less than 15 Free Studentships are awarded annually on the results of the Board's Examinations in Art or, in the case of candidates in Architecture, on those of the Intermediate Examination of the Royal Institute of British Architects.

A Royal Exhibition or a National Scholarship entitles the holder to an allowance of £60* a year for three years and to free admission to the Royal College of Art.

A Free Studentship entitles the holder to free admission to the College for two years. Other students are granted free admission as holders of awards made by Local Education Authorities during the tenure of the Authority's award.

Columns 10-11.—If there are candidates of sufficient merit, twenty-four Local Scholarships tenable at Art Schools recognised by the Board are awarded annually on the results of the examinations mentioned above. The scholarships are tenable for three years with an allowance of £20 a year.

Column 12.—One Princess of Wales' Scholarship of the value of £24 for three years is offered each year to women students of Art Schools, under the same conditions as for Local Scholarships.

A second scholarship of £24, but tenable for one year only, may also be awarded.

Columns 13-19.—A limited number of Continuation Scholarships are awarded each year to students of the Royal College of Art who have obtained their diplomas. The scholarships, which are of the value of £60* a year, are awarded for a term and may be renewed but not so as to continue for more than two years in all.

Travelling Scholarships are awarded annually to the best post-diploma student in each of the five main schools of the College. The award is of the value of £65* and the holder is required to travel during twenty weeks.

Two Student-Demonstratorships of the value of 30s.* a week may be awarded to suitable students whose diplomas have been endorsed with the Board's Teaching Certificate.

Remission of fees is granted to a limited number of students of exceptional merit who have been at the Royal College of Art for not less than one year. Renewal of such remission is considered annually.

Further particulars of awards referred to in the preceding paragraphs will be found in the "Temporary Regulations for Scholarships and other Awards in Art, 1919-20" (Grant Regulations No. 13) and in the Prospectus of the Royal College of Art.

Studentships for Teachers.

TABLE 129.

Studentships for teachers are awarded under the Regulations for the Training of Teachers. Full-time Studentships are intended to assist suitably qualified teachers to follow approved courses of advanced study at a University or other institution, either at home or abroad. The maximum grant payable to a Student is £100 for the complete session.

*The allowance is subject to augmentation by not more than 33½ per cent. in the case of Royal Exhibitions, National Scholarships and Continuation Scholarships and by not more than 50 per cent. in the case of Travelling Scholarships and Student Demonstratorships.

Part-time Studentships are intended to assist Teachers who are able to attend an approved part-time course at a University while continuing their teaching work at school. The grant payable consists of a sum not exceeding three-fourths of the fees for the approved course.

Maintenance Allowances.

TABLES 130-132.

The numbers of awards of Maintenance Allowance given in these tables are those shown on the returns submitted annually to the Board by Local Education Authorities for Higher Education, expenditure on which is accepted for purposes of grant, i.e., which comply with the Higher Education (Maintenance Allowance) Regulations. The year referred to in each of these tables is that ending on 31st March. The figures for 1925-26 are provisional and may be subject to some amendment.

The awards have been classified under the main types of institution for Higher Education at which they are held. Minor awards at Secondary Schools are normally held by pupils under the age of 16. Intermediate awards are normally held by pupils between the ages of 16 and 18. Under the head of "Technical, etc., Schools" are included maintenance awards of all kinds (minor, intermediate and major), held at Junior Technical Schools, Schools of Nautical Training, Technical Schools and Schools of Art and other institutions for Further Education. Continuation awards and Special awards are included but are also shown separately since the majority of them are held for shorter periods than a year. Thus Continuation awards are normally for part-time instruction at evening schools, etc. Special awards vary widely in type and may last for only two or three weeks.

The columns headed "Expiring within the year" and "Continuing throughout the Year" give the number of maintenance allowances awarded in a previous year and current on the 1st April.

The figures do not include maintenance allowances awarded to students in Training Colleges or University Training Departments, or to students holding scholarships at Agricultural Colleges.

F.—PRELIMINARY EDUCATION, TRAINING, EXAMINATION, AND SUPPLY OF TEACHERS.

Preliminary Education and Training of Teachers.

TABLES 133-140.

These tables refer to the arrangements made by Local Education Authorities and approved by the Board under Chapter I of the Regulations for the Training of Teachers, 1922, for the preliminary education and training of boys and girls who are candidates for

the teaching profession. Such arrangements are being continued, under the Regulations for 1926, in certain areas with the sanction of the Board.

Pupil-Teachers.—The Regulations for the Training of Teachers, 1922, provided that boys and girls who are receiving (a) training in teaching in Public Elementary Schools, together with (b) instruction accepted by the Board might be recognised as “Pupil-Teachers.” Where possible, the instruction of Pupil-Teachers must be given in a Pupil-Teacher Centre recognised by the Board. These centres might either form integral parts of Secondary Schools, or, in certain circumstances, be attached to Secondary Schools or to Public Elementary Schools, or be separately organised. The school year of centres runs from 1st August to 31st July.

In rural districts Pupil-Teachers for whom instruction in a Secondary School or centre is not available might receive such instruction in central classes or otherwise as the Board approve.

In the case of a Pupil-Teacher instructed in a Pupil-Teacher Centre the appointment must date from 1st August and the period of appointment normally be two years. The Pupil-Teacher must be over 16 but not over 18 years of age at the date of appointment. Candidates who are over 17 years but not over 18 years of age at the date of their appointment might be appointed for a period of one year. In the case of a Pupil-Teacher instructed in accordance with arrangements approved for a rural area the appointment might date from the first day of any month and the period of appointment would be normally four years. Pupil-Teachers appointed for the normal period of four years must be over 14 years of age and not over 16 years at the date of appointment. Candidates over 15 years of age at the date of their appointment might be appointed for shorter periods, provided that they would be over 18 years of age when the appointment expires.

Figures of Pupil-Teachers in service or under instruction are given as on 31st March 1926.

The number of Centres is that on the 31st July, 1926.

Preparatory Classes.—Boys or girls intending to become Pupil-Teachers might, under the Regulations of 1922, receive instruction in preparatory classes forming integral parts of Pupil-Teacher Centres. Preparatory classes might not be recognised in Pupil-Teacher Centres forming parts of Secondary Schools nor, except where already recognised before the 1st April, 1920, in those attached to Public Elementary Schools.

The number of Preparatory Class pupils is given as on 1st October 1925.

Student-Teachers.—Candidates for recognition as Student-Teachers must have been in receipt of continuous instruction at an efficient Secondary School, or some other school or schools accepted by the Board, up to the age of 17; and they must have passed

a qualifying examination. The period of recognition is ordinarily for not more than one year, but may be increased to two years with the approval of the Board. Student-Teachers obtain practical experience in the art of teaching by attendance at Public Elementary Schools; and they must receive such further general education as may be approved. Student-Teachers are recognised from any date in the year. The numbers of Student-Teachers given in these tables are the numbers recognised for the first time in the year 1st August to 31st July.

TABLE 135.

A Pupil-Teacher Centre is regarded as forming an integral part of a Secondary School if it is under the same Governing Body and the same Head Master or Head Mistress as the school, and if the Pupil-Teachers instructed in it share the ordinary corporate life of the school.

TABLE 136.

These statistics relate only to full-time teachers. The classification of teachers as "full-time" and as "trained" or "not trained" is based upon returns made by Local Education Authorities.

The term "trained" covers any accepted course of training in teaching of at least one year's duration.

TABLES 139 AND 140.

These Tables show the Pupil-Teachers and Student-Teachers whose recognition as such terminated during the year ended 31st July, 1924, and who had, before the 31st July, 1926, either entered a Training College or taken up teaching as Uncertificated Teachers. The "residue" are those who either did not complete their engagement as Pupil-Teachers or Student-Teachers, or, having completed it, had not before 31st July, 1926, entered a Training College or been recognised as Uncertificated Teachers. These persons may be regarded as having abandoned their intention of entering the teaching profession. When the percentages in the two tables are compared, it should be borne in mind that the period of engagement of a Student-Teacher is shorter than that of a Pupil-Teacher, and that a Student-Teacher when appointed has already passed the examination which qualifies for admission to the Training College or for recognition as an Uncertificated Teacher.

Preliminary Examination for the Certificate.

TABLES 141 AND 142.

The Preliminary Examination for the Certificate is an examination conducted by the Board. The candidates who pass the examination as a whole are qualified by examination for admission to a Training College as Two-year Students or for recognition as Uncertificated Teachers. The conditions for admission and other regulations are published with the syllabus. This examination, as was announced in the Board's Circular 1372, will not be held after 1928.

Training and Certification of Teachers.

TABLES 143-166.

These tables give statistics of the Training Colleges and students in training which fall within the purview of the Board's Regulations for the Training of Teachers. The Regulations issued in 1922 were in force for the years covered in these tables.

The Board recognise and aid with grants Training Colleges which provide approved courses of education and training for persons who are preparing to become Certificated Teachers in Elementary Schools or teachers in Secondary Schools or Teachers of Domestic Subjects. Approved courses may be given in a University Training Department, a Two-Year Training College or in special cases in some other institution approved for the purpose.

The Board publish a list of Training Colleges which provide approved courses. Not all these Colleges receive grant aid.

TABLES 143 AND 144.

University Training Departments are Departments for the training of teachers provided by a University or by a College which forms a constituent part of a University. All provide a four-year course, of which the first three years are devoted wholly or mainly to study in preparation for a degree, and the fourth is devoted to professional training. All of these institutions also provide a one-year course of post-graduate professional training, and two provide in addition a two-year course of training leading up to the Board's Certificate.

Two-Year Colleges provide a two-year course of training leading up to a Final Examination qualifying for the Certificate and some of them in addition provide third-year courses, either continuous or deferred, for selected students who have completed a two-year course, or one-year courses for Certificated Teachers, graduates or other advanced students. A few of these Colleges also make provision for a four-year course under arrangements agreed to, with the approval of the Board, with a neighbouring University.

Post-Graduate Colleges provide only courses of post-graduate professional training for work in Secondary Schools. (See also Note to Tables 160 to 163.)

Training Colleges for Domestic Subjects provide courses of training for recognition as a teacher of Domestic Subjects. (See also Notes to Tables 164 to 166.)

TABLE 146.

This table shows those Training Colleges which provide courses of training for teachers in Elementary Schools (namely, the University Training Departments and the Two-Year Training Colleges) classified according to type of body responsible and denominational character. All the Training Colleges included in this table, except those falling under *Head 2 (d)*, are undenominational in character.

TABLES 147-150.

These tables show the number of students taking courses of training for Elementary Schools during the year 1925-26 classified in four ways:—(i) by type of institution, (ii) by nature of residence, (iii) as recognised and private students, (iv) by types of courses.

The academic year of a Training College usually begins on 1st August, but may in special cases begin on some other date. The figures given for 1925-26 include particulars for the academic year beginning on 1st August, 1925, and for any other academic years beginning in the year 1925.

TABLE 149.

Recognised Students are students in respect of whom grants are payable under the Regulations. They are required to sign a declaration of their intention to follow the profession of teacher in an approved school. Other persons may under certain conditions be admitted either to Training Colleges on the Grant List, or to certified Training Colleges, as Private Students.

TABLE 150.

For the Four-year, Two-year, One-year and Third-year courses referred to in this table see the Notes to Tables 143 and 156.

The short courses mentioned in *Head 5* were for periods lasting for less than an academic year, in some cases for only a term.

“ Other courses ” (*Head 6*) were courses other than recognised or approved courses and were taken entirely by private students.

TABLES 151-154.

These tables show the number of students admitted to Training Colleges from the 1st August, 1925, (or from some other date falling in the calendar year 1925) classified (i) by age, (ii) by previous status as teachers, (iii) by previous education, (iv) by qualifying examination. The tables include only students who were admitted in the year 1925 for the first time, and do not include students who were readmitted after an interval owing to an interruption of their course, or for some other reason. In Table 152 figures are given for five years.

TABLE 151.

The age is calculated as on the day previous to the first day of the academic year for which the student is admitted.

TABLE 152.

The students are classified according to the status which they possessed at the date of admission. Thus an Uncertificated Teacher who had previously been recognised as a Student-Teacher is shown as an Uncertificated Teacher, and is not shown also as a Student-Teacher.

TABLE 154.

Students who have taken more than one of the examinations specified in this table are classified according to the examination which they took last.

TABLE 155.

The third-year students shown in *Head 5* are students who have completed a third year course not devoted to degree or post-graduate work. Students taking degree courses who have been granted a continuous third year of training are not recognised as Certificated Teachers at the end of their second year, but at the end of their third year. At the end of their second year they are regarded as having postponed their Final Examination and are included in *Head 1 (c)*. At the end of their third year when they are candidates for recognition as Certificated Teachers, they are included in *Heads 1 (a)* or *1 (b)*. Details of these students are given in Table 156, *Head 8*.

TABLES 155-158.

These tables give particulars as to students who completed courses of training on the 31st July, 1926, or some other date falling between the 1st December, 1925, and 31st July, 1926, inclusive.

TABLE 156.

The Final Examinations taken by the students who complete approved courses of training are held in June or July.

Head 1.—Four-year students take a three-year Degree Course at a University, followed by a fourth year devoted wholly to professional training. The Examination in professional subjects at the end of the fourth year is conducted either by the University or by the Board. Four-year students who have completed three years of University study, but failed to pass the Final Examination for a degree, may be recognised by the Board as Certificated Teachers if they have completed satisfactorily their course of professional training and are specially recommended by the Authorities of the Training Department.

Head 2.—A “Reduced Course” is a two-year course taken by students who, having begun a four-year course of training, show at the end of the first year that they will not be able to complete the four-year course. They are allowed to take a second year either at the Training Department which they are attending, or at a Two-year College. If they pass the Final Examination approved for them they are recognised as Certificated Teachers.

Head 3.—The Syllabus of the Board’s Final Examination is published annually by H.M. Stationery Office.

Head 4.—At certain Training Colleges the two-year students take an alternative College Examination approved by the Board. This Examination is conducted either by a University or by a Joint

Examining Body including members of the staff of the Training College, together with external examiners approved by the Board, and one or more of the Board's officers acting as Assessors.

Head 5.—In certain cases, individual two-year students are allowed to take University Examinations forming recognised stages in degree courses in place of the Board's Examination in General Subjects. They take either the Board's or an alternative examination in professional subjects.

Head 6.—Students who have passed a University Degree Examination or other examination which is regarded as of a sufficiently high standard, may take a one-year course of training devoted wholly to professional study.

Head 7.—One-year students (Certificated) are students who have been recognised as Certificated Teachers and after a period of service take a one-year course of training.

Head 8.—Students taking degree courses, who have been granted a continuous third year of training, are recognised as Certificated Teachers at the end of their third year, not at the end of their second year. (See Note to Table 155.)

TABLE 159.

The classification of teachers as "full-time" or "part-time" and as "trained" or "not trained" is based upon returns made by the Training College Authorities.

The term "trained" covers any accepted course of training of at least one year's duration.

A part-time teacher is counted in this table once for each employer under whom he or she was serving on 31st March 1926, and the figures given in the table are accordingly somewhat greater than the actual number of part-time teachers.

TABLES 160-163.

One year courses of training designed for teachers in Secondary Schools may be taken in University Training Departments or other Training Colleges, or in Secondary Schools specially approved for the purpose. A student must have obtained a degree or some other approved qualification before admission to the course.

TABLES 164-166.

Training Colleges for teachers of Domestic Subjects provide a two-year course in Cookery, Laundrywork and Housewifery, which may in the case of selected students be supplemented by a third-year course. Students who have completed a two-year course successfully receive a diploma for Domestic Subjects. If a student completes a third-year course successfully, the diploma is endorsed in respect of the subject studied during the third year.

Special Courses may also be provided for Private Students.

TABLE 166.

Students who complete courses of training take the Board's Final Examination unless an Alternative College Examination has been approved for them. The examinations are held at the end of June or at the beginning of July for students whose academic year begins on 1st August, and in December for those students whose academic year begins on 1st January.

Those who pass the examination qualify for the Board's Diploma in Domestic Subjects.

Head 2.—Students who with the Board's approval take a continuous third year of specialised training in one subject—Advanced Cookery, or Needlework and Elementary Dressmaking, or Science applied to Housecraft—may on the satisfactory completion of their course have their diplomas endorsed in respect of the special subject studied.

A deferred third-year course may, with the special approval of the Board, be taken after an interval of teaching in schools by students who have previously completed satisfactorily a two-year course of training in a Training College for Domestic Subjects. These students are examined in the Principles and Practice of Teaching and in the Theory and Practice of the special subject of the course approved for them. Their diplomas are also endorsed on the satisfactory completion of their course.

TABLE 167.

The figures in this table relate only to courses which were organised or recognised by the Board. Short Full-time Courses vary in length; most of them are held in the Summer vacation and last for a fortnight or three weeks. A small number are held during the week-end at different times of the year. A list of Vacation Courses conducted by the Board of Education, Local Education Authorities, Universities and other Bodies is published annually by the Board in the Spring.

Part-time courses consist of meetings on one or more days a week for a number of weeks; as, for example, a meeting of two hours on Saturday mornings for 10 or 12 weeks.

Teachers Recognised.

TABLE 168.

This table includes all the teachers recognised by the Board under Schedule I of the Code during the calendar years 1924, 1925 and 1926. The number of Certificated Teachers in 1925 includes 639 who passed the Board's Certificate Examination for Acting Teachers in November, 1924, and who were recognised as Certificated Teachers as from 1st April, 1925. No Certificate Examination was held in 1923 or in 1925.

TABLE 169.

This table gives more detailed information of the persons recognised as Certificated Teachers in the same years.

Head 3 includes teachers who completed courses of training outside England and Wales.

Head 5 shows the teachers who qualified for recognition by passing the Board's Certificate Examination or other examination accepted for the purpose. It includes those who after a period of training failed in their Final Examination but were given temporary recognition for a period of two and a half years in which they would have an opportunity of taking the Examination again. During their temporary recognition they are regarded as non-trained. On passing the Examination they are regarded as trained and are included under *Head 1*.

In 1925 the number is swollen by the 639 who passed the Board's Certificate Examination for acting teachers at the end of 1924 and were recognised as Certificated Teachers from 1st April 1925.

III

LIST OF STATISTICAL PUBLICATIONS

A—General.

B—Elementary Education.

C—Higher Education.

D—Preliminary Education and Training of
Elementary School Teachers.

III. LIST OF STATISTICAL PUBLICATIONS.

The Board of Education are responsible for the following statistical publications which include not only those which are issued annually but any which, without being repeated annually, have been issued during the last five years. They may be purchased as indicated on the cover of this volume.

A.—GENERAL.

1.—STATISTICS OF PUBLIC EDUCATION IN ENGLAND AND WALES.
(*Issued Annually.*)

Note.—This publication was suspended during the years 1914-15 to 1918-19 and in 1923-24.

2.—STATISTICS OF PUBLIC EDUCATION IN WALES. (*Issued Annually.*)

Note.—This publication was suspended during the years 1914-15 to 1918-19, 1922-23 and 1923-24.

3.—REPORT OF THE BOARD OF EDUCATION. (*Issued Annually.*)

An annual survey of the work of the Board of Education in England and Wales, with statistical tables in the text and appendices.

4.—THE HEALTH OF THE SCHOOL CHILD.

An annual survey for England and Wales by the Chief Medical Officer, with some statistics in the text and appendices as to the physical condition of school children, Medical Staffs of Local Education Authorities, Provision of Meals, Nursery Schools, Special Schools, &c.

5.—MEMORANDUM ON THE BOARD OF EDUCATION ESTIMATES.
(*Issued Annually.*)

6.—DIRECTORY (EDUCATION IN WALES).

Published in three parts, viz. :—

List of Elementary Schools, &c. (similar to 10 below).

List of Secondary Schools (List 60, Wales. Similar to 19 below).

Local Education Authorities and Inspectorate.

7.—ESTIMATES OF THE EXPENDITURE OF LOCAL EDUCATION AUTHORITIES IN THE FINANCIAL YEAR 1921-22. (Cmd. 1423.)

8.—REPORT OF THE PUBLIC LIBRARIES COMMITTEE, 1927.

An enquiry into the adequacy of the library provision already made under the Public Libraries Acts and the means of extending and completing such provision throughout England and Wales, with statistical tables.

9.—REPORT OF THE CONSULTATIVE COMMITTEE ON THE EDUCATION OF THE ADOLESCENT, 1926.

Contains statistical tables in the appendices.

B.—ELEMENTARY EDUCATION.

10.—LIST OF PUBLIC ELEMENTARY SCHOOLS (INCLUDING HIGHER ELEMENTARY SCHOOLS) AND CERTIFIED EFFICIENT SCHOOLS IN ENGLAND, EXCEPT MONMOUTHSHIRE, ON 31ST MARCH, 1922 (List 21).

Gives for each school the nature of the religious instruction (where known), the accommodation and average attendance.

For Wales, *see* No. 6 above.

11.—RETURN TO THE HOUSE OF COMMONS.

“Showing, for every Local Education Authority for Elementary Education in England and Wales, (a) the number of rooms used for teaching which, on the 21st day of May, 1924, contained two, three, four, or more classes and the number of children taught in those rooms; together with (b) the total number of departments, classes and children in the public elementary schools in each authority's area; and (c) the relation expressed as a percentage between the figures given under the foregoing two heads.” 10th February, 1925. (H.C. 20-1925.)

12.—LIST OF CERTIFIED SPECIAL SCHOOLS, RECOGNISED INSTITUTIONS FOR THE TRAINING OF BLIND AND OTHER DEFECTIVE STUDENTS, AND NURSERY SCHOOLS IN ENGLAND AND WALES. (List 42.) (*Issued Annually.*)

Gives for each School the accommodation, and average attendance.

13.—COSTING TABLES (ELEMENTARY EDUCATION), BASED ON THE EXPENDITURE OF LOCAL EDUCATION AUTHORITIES, 1922.

14.—COST PER CHILD, ELEMENTARY EDUCATION, 1921-22, 1922-23 (LOCAL EDUCATION AUTHORITIES' ACTUAL EXPENDITURE) AND 1923-24 (LOCAL EDUCATION AUTHORITIES' APRIL ESTIMATES)—1923.

Contains statistical tables showing for each of the three years the total cost per child, and the cost per child under the heads of Salaries of Teachers, Loan Charges, Special Services, Administration and Other Expenditure respectively; also for 1923-24 highest and lowest cost, and frequency distribution tables.

- 15.—COST PER CHILD, ELEMENTARY EDUCATION, 1923-24 AND 1924-25 (LOCAL EDUCATION AUTHORITIES' ACTUAL EXPENDITURE), 1925-26 (OCTOBER ESTIMATES), AND 1926-27 (REVISED FORECASTS).

Contains similar tables to those in No. 14 above.

- 16.—STAFFING OF PUBLIC ELEMENTARY SCHOOLS IN ENGLAND, 1925-26 (List 44).

Showing for the area of each Local Education Authority in England the number of schools, average attendance, number of classes (by size of class) and staff per 1,000 pupils in average attendance (by grade of teacher) with summaries by type of area for England and Wales.

Corresponding figures for 1924-25 were contained in Tables 38 and 39 of the Board's statistical volume for 1924-25.

- 17.—STAFFING OF PUBLIC ELEMENTARY SCHOOLS IN WALES, 1925-26. (List 44, Wales).

Contains tables similar to those in No. 16 above.

C.—HIGHER EDUCATION.

- 18.—REPORT OF THE BOARD OF EDUCATION UNDER THE WELSH INTERMEDIATE EDUCATION ACT, 1889. (*Issued Annually.*)

Includes a survey of the work of the Welsh Intermediate Schools, with statistical tables.

- 19.—SECONDARY SCHOOLS AND PREPARATORY SCHOOLS IN ENGLAND RECOGNISED BY THE BOARD AS EFFICIENT. (List 60—1925-26.)

Gives for each School the fees, number of full-time pupils, and (in Secondary Schools) number of free places.

This list was previously issued for the year 1923-24, a Supplement only being issued for 1924-25.

The list for Wales is included in No. 6 above.

- 20.—TECHNICAL SCHOOLS AND SCHOOLS OF ART (ENGLAND AND WALES). (List 111—1922-23.)

Gives for each school the number of students and average number of hours of attendance made by each part-time student.

- 21.—RETURN OF THE NUMBER OF FULL-TIME PUPILS ATTENDING SECONDARY SCHOOLS IN ENGLAND AND WALES ON THE GRANT LIST ON 31ST MARCH, 1920, 1921, 1922 AND 1923 PER 1,000 OF THE POPULATION OF THE AREA IN WHICH THEY WERE RESIDENT AT THE TIME OF ADMISSION. (Cmd. 2284.)

- 22.—MAINTENANCE ALLOWANCE AWARDS AT SECONDARY SCHOOLS AND OTHER INSTITUTIONS OF HIGHER EDUCATION.

Statement of Expenditure incurred by Local Education Authorities (England and Wales) under Grant Regulations, No. 14, in the Financial Year 1923-24. (Cmd. 2415.)

23.—ADULT EDUCATION COMMITTEE PAPER, No. 2.

Report on the Recruitment, Training, and Remuneration of Tutors, 1922. Contains an appendix giving statistics of University Tutorial and similar Classes for Adults.

24.—ADULT EDUCATION COMMITTEE PAPER, No. 4.

Report on the Development of Adult Education for Women, 1922. Contains an appendix giving statistics of classes and students in Evening Institutes, Adult Schools, &c.

25.—REPORT OF AN ENQUIRY INTO THE CONDITIONS AFFECTING THE TEACHING OF SCIENCE IN SECONDARY SCHOOLS FOR BOYS IN ENGLAND, 1927.

Contains statistical tables in the appendices.

D.—PRELIMINARY EDUCATION AND TRAINING OF ELEMENTARY SCHOOL TEACHERS.

26.—INTENDING TEACHERS, 1920-21—ENGLAND AND WALES. (Lists 170 and $\frac{170}{\text{Wales}}$).

Statement showing the number of Intending Teachers (*i.e.*, Bursars, Pupil-Teachers and Student-Teachers who had not been Bursars), recognised for the first time during the year ending 31st July, 1921, and the percentage of this number to the number of Certificated and Uncertificated Teachers employed in Public Elementary Schools as on 31st March, 1921.

27.—REPORT OF THE DEPARTMENTAL COMMITTEE ON THE TRAINING OF TEACHERS FOR PUBLIC ELEMENTARY SCHOOLS. (Cmd. 2409.)

Contains appendices giving historical statistics of Training Colleges and Students, Teachers and Intending Teachers for Public Elementary Schools.

Official Reports and Handbooks on
Educational Subjects.

ARITHMETIC. Report on the Teaching of Arithmetic in Elementary Schools.

1925. *Royal 8vo. pp. 32. 3d. (4d.)*

MODERN STUDIES. Report of the Committee on the Position of Modern Languages in the Educational System of Great Britain.

1918. *Cr. 8vo. pp. xxiii+257. 1s. 6d. (1s. 8½d.)*

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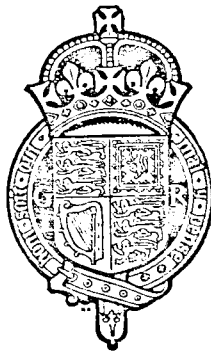
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PREFATORY NOTE.

The following paper is a development and enlargement of a series of four articles which appeared in the "Times" in February and September, 1905. It deals with matters of so much interest to sparsely-populated districts, not only in this country but in other parts of the King's dominions, that, with the consent of the "Times," the Board have thought it worth while to make the information available in a fuller and more permanent shape than is possible in a newspaper. It will be clearly understood, of course, that the author is alone responsible for the opinions expressed.

Office of Special Inquiries and Reports
September, 1908.

THE PROBLEM OF RURAL SCHOOLS AND TEACHERS IN NORTH AMERICA.

I.

THE PROBLEM OF RURAL EDUCATION IN NORTH AMERICA.

The appearance in the New World within the last 30 years of a rural problem similar in many respects to our own, and of a movement of educational reform to cope with the difficulty, should throw some light on English problems. Educational questions are so closely knit up with social and political ones, that each country must work out its own reforms. But the broad lines of progress are the same, and can often be studied more clearly at a distance. I propose therefore, to discuss the movement at present in progress in the United States and Canada. The problem is an economic, as well as a social and political one.

During the last century the United States have passed rapidly over economic stages which we have covered in the course of centuries, and the youngest of the nations is now in many respects the most mature. This is pre-eminently true of the States of the Middle West, in the great basin of the Mississippi, which is rapidly becoming the most effective and dominant portion of the whole Republic. This region, which a generation ago was in the hands of the pioneer, is now parcelled out in fully developed and modernised farms. The vast supply of free unoccupied land once at the disposal of the Government has now been settled by a population drawn from the progressive element in almost every European country. These people have brought with them their national antagonisms; the climatic, racial, and economic conditions have combined to produce a spirit of competition such as the world has rarely seen. The farmers have been the last to catch the spirit, but they too are catching it. In the States of the Middle West the land has never obtained that clinging hold on the affections which elevates farming in older countries out of the sphere of a trade; but now, more than ever before, the business spirit begins to prevail. Further, the recklessness with which a past generation exploited the marvellous fertility of the virgin soil has met its reward. To counteract the consequent reduction in profits, the farmers will undergo any expense to improve their plant and bring their methods up to date. For it is realised that the age of muscle is past, the age of mind beginning. This economic keenness, unparalleled by anything of the kind in England, is perhaps the primary source of the educational reform movement in the United States; for it has led to a demand for improved education from the farmers themselves.

A second very different cause is the marked diminution of rural population which is already becoming apparent throughout the Union. In New England for the last twenty years the unoccupied farm has been a sadly common sight, and only quite recently has the incoming of Scandinavian and Polish settlers

somewhat checked the process of rural decay. But the last two censuses show that the phenomenon is widespread over the Union. It is a marked tendency in Canada also. The native-born Canadian and American prefer city life, and their desire for it is already overcrowding the professions. Hence there is in the United States a universal reduction in the size of the rural schools, so that fifteen, ten, five, or even two pupils are often found where there used to be thirty or forty, and expense has waxed while efficiency has waned. This depopulation of the rural districts, therefore, has forced new problems upon the educationist.

Thirdly, from the sociologist comes a demand for educational reform. The medium-sized farm, owned and worked by its occupier, is rightly regarded as an invaluable feature of American and Canadian life. It secures to rural life a vigorous and progressive body of men, who combine with the practical qualities of the English working farmer the spirit of independence of the English squire; and it altogether excludes the inert "Hodge." But in view of the growing power of capital, of the cityward trend, and of increasing competition, it is feared that the working farmer may give place to the big estate owner. It is urged that the former can keep his hold on the land only by making more out of it than the capitalist could possibly make by leasing or by absentee farming. But to do this, he must have a general and special education of the first order. The English visitor to the States, whose knowledge of rural life is confined to what he sees from the railway cars, is apt to forget that the essence of American citizenship is not summed up in the turbulent life of the great cities, that the basis of that life in the past was agricultural and provincial, and that the effervescence of the great cities is partly cosmopolitan in nature. If America is to retain her character in the teeth of constant immigration, it can only be by maintaining the independent farmer.

Lastly, reform in the rural school curriculum is urged on the highest educational grounds. In face of the complexity of modern American life, and its apparent utilitarianism, there is a growing desire amongst thoughtful people for greater simplicity and reverence. Some of the stress of modern life is ascribed to modern education, whereby, in the words of the well-known Canadian reformer Professor J. W. Robertson, "the mental horizon is widened to no purpose, because the child is distracted with a number of vague impressions instead of being guided to the realisation of certain simple principles." Professor Robertson holds that simplicity and reverence come from the conviction "that every effect has a cause," and that the study of books, if not supplemented by training of hand and eye, cultivates "gullibility," and a pagan attitude to the world around. On these grounds he urges the introduction of Nature Study and Manual Training as central features in the curriculum. Again Professor Bailey, of the Agricultural College of Cornell University, has encouraged Nature Study in schools, partly to save the poetic sense and the love of a simple life from being swamped

by a false utilitarianism. Further, in many States of the Middle West, where commercialism is keenest, the rural reform movement is closely combined with attempts to beautify rural life. Farmers are persuaded to spend time and money in changing the bare little school ground into a garden of trees and flowers. It is remarkable in how many cases this view of the higher function of rural school reform is held by those who also urge the economic and social importance of the movement.

It is well to remember that the educational system with which the reforms so widely demanded must deal is throughout North America broadly the same. Public school education is in charge of the State or Province, not in that of the Union or Dominion; it begins with the eight grades of the elementary school, is continued in the four grades of the high school, and leads on to the University. Many village schools have several teachers, are able to grade their pupils, and have a more or less complete high school department. But in vast thinly peopled areas, where no village exists, the "rural district schools" are alone found. These schools are in tiny one-roomed shanties, they are invariably taught by one teacher, and their average enrolment is about five to fifteen pupils. In Canada, from the census of 1901, it was estimated that in purely rural districts there were about 746,000 children from five to fourteen years of age, as against 450,000 children in incorporated villages, towns, and cities. It is in such rural districts that the educational problem is most acute. The isolation of the schools is accentuated by the badness of the roads, and by the climatic conditions, which discourage walking. The schools are often open only for seven months in the year. Further it must be borne in mind that there is in North America no peasant class. The result is that no scheme of reform will appeal to the rural population which does not place the country child on an equality with the city child, by carrying him on from the ordinary elementary grades, through a secondary "high school" course, and fit him if he wishes to go on to college.

Thus many circumstances differentiate the problem from that in England. A landowning population of varying wealth, but considerable economic prospects, have a public-school system in which social distinction plays no part, and whose root principle is that the educational ladder shall be equally accessible to all. Reform is in many parts rendered easier by a growing demand from the people themselves, but is in those very parts made more difficult by a sparseness of population to which we in England have no parallel.

The stimulus of public demand in American rural education is worth further consideration, since it is an essential factor in all educational progress. It has been organised by two main agencies, the Order of the Patrons of Husbandry, and the Farmers' Institutes. The former, founded nearly thirty years ago, is a semi-secret society of farmers for the protection of agriculture. It consists of a national "Grange," State Granges, district, county, and subordinate Granges; to the latter all who

wish may belong, after undergoing a ceremony of initiation, while the other Granges are composed of delegates and of members of high degree. The work of the Order is by no means narrowly utilitarian; it aims at wide social amelioration. It has influenced Federal and State legislation on behalf of education, of good roads, of pure food, and of the free delivery of rural mails; and the State Granges have special committees on education. They have further trained their members to an attitude favourable to reform; experiments tried in one State have been brought to the notice of others, and conservative States have been urged forward by progressive ones. In a remote district of Eastern Ohio I attended in 1904 an open meeting of the local Grange. The farmers and their families had driven in from the country round to the four cross-roads which marked the centre of the rural district. Here, in an empty upper room of a minute cheese factory, the meeting was held. About seventy people were present, the chair was taken by a farmer's wife, and in a series of business-like speeches the aims of the Grange were laid before outsiders. The note of the whole was the national need of maintaining the agricultural life, as the basis of all other life.

Similar propagandist work is done by the Farmers' Institutes, associations widely spread in the United States and Canada. The organisation of the institutes of the Province of Ontario affords, perhaps, the best example of their work. The province is divided into districts, in any one of which, under the Farmers' Institute Act, an institute or farmers' association may be formed, if fifty members are available, "for the purpose of disseminating information with regard to agriculture." Each institute holds four or more meetings in the year, to which the Ontario Department of Agriculture sends picked speakers, men and women qualified by experience on a farm or in the agricultural college. Further, in 1904 there were fifty-seven women's institutes in Ontario, with a total membership of 5,433, and holding on an average seventeen meetings a year; their purpose is to improve the home and make rural life satisfactory to women, by giving them scientific knowledge, practical skill, and wider social outlook. A similar system prevails in the States of the Union. In some of the American institutes the question of the schools has recently been prominent amongst the subjects discussed.

In Canada public opinion on educational questions appears to be less keen, though the need for educational readjustment is fully as great; Canadian educationists, moreover, have much more of the caution which is characteristic of the mother country. Here therefore a single individual, Sir William Macdonald, the munificent benefactor of McGill University, stepped in ten years ago to rouse public opinion on the rural question, not by theorising, but by practical demonstration of what could be done. He founded the Macdonald Fund, and initiated the Macdonald Scheme for Rural Education which is now in process of realisa-

tion. In carrying out this movement he has throughout been guided and advised by Professor J. W. Robertson, late Commissioner of Agriculture at Ottawa. It is hoped that this scheme will revolutionise Canadian rural life in fifteen or twenty years, and profoundly modify it even in six or seven. Professor Robertson, in view of his remarkable success as Commissioner of Agriculture in stimulating Canadian farming by educational means, has every right to be hopeful. One cannot but feel that the optimism of the New World is an immense national asset in both Canada and the United States; we in a sense are clogged by our history. The Macdonald scheme was briefly as follows:—First, to exhibit to the cities, as radiating centres of opinion, the value of manual training, which was almost unrecognised in Canada. To this end, in certain leading cities, between 1900 and 1903, there were established forty-five centres, since taken over by the localities. The second step was to show the five eastern provinces what an ideally trained rural teacher might be, and to supply a nucleus of expert rural teachers, round whom a teaching force of an entirely new kind might gather. Two picked teachers from each of these eastern provinces were, in 1902-1903, sent for training, first to the botany and education departments of the University of Chicago, then to the Agricultural Department of Cornell University, then to the Teachers' College of Columbia University, New York, and finally to the Ontario Agricultural College at Guelph. Next, an object-lesson in nature-study combined with school gardening was given in each of four provinces; one of the above teachers was in each case detailed to take charge of a group of five rural schools, and in a weekly visit to each school to organise nature-study by teaching and advice, and to start a school garden. This part of the work is still in progress, and has met with marked success; in at least one instance, the travelling teacher has inspired one group of schools with new aims and methods, and has undertaken a second group. The fourth step was the foundation of a consolidated rural school in each of the provinces of Nova Scotia, New Brunswick, Ontario, and Prince Edward Island, all abnormal expense to be borne for three years by the Macdonald Fund. Side by side with this, Sir William Macdonald has founded at Guelph the Macdonald Institute for farmers' daughters. The last step, realised in the autumn of 1907, is the foundation at Ste. Anne de Bellevue, near Montreal, of a combined agricultural college and training college for rural teachers, under the principalship of Professor Robertson. The full fruition of the scheme is only looked for some ten years hence, when pupils educated in the new schools and trained in the new training college go out to teach.

The educational demand above outlined is thus two-fold in character. At the root of the farmers' demand is a desire for practical efficiency. At the root of the demand made by social and educational reformers is the conception that "book educa-

tion " has militated against country life, because it has turned children's thoughts from their environment, has developed a receptive rather than an inquiring attitude of mind, and has repressed spontaneous physical activity. The implied slight to the humanities often involved in such an opinion is needless and absurd. The root of the matter lies not in the books, but in the use too often made of them in the schools both of England and of America. The books which are "the master thoughts of great minds" have been too often left unread, or laid on the scholastic dissecting table and spoiled for children by masses of impertinent commentary. The books which are aids to knowledge have been used in the service of a knowledge which is the fossil of living truth. The prevailing evil in modern teaching is not lack of pedagogic method; it is the lack on the part of teachers of living realisation of what they teach. Whether therefore history, literature, nature-study or agriculture be our subject-matter, it is vital that it be a reality in the life, first of the teacher, and then of the child. Truth itself is the great educator.

The rural reform movement thus includes the consolidation of small rural schools into larger and more efficient ones; the introduction of nature-study, manual training, and domestic science as an integral part of the curriculum; the extension of library facilities to rural schools; the special preparation of teachers for rural work; the foundation of secondary agricultural schools as a link with the University. The following chapters will deal with all but the last of these movements in greater detail.

II.

THE ADAPTATION OF THE CURRICULUM IN SCHOOLS OF NORTH AMERICA.

The various reforms now on their trial in rural elementary schools in North America, chiefly with the object of adapting the curriculum to rural life, are as follows:—Firstly, the introduction of either nature study or elementary agriculture, combined with educational school gardening; secondly, the establishment of manual training for boys, and of household science for girls; thirdly, the improvement of literary studies, mainly by the provision of suitable libraries.

The educational value of nature study has been as widely discussed in America as in England, but the reformers hold two somewhat different views as to its place in the rural elementary school. Some maintain that, as soon as possible, the indiscriminate study of the whole natural environment should give place to the definite study of elementary problems bearing on agriculture. Others hold that elementary agriculture should be reserved for the secondary school, and that the wider nature study should alone find a place in the elementary school curriculum. Foremost in maintaining the latter view is the

agricultural department of Cornell University, which, inspired by its present director, Professor Bailey, has, since 1897, conducted an educational campaign in the schools of New York State. Nature study is preferred to elementary agriculture, because it involves the intelligent observation of all the environment, and thus trains the qualities desirable in every human being and applicable to all branches of study. Again, it builds on the sympathies of the little child, which lie more with the wild and the beautiful in nature than with the useful; and thus it lays a strong foundation for that true nature-sympathy which can raise the farmer's life above sordid interests. The view is held that nature study should not be a formal subject in the curriculum, and that the child should mainly teach himself, with little but sympathy and suggestion from the teacher. Through the nature study bureau of the University these views have reached the schools of the State. Any class in any school may start a "Junior Naturalists' Club," officered and conducted by the children, but affiliated with the University, and carrying on a monthly correspondence with it by letters, specimens, and drawings. Every letter to the bureau is read, and every question answered. A small periodical, the "Junior Naturalist Monthly," is issued each month. The teachers report that the conduct of these clubs forms an excellent training in civics. The danger in the position taken up by Cornell with regard to nature-study, in the desire to make it spontaneous, is that the unintelligent teacher, misunderstanding the point of view, is apt to fall into haphazardness and vague sentimentalism; the influence of Cornell has spread far beyond the limits of New York State, and the subject has been taken up by many who have little either of nature love or nature knowledge, and who are not within the sphere of the Cornell correspondence course. Quite unjustly, the loose teaching of these people has brought the subject into derision with common-sense people and with scientific men.

Since the unintelligent teacher has to be reckoned with, the arguments of those who prefer elementary agriculture are not without force. These are exemplified in the course of study drawn up in 1903 for the common schools of Illinois, which included, from the third grade upwards, a series of simple agricultural experiments, involving, first, definite action on the part of the pupil, and, secondly, observation of results obtained. It is argued by those who drew up the course that it is preferable to nature study because it cultivates the active and creative instincts and gives experience of failure and success, and because it connects the school with practical life. Elementary agriculture is now encouraged by direct legislation in at least ten of the States, and by the efforts of the United States Department of Agriculture. Many of the State colleges of agriculture have planned model courses; for example, the Minnesota Agricultural College in 1903 issued free to each rural school in the State a volume of 200 pages, entitled "Rural School Agricul-

ture," containing 237 practical exercises. This adoption of elementary agricultural problems instead of wider nature study has the merit of definiteness, and ensures more exact scientific treatment. On the other hand, the limitation of subject matter is fatal to interest of the highest kind, and tends to develop a merely utilitarian attitude to the world. The early introduction of agricultural studies, therefore, is more likely to commend itself as a practical expedient where children, as in England, leave school very young, than as ideal where a secondary school course follows.

Another very valuable aid to nature study has been introduced in Nova Scotia. Here the Provincial Superintendent of Schools happens to be general secretary of the Botanical Club of Canada, which has for some years conducted, from scattered points throughout the Dominion, observations of natural phenomena on the lines of those conducted by the meteorological service of Great Britain. With this work Dr. Mackay, Superintendent of Education for Nova Scotia, has associated the schools of his province, primarily in order to give an incentive to the study of nature, incidentally because the keen observation of a whole school of children bent on a phenomenon will often be more exact than that of an isolated adult. The province is divided, for the purpose of these observations, into ten climatic regions. (See Appendix A, p. 39 below.) Schedules are issued to all the teachers willing to take part, and about 300 schools have for several years been engaged in the work. On the schedule must be recorded the district, altitude, slope, soil, and other geographical features of the neighbourhood; next follows a list of fifty-two wild and thirteen common plants, names of common farming operations, a list of simple meteorological phenomena, and of eighteen migrating wild birds. Against each item must be entered various specified facts observed by the school. The schedules are sent to the inspector annually. A staff of science specialists averages and criticises these records, and their critical notes, published each year, form a valuable incidental training for the teacher. The averages are published in the annual proceedings of the Botanical Society, and the latter reports that really valuable scientific evidence is coming in. The schools of Denmark have lately borrowed the system.

Closely associated with nature study and elementary agriculture is the educational school garden. Gardening as a recreation is comparatively uncommon in Canada and the United States. The climate, the mosquitoes, and the neglect of leisure all discourage it, as does also the custom of having gardens unfenced and open to the roads. One hears a class of American children of twelve to fourteen years of age solemnly taught how to plant a geranium, and encouraged by prizes to do so skilfully, and nobody seems amused. The awakening to the need for beauty in American life has however recently led to a wide movement for encouraging gardening in the North Atlantic and North Central States. The cities of New England, notably Boston,

led the way. In the rural schools playgrounds are being beautified with shrubs, trees, and lawns. In New York State, by means of the Cornell Junior Naturalist Clubs, 2,400 children were in one year interested in the work, and 475 school-grounds were beautified. Similar work has been done in Ohio, in Illinois, and in other Middle States. In some cases farmers assist by ploughing and digging, and school entertainments raise funds. But the American school garden is educational in a more definite sense; it fosters individual gardening, and it experiments for nature-study purposes. It is therefore almost always composed of a series of individual plots for children, and of experimental plots variously used. Moreover, it is usual for all the children in a school to have gardens. In Eastern Canada great encouragement is being given to school gardens. The New Brunswick Legislature has voted £4 4s. a year in aid of any rural school garden, and £6 6s. towards the salary of a nature-study teacher qualified to direct the work. In Nova Scotia, where no direct financial aid is given, the number of rural school gardens increased in 1903-1904 from 52 to 79, and in 1904-1905 rose to 103, mainly through individual enthusiasm. In some schools the garden is utilised in teaching mathematics, book-keeping, and language; thus, in Hyannis, Massachusetts, the children order their seeds from the seedsman, sell their produce, keep their accounts, and deposit money in the bank. The pre-eminent value of school gardens however lies in the study of plants as living wholes, and in their natural surroundings.

The second change in the rural school curriculum is the introduction of manual training for boys and household science for girls. The manual training work of the American elementary schools, and to some extent the household science, though inferior in many respects to ours, is better in three ways. There is greater latitude for originality or "self-expression," the technical and educational aims are more completely unified, and there is often closer correlation with the rest of the curriculum. The strong feature in English manual work is the mental and moral training involved in the rigidly accurate reproduction of a model. In American and Canadian work, while exactness is not forgotten, it is made secondary to independence and originality. On this point the opinion of an English director of manual training for Ontario is worth quoting. Trained in the exact school of English manual work, the Canadian and American methods struck him at first as lacking in thoroughness. The experience of four years convinced him that English thoroughness is overdone, since it is carried to the length of sacrificing individuality. The point is of considerable importance in relation to teaching methods throughout the elementary curriculum. In "results," which inspectors or examiners can gauge, English school work is almost always superior to American. Yet in Canada the English working-class emigrant is often found, in spite of excellent workmanship, lacking in

adaptability and resource; he is paralysed in the face of unaccustomed conditions. Has the old system of "payment by results" left us, as a legacy, the destruction of our national resourcefulness? In manual work, at any rate, we may learn adaptability from the American.

The unification of the technical and educational aims in manual training is also characteristic of America. In England we have inherited from the past an educational tradition which abhors the practically useful where true education is concerned; thus the technical subjects are clearly marked off from the educational. In America the reign of theory has had, at any rate, this good result—that it has spread wide the conception that a subject may be useful and educational at one and the same time. Thus in manual work and household science underlying scientific principles are valued more than they are here.

The correlation of manual work with the rest of the curriculum is often artificial and forced. But undoubtedly in rural schools much apparatus necessary in nature study can be made, such as labels, plant-stands, germinating boxes for insects, and other appliances. The correlation of manual training with the study of history, again, is being worked out on interesting lines in the School of Education of the University of Chicago, and in the Horace Mann School in New York. The aim is to treat history, not as a tradition remote from the experiences of life, but as the explanation of the human environment. The point of view is identical with that of nature-study. Hence social and industrial rather than political history is all-important, and, since social development has been co-ordinate with the growth of manual and mechanical skill, the manual work of the child may be, without any forced correlation, a means of realising concretely some of his historical ideas. The construction of the Indian wig-wam and birch-bark canoe, of primitive looms, of woollen fabrics, and of bricks are illustrations of this work. In the schools referred to it involves an elaborate plant, but much of it is capable of adaptation on simpler lines under intelligent teachers. This question is discussed more fully in a later chapter.

Supplementary to the work of the schools in certain middle States are the clubs for boys and girls from nine to twenty-one years of age, for the purpose of stimulating active interest in country life. The special value of these clubs is that they link school education with the self-education to which the former should lead, and give scope for independence and originality. To give an example of such clubs, Winnebago County, Illinois, has a farmer boys' experiment club, started in 1902, and a girls' home culture club, started in 1904; the former, beginning with 33 members, had 500 in 1906, and the girls' club had over 300 members. These clubs are in close connection with the local Farmers' Institute. The boys, under directions issued by the County Superintendent of Schools and by the State College of Agriculture, carry out on home plots simple agricultural experi-

ments and tests. The boys work with great enthusiasm, and some of the crops grown by them under these circumstances have been remarkably successful. Experiments have been made in the growing of maize and sugar beets, and tests have been applied to smut in oats and similar phenomena. In 1905, seventy boys were cultivating in this way a total of 33 acres. Further, on one Saturday in each of the five winter months a club meeting takes place; in the morning members read short papers and hold discussions on agriculture and current events; in the afternoon lectures, free to the neighbourhood, are given by prominent members of agricultural colleges and others, who are specially invited for the purpose. The subjects discussed are not confined to agriculture; for example, local history, music and art are taken up. The interest taken by the parents in these clubs is keen, and during the annual Farmers' Institute a half-day is now set apart for the boys of the club to report on their work. In 1904 the Winnebago County Farmers' Institute offered a total of £12 12s. in prizes for the most successful cultivation of sugar-beets. In the course of this competition the boys successfully demonstrated a point of considerable economic importance, namely, that the soil of the county was very favourable for growing sugar-beets. The result was that in the spring of 1906 a large acreage was sown by the farmers, and 931 tons were conveyed to a factory in the following autumn. In 1905 and 1906 similar prizes were given for corn-growing. Further, in 1906 a corn-judging contest was planned, and the five most expert boys received scholarships enabling them to attend a two-weeks' course at the State College of Agriculture. The girls' club studies, more or less experimentally, such home problems as the ventilation, lighting, and decoration of rooms. Prizes are annually offered for needlework, bread-making, and similar work. Each summer an expedition of the clubs is made to some great agricultural college. The first two years from 200 to 300 people travelled a distance of 214 miles to the State Agricultural College at Urbana, starting at 4 a.m., arriving at noon, and getting back in the evening of the following day. In 1904 they went even further, to Ames, in Iowa, a distance of 318 miles. In 1905 a total of 326 people visited the Wisconsin State College of Agriculture at Madison. Reduced fares are obtained at about $\frac{1}{4}$ d. a mile. Before this many of the boys had never been in a train. Similar clubs exist in Indiana.

But, when all is said and done, the child who does not learn to love and use books is mentally but one stage removed from the intelligent savage. The education of the backwoods, which is that of nature study pure and simple, renders, as I have seen for myself, the five senses alert; it gives the basis of concrete ideas on which reason and imagination can build. But without books the mind is limited to observation of the environment; it cannot inherit the mental legacy of the race, nor can nature study develop into natural science, history, geography, or literature. Without books much future self-education is debarred,

and much power of getting the best out of life. Hence the importance of rural libraries.

The great educational importance of training children to the use of libraries was recognised some eleven years ago by the National Education Association of the United States. Holding, in the words of one of its members, that "the mere ability to read is of very little value, and in some cases a positive misfortune," the Association in 1897 appointed a Committee to prepare lists of books suitable for children in various grades of public schools, and "to report on the relations of public libraries to public schools, indicating methods of co-operation by which the usefulness of both might be increased." The result was the publication of an invaluable report* in 1899. This laid stress on the educative function of the librarian, urging that he should be in close touch with teachers and with pupils; that he should supplement the work of the former by preparing lists of books and illustrations bearing on school work; and that he should deliberately train the children to appreciative and effective reading by sympathy, by suggestion, and by help in the use of catalogues. The report further offered valuable suggestions as to the establishment of village and travelling libraries, and as to the bye-laws suitable for small libraries; it also gave hints on cataloguing, furnished priced lists of books adapted to children of all ages, and accounts of the work done in certain typical libraries of the States. This report has had wide-reaching influence. The co-operation of the librarians in many big American cities with the teachers in the schools is admirable. For example, Boston Public Library has a large central reading room set apart for children, and issues a special catalogue of books for boys and girls. In at least one branch library in a poor part of Boston the librarian visits weekly every school in the neighbourhood to find out the special subjects of study for the week in history, geography, or kindred subjects in that school; she then posts up pictures, looks out passages in books, and is prepared to give every aid to the children who pour into the library at 4 o'clock. Again, the Cleveland Public Library has a selected branch of 12,000 books for children, and the library assistants train the children to use the catalogues for themselves. Brooklyn and Buffalo public libraries are amongst other famous examples. Further, Brooklyn makes up loan libraries of 50 volumes for teachers on any given subject, and allows them the use of these for three months on payment of carriage.

Not merely the cities, but even the villages of the United States have often their libraries; not a single village in Massachusetts is without one. But in the purely rural districts travelling libraries can best supply the want. The travelling library idea

* "Report of Committee on Relations of Public Libraries to Public Schools, 1899." See National Educational Association. *Journal of Proceedings and Addresses of the 38th Annual Meeting*, 1899, p. 452. Published by the National Educational Association. (To be seen in the Library, Board of Education, Whitehall, London, S.W.)

was born with the University Extension movement of England; it was introduced into America in 1893, but there it has developed with such rapidity that even in 1901 no fewer than 20 States provided free travelling libraries to communities and individuals; and, besides these State libraries, various independent organisations, such as the State federation of women's clubs and the farmers' institutes, had been so active that 36 States in all had considerable travelling library facilities. The pioneer State, New York, had by 1901 no fewer than 59,339 travelling libraries packed in wooden cases to serve as bookshelves, and sent for six months to any community on the application of 25 resident taxpayers, and any public school, study club, grange, or other organisation. These libraries are of two kinds: libraries of popular works for general reading, composed of 25, 50, or 100 volumes each, or of 25 each for children; and special supplementary libraries for more serious study, in subjects such as history, literature, social science, and agriculture. Further, to individual homes, small house libraries of 10 volumes each are lent for three months. In each case the applicants pay carriage and working costs. Similar systems have been adopted in other States. Travelling libraries were introduced into Indiana in 1899, and in 1906 there were 5,825 volumes and 170 libraries in the field. These were composed of general libraries of 40 volumes each, and special study libraries of 12 to 16 volumes each; the libraries are sent to any five or more people who organise themselves into an association with president, secretary, and librarian, and who prepay expenses, and give satisfactory guarantees.

But the most successful system is that of Wisconsin. Here the travelling libraries originated in the individual counties, and this more localised system has justified itself by success; for the county libraries are more widely used than the State libraries elsewhere. The first were provided for Dunn County by Senator Stout, a munificent benefactor of rural education, who in 1896 equipped and maintained 37 travelling libraries of 30 volumes each. Similar endowments were made for other counties by individuals and associations. In 1901 the State stepped in, and a law permitted any county to spend 100 guineas the first year and 40 guineas any subsequent year in providing travelling libraries over which the State should exercise an advisory control. Finally, in 1903, supplementary State libraries were established, and of these in 1904 there were 380, in addition to the county libraries. The movement has continued to increase. In 1906 there were 618 travelling libraries, of which 392 were State libraries, containing 14,259 books, and 226 county libraries, containing 10,459 books. There were in addition 171 groups of foreign books sent out by the State, with 5,429 books, making a total of 30,147 books. The State travelling libraries of Wisconsin contain usually from 50 to 60 volumes on fiction, history, travel, science, biography, and literature, and are sent in pine cases, with printed catalogues. They are intended for rural communi-

ties which have no library, but they are allowed also to supplement the existing libraries in poor communities. Applicants must first elect a secretary and librarian, and must pay cost of carriage. Among the different kinds of travelling libraries circulated by the Wisconsin State Free Library Commission may be mentioned as of special interest:

(1) The study libraries, which are sent to public libraries, women's clubs, or organisations of citizens engaged in serious study of certain subjects.

(2) Groups of foreign books. These comprise ten volumes each, and are added to the English travelling libraries sent to communities where a large foreign-born element can be served. They prove most popular, the supply being unequal to the demand. They comprise collections in the following languages:—German, Polish, Swedish, Norwegian, Bohemian.

(3) Co-operative collections. In the case of these collections a given number of communities join together to form a circuit, and the collections of books, for which a fee is charged, circulate every six months until each community has had them; a new collection may then be started. This system helps libraries to obtain new books or foreign books, and also assists communities unable to maintain a public library, but desirous of something more than a travelling library of the usual size.

(4) The exhibit of children's books. This is intended purely as an exhibit to arouse the interest of parents and teachers in the selection of books for home and school use, by enabling them to examine books about which they have read, and to learn of new books and new editions. It is used in connection with public libraries, and is not intended to serve as a travelling library for use.

A collection of reproductions of pictures by great artists has been begun by the Free Library Commission.

This general travelling library system has partially met the rural school needs, but, in addition, some States make special provision for rural school libraries both stationary and travelling. In Wisconsin a certain amount of public money is assigned each year for the purchase of permanent rural school libraries, and in each school district every individual of school age is taxed 5d. per annum to provide a library fund. Other States which make provision for rural school libraries are Iowa, Indiana, Missouri, Minnesota, Illinois, New York, and Massachusetts. In North Carolina, whenever private subscription can raise two guineas, the county board is authorised to give two guineas more towards a library. In North Dakota nearly £160 is spent annually in providing travelling rural school libraries. In Winnebago County, Illinois, the county superintendent, whose pioneer work in school gardening, nature-study, and school consolidation is described elsewhere in this report, has created a wonderful system of libraries. By writing and speaking he roused the school districts of his county to found school libraries; in 1904, at the end of five years, out of the 120 districts, 111

had founded libraries, with funds obtained, entirely within the district, by school entertainments, "socials," and in other ways; there was a total of 7,797 volumes. By 1906 the total had risen to 8,847. These are stationary libraries, belonging to individual schools. As supplementary to these he raised funds for county travelling libraries (*see* Appendix B, p. 41 below), and at the end of five years had 81 travelling libraries, with 4,565 volumes. These are conveyed from school to school for two months at a time; they are the property of the county.

In Eastern Canada something is being done. In Nova Scotia school libraries are compulsory for all secondary schools, and for schools drawing special grants. Further, an Act of 1903 empowered the Council of Public Instruction to grant to other rural schools starting libraries from one to two guineas annually, as a remuneration for librarian work done by the teacher, on condition that from four to ten guineas were spent in the first year on books, and that from 150 to 300 issues of books were made during the year. A continuation of the grant is conditional on an annual increase of from one to two guineas in the value of the library up to 1909. Excellent instructions (*see* Appendix B, p. 42, below) are issued to teachers concerning choice, cataloguing; and loan-record of books, together with a picked and priced list of some 450 books. There were in 1907 about 50 of these rural school libraries in Nova Scotia, and the number is steadily growing. New Brunswick again pays a bonus of 50 per cent. of the expenditure made by any rural school district on its library. In the school year beginning September, 1905, a sum of £71 was expended in this way, and 642 new books for rural school libraries were purchased. In Ontario a similar bonus is offered, but no school may receive more than £2 2s. in any one year. Further, the Education Act of 1906 for the province of Ontario, amongst other important changes affecting rural schools, renders obligatory the foundation in every school of a library of the minimum value of £4 4s. for every teacher employed; the value is to be annually increased from December 1907 by at least £2 2s., until it reaches £21 for every teacher employed. At the end of 1906 there were as many as 1,587 of such rural libraries in the province of Ontario.*

Thus, while nature study, manual training, and domestic science are prominent in the curriculum of the reformed rural school, everything is being done to encourage the love of books.

III.

THE CONSOLIDATION OF SCHOOLS IN THE UNITED STATES OF AMERICA.

The consolidation of schools means the uniting of two or more small inefficient schools into one larger central one, for the

* Additional information about the library movement in Canada and the United States can be obtained from the Official Education Reports for the various Provinces of the Dominion and States of the Union, and from the Annual Reports of the Free Public Library Commission for Massachusetts, and of the Free Public Libraries of Cleveland, Ohio.

purpose of securing both increased numbers and better educational opportunities. In the United States the opinion is rapidly becoming general that it is the necessary first step in rural school reform. It usually involves the conveyance of the children in vans or other vehicles at public expense. The movement first arose, more than 30 years ago, in Massachusetts, to meet the financial and educational difficulties due to diminishing population. Quite independently it appeared about 13 years ago in Eastern Ohio, to meet the demand of an ambitious but sparsely settled population for educational opportunities similar to those of the cities. It has now been widely taken up by educational reformers in the States and in Canada, as a means of enlivening rural life, and adapting the curriculum to rural needs.

The State of Massachusetts, a land of hill, woodland, and stream, settled haphazard long ago, is divided, for purposes of administration, into counties, and subdivided into 353 cities and rural "towns." In size, wealth, and population the latter vary immensely, some being in remote non-progressive hill districts, others in semi-industrial areas; their average extent is about 25 square miles. The school committee of every city and "town" is required by law to maintain sufficient schools within "reasonable walking distance" of all children entitled to attend. Fifty or sixty years ago, when Massachusetts was peopled by the old New England stock, and the primitive country life produced a vigorous population, this was comparatively easy; but the combined effect of smaller families, the drift to the cities, and the drift to the West reduced population to such an extent that schools which had had sixty to eighty pupils dwindled slowly to fifteen, ten, or even five. The parallel reduction in rateable property produced a financial, side by side with the educational, difficulty. To meet this, a law passed in 1869 empowered towns to raise money for conveying children to and from central schools. The interpretation of the "reasonable walking distance" is left to the school committee, and varies widely; commonly the Massachusetts children are expected to walk one to two miles. Under this law consolidation began in 1874 and 1875 with the "towns" of Quincy and Montague; the most complete early example was Concord, where, out of 15 schools, six were consolidated in 1879. Since then consolidation has gone on rapidly, especially in the more populous and developed townships, where the roads are better and opinion is less conservative; in 1903, out of 353 "towns" and cities, there were only 68 which were not spending money on conveyance.

The State of Ohio, in the regularity of its political divisions, in the uniformity of its very roads, has stamped on its face the fact that it was settled later and more deliberately than Massachusetts. The "towns" of New England, like the parishes of Old England, grew up spontaneously as hill and stream directed. But in the great central plain political divisions were marked out as with a ruler. In Ohio the unit of school government is the township, a subdivision of the county, usually five miles square. A system of parallel roads running north and south,

east and west, marks its boundaries, crosses its centre, and further bisects its subdivisions. At wide intervals organised villages break the uniformity, but the purely rural township, with a population of about 600 to 800 to the 25 square miles, largely prevails. At the cross-roads in the centre are usually a store, a post-office, a little town hall, and two friendly, but rival, churches. Each township has in its elected school committee a greater power over local education, and a greater independence of State control, than is usual in the States of the Union. It determines its own curriculum; and till recently there was no qualifying examination for teachers except that of the county. Each township erects and maintains some nine or ten little district schools; these in some cases, owing to decreasing population, have as few as five pupils. I have myself witnessed, so recently as in 1904, the dreary monotony of a morning's work in these circumstances. The best farmland in Ohio is the so-called "Western Reserve," that portion of Eastern Ohio which was settled from New England. Here the rich clay soil, the abundance of sugar-yielding maple, the moderation of climate due to Lake Erie, offer great economic opportunities. Along the lake shore the vine flourishes, and wine is abundantly manufactured. Further south it is an undulating country, beautiful with patches of woodland and semi-historic homesteads. The farms vary from about 50 to 500 acres in extent; there is solid comfort, and keen interest in national and foreign politics; and the recent establishment of the rural free mail delivery here, as throughout the Union, has made the daily paper a possibility. Yet the up-growing generation betakes itself to the city. Here partial consolidation began in 1894 in some of the townships along the lake, in Ashtabula County. One township, that of Kingsville, contained eight districts, each with its own school; a small village lay at the centre, about a mile and a half from the Lake Shore Railway. Here the need arose in 1894 for more outlying school accommodation, but owing to the unsatisfactory condition of the other small schools, the Ohio State Legislature was approached, and powers obtained to close several of these and convey the children to the central village school. Here a new building was erected, a high-school department was established, and five teachers employed. Soon after, other townships asked for the same powers, and a general law was enacted for the State, enabling the people of any township at their annual election to decide by vote to consolidate their schools. In most cases the proposal, made by an energetic minority, was at first hotly resisted. The objections raised varied in weight; usually the change was carried by a small minority; finally most of the opponents were converted by experience. In 1897 a purely rural township, Gustavus, in Trumbull County, about 20 miles south, abolished its nine district schools, and built a consolidated school at its centre. (*See Appendix C, p. 47, below.*) The movement proved infectious, and, in spite of local hostility, the seven contiguous townships consolidated within the next few years. The movement is rapidly proceeding, partly owing to the children.

who, true to the spirit of the American child grow rebellious in the little district schools when their neighbours enjoy the delights of consolidation. I found one school closed in consequence, and heard of another where five successive teachers had been ousted in one year.

Ohio has been called the "Mecca" of consolidation. These schools, far less suggestive for English conditions than those of Massachusetts, meet the needs of the great central American plain. The people boast that their consolidated schools give an education like that of the city, and the curriculum of these Ohio schools is in fact identical with that of the city schools. Educational reformers, however, see in their organisation a means of differentiating rural education from that of the city by changes in the curriculum described in the preceding chapter.

The need for change is widely felt. The State of Indiana in 1900 was officially reported to have 108 schools with an attendance of five pupils or under, 487 schools with five to ten pupils, and 1,253 with ten to fifteen; while the cost of education was more than 48 per cent. higher for the country than for the city with its high schools. The State of Michigan in 1902 reported 83 schools with five pupils or fewer, 1,004 schools with fifteen or fewer, while the cost per pupil per year of ten months was about £8 10s., or more than twice that of the city schools. Similar reports are given for Missouri, Iowa, and other Mississippi States. To meet these difficulties, in 1902 no fewer than 27 States had introduced consolidation in some districts. The first consolidated school of Illinois was introduced by the County Superintendent of Winnebago County in 1903. This was a case of the partial consolidation of the schools of a township. Seward is a rich agricultural area, about five miles square. Three of its nine school districts agreed to consolidate. They erected a two-storey building, with a furnace-room, a boys' workshop, and a girls' gymnasium in the basement; the first floor contains two school-rooms and cloak-rooms, the second floor a school-room, laboratory, and assembly hall. The school stands on $3\frac{1}{2}$ acres of ground, and this has been laid out in playgrounds, tennis lawns, shrubberies, and experimental plots. (*See Appendix D III.*, pp. 53-54, below.)

The first question in consolidating schools is that of transport. In Massachusetts three methods are adopted. In some cases payment is made to parents, who arrange as seems best, but in these cases it is often found that the money is kept, and the children walk. Where trains or long-distance electric cars are available, these are used; the cars are obliged by law to take the children at half-price; the teachers distribute strips of five return tickets each week, which are available up to 4 p.m. of the day of use. But the commonest method is by the school van. In Massachusetts this is often of rough home construction, resembling a small hay-cart, with seats and a canvas cover. In Ohio it is more elaborate, having leather seats, glass ends, and canvas sides, which roll up for warm weather and button down

for winter. The driver sits on a stool, and usually takes part in the conversation within. In winter the vans are on snow runners, and rugs and a stove must be provided. The jolting is severe, the vans go at a very slow pace, and it takes about 1½ hours from the beginning to the end of a five-mile route. The vans are at most 12 feet long and 5 feet wide, and hold from 20 to 26 children. The drivers in the States supply their own vans and horses. The work is given annually to a suitable person making the lowest tender. The drivers are usually farmers, and in both Massachusetts and Ohio it is found that by milking before starting, and using their horses for light work only, they can undertake the transport without serious detriment to their work. This is because the route seldom exceeds five miles, although the maximum route of Ohio is as much as eight miles.

The school committee also defines the routes. This question is more difficult in Massachusetts than in Ohio with its mathematical precision of roads. But the Ohio children are fetched from their very doors, and practically all are conveyed regardless of where they live, since the law only compels them to walk half a mile; the Massachusetts children have to walk to the main road to meet the van, and only those are carried who live beyond a "reasonable walking distance." The vans are allowed a quarter of an hour of latitude for arrival, but must leave within five minutes of the ringing of the dismissal bell.

The next question is that of expense. (*See Appendix E, p. 55, below.*) It was from motives of economy that the movement in Massachusetts began; in 1897 as many as 68 per cent. of the consolidated schools of Massachusetts reported that consolidation was cheaper, 16 per cent. that expense was the same, and only 16 per cent. that it was greater. In Ohio, however, the school rate has gone up considerably in consequence. Again, in Massachusetts the salaries of the teachers have improved, while in the Ohio schools, except for the headmaster, who is usually a college graduate, the salaries have but slightly risen, and the teachers are exactly of the calibre of those in the district schools. For example, in the Massachusetts township of Concord, five schools costing from £100 to £120 a year, in which the teachers had been getting about £2 2s. a week, were abolished in 1879, and the children were conveyed to a sixth and much larger school in Concord village, which had already several rooms, and in which the teachers were far better paid. The transport of an entire school cost from 30s. to £2 a week; school insurance, firing and maintenance in the large school were not increased, and at first no more teachers were needed. In spite of increased rate of transport since 1897, and a rise of population, Concord is saving about £50 a year by consolidation. Again, the town of Warwick, Massachusetts, had nine schools, with a total average attendance of 87, and a 24 weeks' school year; the teachers were paid £1 1s. a week, and 25s. in the largest of the schools. In 1894 the build-

ing of the latter was enlarged to three rooms, and the small schools were abolished; three trained teachers were employed for a 36 weeks' year; the salaries were increased by 75 per cent., and though the average attendance rose to 96, there was no material increase of cost.

On the other hand, in the township of Gustavus, Ohio, the expenses have gone up from £479 in 1896-1897 to £950 in 1906, and the facts are similar in adjacent townships. The rise in individual salaries, except for the headmaster, is insignificant, amounting to from 10s. to £1 a month. Many facts account for the difference; the townships of this part of Ohio had in most cases no village school as a centre, and therefore built new and elaborate buildings; they instituted high-school departments; they overcame local jealousies by undertaking to convey all children. Further, having more of the optimism of the West, they were more ambitious, and troubled less about expense.* Finally, the increase in daily attendance is so marked that, in spite of increased total expense, the average daily expense per pupil present is, even in Ohio, less than before consolidation.

In considering the advantages of consolidation, however, no American will tarry long over the money question. The educational advantages are great. Foremost is the intellectual and moral stimulus of numbers, the intangible influence of mind on mind which every teacher is conscious of, and the public spirit of a large school. Perhaps one of the greatest disadvantages of the little school is the inability to organise games; several consolidated schools in Ohio have now started baseball and football teams and play inter-school matches. Of course much of the success of consolidation depends upon the teachers; it gives them their opportunity, but it takes a better teacher to inspire the large numbers. However, amongst the dozens of children who have told me their experiences of the change, two only regretted the little schools, and these because they could be naughtier where there was no male principal. Secondly, the increase in enrolment, and, still more, in attendance, is almost everywhere marked; older boys and girls return to school when educational opportunities increase; younger children no longer play truant when school becomes interesting. The enrolment in Kinsman, Ohio, consolidated in 1901, rose at once from 90 to 120, and in 1906 was 161; in Gustavus it rose on consolidation in 1898 from 142 to 186, and since to 204. In the three districts of Seward, Illinois, there were before consolidation 122 young people between six and twenty-one years of age, and of these only 79, or 64·7 per cent., were at school. In 1905 the total had risen to 139, and of these 134, or 96·4 per cent. were enrolled in the con-

* That these circumstances sufficiently account for increased expense is emphasized by contrast with Madison township, Ohio, on the shore of Lake Erie. Here, instead of one large consolidated school, five smaller schools have been instituted, by combining two or at most three schools in various parts of the county. The result is that the total expense for Madison township has not increased, and owing to increased enrolment the average expense per pupil has been reduced by 33·3 per cent.

solidated school. Again, in Kinsman the average attendance has risen from 66 per cent. to 78 per cent. of the enrolment. The evidence of such increase is widespread; in Buffalo School, Iowa, attendance rose from 83 per cent. to 94 per cent.; in the whole of Massachusetts in 1902-3 the average percentage of attendance fell in only two "towns" below 80 per cent., and these were where no consolidation existed. Other advantages claimed are that children are better classified, and better teachers are employed. The latter is by no means always true; where, as in the case of the Ohio schools, the drivers are paid as much as the teachers, the pay of the latter is insufficient. It cannot be too strongly urged that consolidation should never take place unless a better teaching staff can be employed. On the other hand, consolidation facilitates the employment of teachers specially qualified in nature study, domestic science, and manual training, and the provision of library, pictures, and apparatus. Further, the ordinary teacher gains in dignity and helpfulness, and with the added importance of the rural school there is a better chance of attracting really good teachers to the country. Lastly, the effect on the neighbourhood is marked. Public interest in consolidated schools is usually keen; the pride of the Ohio people in the schools for which they are paying so much is stimulating even to the critical outsider, and the schools are becoming important social centres of the townships. Thus one of the main problems of rural life, the lack of social interest, is being partially solved by means of consolidated schools.

Many objections are, of course, urged, especially when the change is first proposed. Even in America the tendency which dreads change has to be coped with, and the loss of the little old schoolhouse is often regretted. More serious are the charges of physical, intellectual, and moral harm in the process of transport, and the loss of sturdy self-reliance when a child is conveyed to school. Intellectual and moral harm there may be, if the driver is ill-chosen, but the same would apply to the teacher; the worst physical harm which can accrue is from a good jolting. Another objection is the absence from home; many vans start at 7.15 a.m., and reach the end of their return route at past 5 p.m. It is too long for the very little ones, and in Canada they have slightly reduced the length of their school day to cope with the difficulty.

Lastly, there is the objection of those who disbelieve in large numbers, and prefer the individual freedom of the little school, in which each child works alone and advances at his own rate; these point to the Scotch "Domsie" of Ian Maclaren's story as the ideal teacher. No doubt with the gifted teacher the gifted child gets the best chance in such a school; but school organisation has to deal with the ordinary teacher and the ordinary child. Those who have experienced in Massachusetts conditions very like our own urge consolidation when the roads are good and the distance is not too great.

IV.

THE CONSOLIDATION OF SCHOOLS IN CANADA.

In Canada, the movement for the consolidation of rural schools has not been spontaneous, as it has in some parts of the United States. It has been introduced experimentally from above, in four eastern provinces, as a part of the Macdonald Scheme already described, and in the belief that a single practical object-lesson is worth more in the education of public opinion than any amount of exhortation. Further, the consolidation has been in every instance combined with radical changes in the curriculum of the rural school.

The need for reform in Canada was even greater than in the States. Professor Robertson, as adviser to Sir William Macdonald, holding that consolidation was the necessary first step, made a personal investigation into the working of the Ohio consolidated schools. He next visited many centres of educational experiment on the lines of manual training and nature-study in the States, and studied reports of similar developments in Europe. The offer was then made in 1902 to the five eastern provinces that one consolidated school should be founded in each, and for three years be partially maintained by the funds of the Macdonald Trust. Four of these schools are now working, and afford an opportunity of studying concretely both the consolidation of schools and the reform of the curriculum; the one in Nova Scotia was founded in 1903, those in New Brunswick and Ontario in 1904, and the school in Prince Edward Island in 1905. The example of consolidation is already bearing fruit in other districts of Nova Scotia and New Brunswick; there were in 1906 no less than 23 consolidated schools in Nova Scotia, representing 61 small schools previously existing; and there were three additional consolidated schools in New Brunswick.

Middleton School, Nova Scotia, opened in September, 1903, and Kingston School, New Brunswick, opened in September, 1904, are the oldest of the four schools. They afford good examples of the two different types of rural school locality with which reformers must deal. Middleton School is in a village of 800 inhabitants, in the centre of a fertile and prosperous valley. Kingston School stands merely at four cross roads, with only a church and half a dozen houses in sight; it is in the centre of a region where no village exists. The village of Middleton has three doctors, two solicitors, two banks, several fair-sized shops, and a railway station with two trains a day; it is the collecting point for the agricultural produce of the surrounding valley, a rich fruit-growing district; yet it has isolated wooden houses, roads comparable only to ploughed fields, and even in the very centre of the village only an occasional plank for a side-walk. Kingston, though in the midst of the most beautiful scenery of New Brunswick, nestling among hills and forests of fir, beech,

and maple, and close to the many-armed waterway of the River St. John, is an unprogressive farming district. The soil is poor, the railway five miles away, the roads atrocious. The people, descendants of the earliest loyalists who settled in New Brunswick from the States in the Revolutionary War, though of sterling quality, are unprogressive and relatively poor. Middleton, therefore, affords an example of consolidation round a village, Kingston of consolidation round a point chosen for convenience of transport, the one in a progressive, the other in a non-progressive region.

These two localities were carefully selected by Professor J. W. Robertson, as adviser and agent of Sir William Macdonald, and the offer was made to them in 1902 that all expenses should be paid for three years out of the Macdonald Fund, over and above the recent average expenses, provided that the schools would consolidate, and allow Professor Robertson a free hand in appointing the staff and organising the curriculum. Sir William wished, for the sake of the object-lesson, to spare no expense. This offer the districts concerned, after much hesitation, decided to accept, and the schools were accordingly built and opened, the one in 1903, and the other in 1904. The old district school houses were left standing in case the experiment should be dropped after three years.*

Middleton had already a school of 130 children, with three teachers, whose salaries ranged between £60 and £120 per annum. Around it, at a radius of about four miles, lay seven other school districts, with schools varying in enrolment between 19 and 47 pupils; each school had one teacher with a salary from £30 to £60 per annum. The total number of children enrolled in the eight schools was 367, and the average daily attendance in 1902 was 198.4, or 54 per cent. The districts had not been marked by educational enthusiasm, for they had paid the relatively low average school-rate of 35 cents on the \$100 of property. The school districts contiguous to Kingston were seven in number, at a radius of about five miles; the total number of children in the seven schools was 125, and each was taught by a young woman teacher at a salary which in only one case reached £60. The united average daily attendance for the last year in the seven schools was only 55, about eight in each school, or 44 per cent. of the number enrolled. The children left school very young.

The consolidation of the schools into one central school had immediately a marked effect on enrolment, on attendance, and on the age at which pupils left. In Middleton in the first term the average daily attendance rose from 54 per cent. to 78 per cent., and in Kingston from 44 per cent. to 91 per cent. Even in the abnormally severe winter of 1904-1905, when snow lay deep on the ground for months and the thermometer was often 40° below zero, Kingston School was only twice closed, and in no

* In the case of Middleton, four of the eight original schools reverted to the old system in September, 1906.

case did attendance fall below 50 per cent. In Kingston the enrolment rose from 125 to 166, an increase partly accounted for by the ardour of districts not included in the scheme, since 20 pupils from outlying districts were willing either to board in the neighbourhood, walk an immense distance, or otherwise convey themselves in order to attend the new school. Moreover, many older pupils returned to school, and amongst them seven young men and women between 20 and 30 years of age. No clearer evidence of the enthusiasm of the Kingston folk could be furnished than the sight of these grown-up people marching in file with children and seated as pupils in children's desks.

The new schools were staffed with the best teachers that could be obtained, at salaries ranging from £67 to £230 per annum. (See Appendix G, p. 63, below.) The Middleton School of 400 pupils had a principal, vice-principal, two assistant masters, and seven assistant mistresses. One of these was a specialist in manual work, another in domestic science, and another had a University degree. The domestic science teacher was a highly trained and thoroughly qualified English-woman, who went out to Canada expressly to take up the work at Middleton. The Kingston School of 170 pupils had a principal and four assistant mistresses. The former was an M.A. and gold medallist of the University of New Brunswick, and there was one other University graduate on the staff. It was thus possible not merely to grade the schools into the eight grades of the ordinary city school, but to introduce high-school work. Middleton had from the very first four, and Kingston had two of the four regular high-school grades.

Middleton school has a two-storied brick building, standing on four acres of ground in the centre of the village. (See Appendix D, p. 49, below.) It has basement playgrounds, eight large class-rooms holding 50 pupils each, an assembly-hall seating 600 people, a principal's office and teachers' room, and a small room for scientific work. Owing to the fact that many more children joined the school than had been expected, the old school building was fitted up for cooking and laundry work, woodwork, and chemical laboratory work. The fittings are excellent; in a class of 24, each boy has a separate carpenter's bench and full set of tools, and the kitchen is supplied with separate cupboards and apparatus for each pupil, demonstration boards, and all other requisites.

Of the four acres of ground, $1\frac{1}{2}$ is used for school gardens and the rest for a baseball ground. Attached to the school is the stable for 11 vans and 22 horses.

The Kingston school has a large wooden building of similar size and plan. It stands in two acres of ground, part of which is laid out very prettily with turf and young trees; there is a baseball ground for boys and a croquet lawn for girls, half an acre is laid out as an orchard, and nearly half an acre more as demonstration plots, and individual children's gardens. The rooms for manual training and domestic science and the science

laboratory are in the case of Kingston within the main building. There is also a small room for a library, and another large room for a school museum to be filled by the pupils.

All the children except those from the immediate district ride daily to and from these schools in covered vans, owned by Sir William Macdonald, and driven by paid drivers, who supply their own horses. Each van holds from twenty to twenty-four children. The routes as originally laid down varied in length from 6 to $2\frac{1}{2}$ miles; the children who came furthest started at 7.30 a.m. The vans reach school by 9.15 and leave again at 3.30 p.m. School begins at 9.30, and the teaching day is four hours and forty minutes; there is one hour for lunch at noon and two shorter breaks.

The main aim of the school work is to prepare children for country life, both intellectually and physically, by giving to nature-study, manual training, and school gardening a central place in the curriculum, and by connecting the other subjects with these as far as possible. (See Appendix J, p. 67, below.) It is felt, however, to be impossible and undesirable at once to break fully with the established curriculum, and the relation of the various subjects to each other is only gradually being worked out. A great deal of liberty is being given to each teacher to plan his or her own time-table, but in the main the school law of the province has to be reckoned with. An average of about $2\frac{1}{2}$ hours a week is given to manual training, or, in the case of older girls, to domestic science, and $1\frac{1}{4}$ hour to nature-study; but the time-table, especially in the lower grades, is elastic. In the spring and summer additional time is given for gardening and for expeditions into the country round. The children in the lower grades garden in common, but each child from Grade V. to X. has his own garden, 12ft. by 4ft., where he plants and grows vegetables under supervision. These are his own property to sell or otherwise dispose of. There are also experimental plots where the effects of different fertilisers and other things are tested and where hot-beds are made and watched. (See Appendix K, p. 69, below.)

Manual training begins in the lower grades with drawing, brush-work, cardboard work, or sewing; both boys and girls learn the latter at Middleton. The older boys from Grade V. or VI. upwards learn American Sloyd, and the girls take laundry work or cooking. They have one long lesson of two and a-half hours per week. Each boy has to first calculate and make a mechanical drawing of the model he is to construct, thus mathematics are brought in. The models made are of things useful in country life, as plant labels, plant stands, match lighters, and so on. The connection with nature study is maintained by lessons on the quality and origin of the woods used. The girls study not only the art of cooking, but a little of the chemistry of foods, and wherever possible the necessary household accounts are done by the class. One year is given to laundry work.

Nature study is wisely begun in a very informal way in the lower grades. A short talk of about ten minutes opens each

morning's work; the weather for the day is discussed and registered conspicuously in a chart; any specimens brought by the children to school are shown, and the children are encouraged to speak of anything which they have seen on the way to school. But the nature study idea runs through all the work of the little people. They read, write, sing, and do their sums about the things around them, and the fairy-story element in nature is not forgotten. In the higher classes a more systematic form of nature study is gradually introduced, and in the high-school classes elementary physics and chemistry are taken experimentally and their bearings on agriculture illustrated. Thus an important part of the school work of these children is calculated to develop in them interests which lead towards life in the country.

Similar work is being done by the two more recently founded Macdonald Consolidated Schools. That at Guelph in Ontario was opened in the autumn of 1904. It stands in the grounds of the great Ontario Agricultural College, and in the very midst of the most fertile district of Ontario, the rich agricultural, dairying, and fruit-growing peninsula, whose boundaries are three of the great lakes. But for its fenced fields, the undulating wooded landscape would recall the scenery of England. Four schools combined for purposes of consolidation in the autumn of 1904, and a fifth, convinced by experience of the advantages, petitioned to be included in July, 1905. Although the important little town of Guelph is only about a mile away, no children from the city are allowed to come to the school; it is rigidly kept for the country child. The management of the school is vested in a Board composed of three trustees from each of the combined districts. The rate of taxation was, up to the end of 1907, the same as before consolidation, all extra expenses being borne till the close of that year by Sir William Macdonald; he further provided the vans. Eight vans are used. The longest distance from which children come is seven miles; but the Principal is convinced that five miles would be a wiser maximum.

The school stands in three acres of ground, of which part is parcelled off into small individual gardens for each child, part into class plots where a whole class works together, and part into "illustration plots," where the entire school conduct experiments in fertilisation, rotation of crops, and so on. Besides the usual subjects of the curriculum, half an hour a day is given to nature-study, and the children also take one out-door trip each week. Each class in the upper grades of the school gives $2\frac{1}{4}$ hours a week to either manual training or domestic science. Gardening has no fixed time on the time-table; half a day is given at the beginning of the season to laying the gardens out, and the time is afterwards given incidentally, often out of the time allotted for manual training time. The school day lasts from 9 a.m. to 4 p.m. in summer, with two 15-minute breaks, and an hour at noon; and from 9.30 a.m. to 3.30 p.m. in winter, without the 15-minute breaks.

In the case of this school the effect of consolidation on enrol-

ment and on daily attendance is interesting. In the first six months of the year preceding consolidation, the enrolment for the four district schools varied from 113 in January to 144 in June; the average daily attendance was 59·1 per cent. in January, 68·1 per cent. in June. After consolidation, in January, 1905, the enrolment of the school rose to 181, and by June it had reached 192; and the average daily attendance rose to 87·84 per cent. in January and 91·07 in June.

The growing influence of the school on the parents is said to be very marked. An Association of parents and teachers has been started, and is doing good work.

The latest of the Macdonald schools is the one at Hillsborough in Prince Edward Island, opened in May, 1905. The school lies in the midst of a very prosperous farming community. It stands on a site of $2\frac{2}{3}$ acres, giving ample room for gardens and playground. The original proposal was to unite nine district schools, but the experience of Middleton has shown that it was a mistake for van routes to exceed five miles in length; the number of districts was therefore reduced to six, with van routes varying from $4\frac{1}{2}$ to $3\frac{1}{2}$ miles in length. Each of the original 6 schools had been staffed by a single teacher; there had been a total enrolment of only 148 children; the average daily attendance was only 60 per cent., and the teachers' salaries averaged only 5s. a day. Great objections were nevertheless raised to consolidation. These objections have now all disappeared. The enrolment at once rose, on consolidation, to 161, the average daily attendance to 74 per cent. The school is staffed with 6 teachers, of whom the Principal is a university graduate; the average of the teachers' salaries is 13s. 9d. a day. The school hours are the same as at Guelph, but there is in the summer a break of an hour and a half which is spent in the garden. One hour a week is given to nature-study, besides incidental work; one hour and a half to gardening; and $3\frac{1}{2}$ hours to either domestic science or manual training.

At the close of the original three years in the case of each of these schools, Sir William Macdonald's agreement to pay all additional expenses incurred by consolidation comes to an end. Each district benefited by the schools has therefore to determine whether to continue consolidation or to revert to the old system of the small district school. In the case of Middleton the three years ended in the summer of 1906, in that of Kingston in the summer of 1907. Experience in Middleton (*see* Appendix E, p. 58, below) had shown that the expense was excessive where the districts were so distant that van routes exceeded five miles. Four of the original eight districts therefore determined to withdraw from the Middleton School and to set up their own little schools once more. Of the four remaining districts Middleton itself sent in 1906-1907 a total of 172 to the consolidated school; three outlying districts sent 24, 36, and 10 pupils respectively, and paid about £134 for cost of conveyance; there were also 16 outside pupils paying

fees. The total enrolment for the fourth year of consolidation was 258. For the three ensuing years Sir William Macdonald promised a contribution of £250 per annum, and he presented the vans to the district. The average school rate paid by the districts concerned has nevertheless risen from 35 cents in the \$100 of property before and during the first three years of consolidation, to 48 cents in 1907. The fact that the districts are willing to pay at this increased rate is an indication that the advantages of consolidation have been appreciated.

The districts concerned in the Kingston School have evinced a more marked enthusiasm. Although the longest van routes are as great as in the case of Middleton, and the school rate far higher, all the seven districts have unanimously agreed to maintain the consolidated school. Sir William Macdonald has promised £250 per annum for three years, and by careful economy it is hoped that the annual expenses may be lowered from £1,250 to about £937. This has been secured partly by reduction in the cost of conveyance; it has been found possible to use a smaller number of vans, and there has been a steady decrease in the wages paid to van-drivers amounting to about £166 in three years. Decreased expenditure is also secured by reducing the staff from five to four, and by a marked lowering of salaries from a total of over £600 to about £400 per annum. This is unfortunate, but inevitable. None the less the districts will have to pay in school rate exactly twice what they have paid hitherto; the rate has risen from 50 cents to \$1 on the \$100 of property. Two facts therefore are clear: first, that the Macdonald Schools are a little too expensive to be exactly reproduced where a school is to be self-supporting; second, that they are capable of arousing marked enthusiasm in a purely agricultural community.

The value of the Macdonald scheme as an object-lesson is being demonstrated by the foundation of other consolidated schools in Nova Scotia and New Brunswick. These schools have not been aided by the Macdonald Fund, and therefore the movement is more economical in plan. The Nova Scotia Legislature, however, has encouraged the experiment of consolidation by the offer of a grant towards building expenses to the first sections in each county who move in the matter; thus two schools opened in 1905 had grants of £126 and £42 respectively. These new consolidated schools have profited by the experience of Middleton, and have avoided consolidation on so large a scale as was there attempted; of the 22 consolidated schools founded within three years of the establishment of Middleton, none represent more than four original sections. In New Brunswick the Legislature offers half the cost of transport to aid consolidation, and the movement is further encouraged by the greater opportunity afforded of earning the grants for manual training, nature-study, and domestic science. Several flourishing consolidated schools have been the direct outcome of the example set at Kingston; for example, Riverside School, founded in January,

1906, had within six months an enrolment of 248, and an average attendance of over 80 per cent. The need for consolidation is indeed great. Dr. Mackay, Superintendent of Education for Nova Scotia, reported in 1904 that no less than 240 schools had no teacher; while in New Brunswick 400 districts were without schools of any kind during a part at least of the year, and 370 schools were so small that half the number of teachers would have done better work in schools double the size. Since the main purpose in founding the Macdonald schools was to stimulate reform by means of an object-lesson, the multiplication of these consolidated schools is perhaps the most marked indication of the success of the Macdonald scheme. All these new schools follow the lines of the Macdonald schools, not merely in consolidation, but also in curriculum. In all of them nature study, manual training, domestic science, and the school garden play an important part.

On the other hand, these schools have a difficult problem still to work out. If the more ordinary subjects are also to be taught and the mental distraction inherent in a wide curriculum is to be avoided, they must be taken in close relation to nature-study and manual work. The weakest point of the work of these schools lies here. That these ordinary subjects cannot be entirely dropped, at present at any rate, seems certain; for it is impossible to make a complete educational schism between town and country education. History and literature, moreover, are essential for the training of human sympathy, public spirit, and imagination. Yet these are the subjects most difficult to correlate with manual training and nature-study. What is needed is history and literature beginning with the neighbourhood and starting from the present, which would be a human nature study, and which would give the Canadian farmers wider interests and sympathies and ideals than nature study pure and simple could give.

It is too soon to draw conclusions as to the effect of these schools on the life of the district. So far it is known that the numbers attending school have increased, that the attendance has been far more regular, that the children take a greater interest in their school and a pride in its doings, that the adults in these scattered districts have been drawn together by new methods, and have found the occasional school entertainments a time of common social intercourse.

In the matter of expense the experiment is by no means normal, but it is evident, first, that it cannot be hoped to reform rural schools and economise at the same time; second, that a district which is so large and where routes are so long that the men engaged in driving vans cannot get back to work in the interval is economically a mistake; a radius of four miles is probably the longest that should be adopted. But for experience in the most economical way of consolidating scattered rural schools one must turn to Massachusetts for evidence.

The Macdonald schools of Canada are at any rate building up

a new tradition in rural education. Further, they are educating the children who may become the rural school teachers of the future.

V.

THE TRAINING OF TEACHERS.

The crux of all educational reform is the training of teachers. The number of teachers who are "born," in the sense that their success is independent of outside influence, is infinitesimal; but there are an immense number in whom the essential combination of human sympathy with intellectual keenness is embryonic. Training is imperfect unless it rouses in these not only a clear perception of the individual and social ends of education, but also a living interest in the subjects they teach. Moreover, only by the training of teachers can the vicious circle of ever crystallising tradition be broken.

The weakest point in the preparation of teachers hitherto has been the failure to awaken in them a keen interest in the actual life of the present day. Academic studies, on the one hand, have placed them in a world apart, a world indeed of ideals, but often too aloof. Professional training in the science and art of education, on the other hand, has tended to produce a one-sided view of the work of the school; the study of the processes of mental and moral development in the individual, of the order and discipline of the class-room are, like all studies in abstractions, inadequate.

Teachers need to recognise more fully that the child is much more than the member of a school; he is the nascent member of a great social organism. To do this they must themselves be keenly responsive to the whole life of that organism.

In the rural schools of North America many teachers have had no special training at all, whether academic or professional. In the days before city life grew keen, it was not uncommon to find a college graduate beginning life by teaching in a remote rural school. But now in some parts the rural teachers seldom have been beyond the High School, and more often have only been through the common school. In other parts they have had very short professional courses of a few months' duration. Thus the actual teachers of the moment are of very inferior intellectual calibre. The first problem, therefore, is how to deal with the immediate situation by training the present generation of teachers. The second problem is how to train up a new generation capable of dealing with the rural problem as a whole.

Attempts to solve the first problem are being made at the Macdonald Institute at Guelph, and in the Nature Study Bureau of the Agricultural College of Cornell University; further, much is being attempted by means of the periodical "Institutes" for teachers, of which those at Winnebago County, Illinois, may be taken as an excellent example.

The Macdonald Institute at Guelph, Ontario, was founded in

1903 by Sir William Macdonald, as a part of his large scheme of rural reform. It was offered to, and accepted by, the Province of Ontario as a department of the Ontario Agricultural College at Guelph, and the building now stands close to the campus of that college. Its prime object is to give to farmers' daughters and others from rural schools a year's training in home-making by means of domestic science and art, and also a wider social outlook through the life of a big community. It also exists to give professional courses of training to teachers of domestic science and art, and of manual training; and thirdly, to give short courses in nature study to teachers of some experience from rural schools. A magnificent building has been provided, with fully-equipped model kitchens, laundries, dressmaking and millinery rooms, manual-training workshop, library, and assembly-hall; and to this has been added close by the Macdonald Hall for the residence of 107 women students.

The staff of the Institute is large and very competent; the equipment is excellent; and the life in the hall of residence compares well with that in many women's colleges in England, though the fee is kept down to the lowest possible figure, and students do some of the light work of the house. The Agricultural College close by has the very highest reputation.

This institute and this hall are being utilised by Professor Robertson to meet the immediate need for better teachers in rural schools. A series of special three months' courses for teachers from these schools was started in September, 1904, and scholarships were offered to the five eastern provinces to encourage the experiment. (*See Appendix F (2), p. 60, below.*) The courses lasted from September to December, January to March, and April to June respectively. The Provincial Governments supplemented the scheme, and in consequence 45 three-months' scholarships were founded for three years, giving free tuition and a liberal contribution to expenses of travelling and board. Those not holding scholarships paid a tuition fee of £2 2s., and a laboratory fee of £1 10s. for the three months.* A wide but elementary course has been planned: it comprises botany, zoology, geography, geology, astronomy, all studied as far as possible out of doors; students are taught to plan and keep school gardens; they take elementary courses in manual training and art, including cardboard work, woodwork, clay and sand modelling, drawing and brushwork. Expeditions are made to the experimental plots, and to the poultry, horticulture, and dairy departments of the Agricultural College. Further, there are lectures and discussions on school method; and in the Macdonald Consolidated School, close by, students can study an up-to-date experiment in rural education, and get supervised practice in teaching. During the three months' course the students reside at the Macdonald Institute, and have the benefit of the social life of the place. Thus at

* Since 1906 the short courses above described have been given during the vacation month of July, and chiefly to Ontario teachers (*See Appendix F. II., p. 61, below.*)

Guelph Sir William Macdonald is dealing with the immediate problem by bringing the actual rural teachers for three months into the sphere of a great agricultural college. One of the teachers writing after the course, says, "It was to me the chance of a lifetime to come in contact with so many professors and notable personages, and to listen to lectures, which being informal, were all the more interesting."

A different method has been adopted by the Agricultural College of Cornell University to meet the needs of the moment. A correspondence course in nature study has been initiated, open and free to all teachers of New York State. It is conducted by Mrs. Comstock, the well-known nature study pioneer, as a department of the Nature Study Bureau of the College. Ten leaflets are issued annually, containing suggestive notes and questions on nature study. The aim is not so much to give instruction, as to suggest a new attitude to all subjects in the curriculum, and to awaken in teachers the habit of observation. Teachers send monthly written answers to the questions, and ten satisfactory answers confer a certificate. All letters of inquiry are answered personally by Mrs. Comstock, and as many as 1,200 such letters have been written in one year. Further, for teachers of the neighbourhood Mrs. Comstock holds a weekly seminary for the discussion of problems. The correspondence course has been widely taken up in New York State; it has proved the natural supplement to the Junior Naturalists' Clubs of the Nature Study Bureau already described, and through these influences nature-study has been introduced into many little schools of New York State.

A third method of training existing teachers is that of Superintendent O. J. Kern, of Winnebago County, Illinois. Mr. Kern's work in establishing rural school libraries, school gardens, and boys' and girls' agricultural clubs, and in initiating consolidation of schools has already been described. His success is very largely due to the very energetic educational propaganda whereby he has created in his county an intelligent appreciation of his aims. He believes in giving pictorial demonstrations of work actually done, and issues every year a very remarkable report* of the work of the county, profusely illustrated with photographs taken by himself. In this report teachers can see pictures of school gardens, renovated schoolrooms and school grounds, school vans, school libraries, all taken in Winnebago County, and gain accurate information as to the progress which is taking place. Further, there have appeared from time to time in the report accounts of similar movements in other States; for example, in 1900 Superintendent Kern travelled nearly 500 miles east to visit the consolidated schools of Ohio, of which at that time no trustworthy report existed, and his pamphlet on the subject, intended for his own county, has been widely circulated in the United States and Canada. The value of this annual report can hardly be overestimated. There is no waste of educa-

* The recent numbers of this report from 1905 onwards can be seen at the Library of the Board of Education.

tional experiment in Winnebago County, and the teachers have all the encouragement to improve which the certainty of recognition can give. It is largely the absence of such educational reports in England which retards progress, by squandering originality, and permitting in the public at large an unsympathetic, uncomprehending attitude to teachers. In addition to this Superintendent Kern has promulgated on useful lines that distinctively American development the teachers' institute. This is a periodic gathering of the teachers of a locality for educational purposes. Superintendent Kern holds one such institute in each of four centres every month during the autumn and winter, when well-known normal-school and other teachers are specially invited to lecture and lead discussions. The monthly institute further gives the County Superintendent an opportunity to explain to the teachers the various educational developments of the State and county as they arise. At the end of the season, in March or April, an annual institute is held of a somewhat similar character, when the teachers meet at the central town of Rockford for three days. Examples of subjects taken up at these institutes are "Nature Study and the School Garden," "The Use of the Library in School Work," "The History and Government of the State of Illinois," "Hygiene," "Music," "Teaching and School Management." During these three days the Rockford Public Library makes special arrangements to facilitate the study by teachers of a large number of books selected for the purpose; and to this was added on one occasion a travelling exhibit of photographs of great pictures obtained from a firm in Boston, and supplemented by books on the subject. In connection with these institutes every year for the last eight years Mr. Kern has drawn up a list of eight or nine books for teachers to study during the year; the books are supplied in the county travelling libraries, and Professional Attainment Certificates are awarded each year to all who have read a certain number of the books and attended a certain number of the institutes. Winnebago County affords an excellent example of how one man can gradually train the rural teachers of a whole county without withdrawing them from work, not so much by individual criticism, as by united discussion and instruction, and by common knowledge of the achievements of all in the county.

The more permanent problem of the training of rural teachers to meet the conditions of their environment raises at once the question whether it should be distinct from that of the city teacher. On the one hand is the argument that the circumstances of country and city life are so different that only by specialisation can teachers in either case be adequately prepared to deal with them. On the other hand is the argument that the underlying facts of all environment are the same, and that teachers trained to interpret them intelligently need in either case the same attitude of mind and the same essential basis of knowledge. Those who desire distinct training for rural teachers would affiliate it to the agricultural school or college. Examples of this are the course at Cornell

University and the Dunn County Teachers' Training School at Menominee in Wisconsin.

The course for rural teachers at Cornell was instituted in 1904. It lasts two years, and the students reside at the University under the ordinary conditions. They attend the first-year University lectures in botany, zoology, entomology, and geology, and also take courses in the agricultural college on soils, agronomy, the homestead, and practical plant growing. They practise garden-making in a model garden. They study the theory of education; they attend a weekly seminary for the discussion of practical problems and they have practice in nature-study teaching under careful supervision and criticism in the public schools of Ithaca. The advantages of the course are that it gives a thorough grounding in the elements of various natural sciences, and introduces the students through the agricultural college to some of the practical problems of country life.

This course, however, is only suitable for students of considerable intelligence and good previous training. The bulk of rural teachers at present could neither afford it nor profit by it. A second experiment initiated in Wisconsin is an attempt to make good teachers out of students of a different intellectual calibre. In 1899 the Wisconsin Legislature found that in its 7,000 rural schools, containing 250,000 pupils, there were 1,500 new teachers annually, that these teachers usually had merely been through the district school, and that the only special training they received was from a fortnight's yearly "institute" or professional lecture course. The Legislature, therefore, provided for the establishment of county training schools for these rural teachers, under the joint supervision and maintenance of State and county. Two such schools were at once instituted in Marathon and Dunn Counties, and ten others have since been added. The State now pay two-thirds of the maintenance. Dunn County is a rich agricultural district containing 129 school districts with 165 teachers. The Dunn County School is situated in the little "city" of Menominee, and is now in close affiliation with the Dunn County School of Agriculture, which was opened in 1902. The latter is an agricultural high school, designed to give to farmers' sons and daughters a secondary school course on agricultural lines. Its main buildings are in Menominee, and comprise a small science laboratory, blacksmiths' and carpenters' shops, a kitchen, a laundry, sewing-rooms, a little model dairy, a library, and a room for indoor horticulture and poultry rearing. There are also $3\frac{1}{2}$ acres of farmland a mile away. The agricultural school proper accommodates about 125 students, boys and girls. On the upper floor of the main building is located the Teachers' Training School, above referred to: it has its own normal staff, and its curriculum comprises a study of the ordinary English subjects, together with the theory and practice of teaching. By an exchange of work with the staff of the agricultural school, the student teachers also receive a ten weeks' course in elementary agriculture, besides courses in manual work and domestic science, and they share the plant of the agricultural

school. Tuition in the training school is free to all residents of the county, but there is an entrance examination for those who have not completed the full course in an ordinary elementary school, or taken at least one year's course in a high school. (See Appendix F I., p. 60, below.)

The school opened in September, 1899, with twelve pupils, but the numbers have steadily risen; for 1905-6 the enrolment was 91. The course is supposed to be for one year, but many do not complete it under one and a half or two years. At the end of that time they go back to the little district schools to teach, and of the 129 school districts, two-thirds are now staffed by teachers trained in this school. The great aim of the school is to develop self-reliance and initiative in teachers, perhaps the highest qualities that a two years' training course can hope to confer on rural teachers of limited education. It is a valiant attempt to reform rural education by the special training of a type of teacher which is common in England, but which in England goes untrained.

These examples of a separate training for rural teachers are open, however, to the objection that they divide the profession in two. It is perhaps hopeless to expect that any large number of competent teachers will, on entering upon their career, have the nerve to cut themselves off permanently from city life by undergoing an exclusively rural school training. Furthermore, since city and rural populations are not permanently distinct, the rural school teacher must educate many children to play their part in the life of the city, and it is not inconceivable that a different race of city teachers might so train city children that a return to country life would not be debarred them. The problem of combining on reformed lines the training for both classes of teachers has been taken up in the School of Education of the University of Chicago, and in the Teachers' College of Columbia University, cases in which training takes place in a city. An experiment in training both types of teachers in the country is being made at Ste. Anne de Bellevue, Montreal. The School of Education at Chicago offers an elaborate training for elementary and high school teachers, for specialists and supervisors, and for normal school teachers. The courses vary in length from two to four years, and are conducted in close connection with two practising schools of remarkable character, which are located in the same building. These schools, known as the University High School and the University Elementary School, are quite frankly a realisation, for the sake of educational demonstration, of conditions not generally possible at the present time. The postulates are, first, plenty of money, and, second, freedom from the necessity of regarding conventional standards in education. The building and equipment of the schools are magnificent, the fees paid by pupils are high, and the children are mostly those of cultivated people in the southern suburb of Chicago. The students also must have means. for the fee for tuition alone is £25 per annum. The immense four-storeyed building, which has a frontage of 350 feet, accommodates college and schools alike. and has equipment for studying practically not merely the world

of nature, but the world of industry which society has built up. The connecting link of the curriculum is the study of history and geography, which show the part played by man in developing the resources of his natural environment. History therefore is closely affiliated with the study of domestic and industrial arts on the one hand, and with geography and agriculture on the other. The building contains a casting and kiln room, a room for studying dyeing, weaving, and spinning, a clay-modelling room, a room for bookbinding and printing, two kitchens, and a woodwork room. There are also special rooms for geography and geology, supplemented by a large apparatus in the basement for studying experimentally by artificial means, the effect of rainfall on the earth's surface. There are also an up-to-date physics laboratory, and two rooms for biology. Many different courses are taken by the various types of students, and in all cases the theory and practice of education play an important part in the scheme of training. But the striking feature is the attempt to make the entire immediate environment the starting point of education. Houses, clothes, food, means of communication, social communities are, equally with natural objects, cardinal facts in the child's environment; and the process by which raw wool becomes cloth is as interesting to him as the process by which a bud becomes a leaf. The clearest explanation of the complex facts of modern civilisation is afforded by the study of the struggle of primitive man with his environment, and the gradual development of agricultural and industrial processes from simplest beginnings; therefore, step by step the children learn to make rough looms, and pottery, and little primitive blankets and rugs. The students in training at Chicago study the working out of this novel curriculum in the University Elementary School, and follow courses of lectures developing the same ideas. This is a training course, which, if practicable, should enable city and rural teachers alike to light up for the little child the mystery of the world around him. The experiment is a daring one, but is full of suggestion for the moderate reformer whose conditions are more circumscribed.

Simpler work with the same end in view is being attempted in the Truro Normal School of Nova Scotia. The underlying educational principle of this school is to seek "a clearly-defined aim in public-school work in the political, social, moral, and industrial conditions which actually confront us." Nova Scotia is a province of forestry, farming, fruit growing, fishing, and nascent manufacture; it has the historical remains of a romantic past; it has in parts a surviving French-speaking population; it has a vigorous Roman Catholic element. There is much that an intelligent study of geography, history, and science can explain. The importance of agriculture to the teacher was recognised as long ago as 1885, when a school for the practical training of farmers was associated with the Normal School, and an experimental farm in the suburbs of Truro was soon added. The training of farmers was in abeyance from 1898 to 1904, owing to

a disastrous fire, but a new and well-equipped agricultural college has now been opened, with a farm of 200 acres, and full agricultural courses. The agricultural training of the normal students has never ceased. An excellent science building, with up-to-date chemical, biological, and physics laboratories has been erected; greenhouses are attached where students conduct seed-tests and other experiments, and there is a model school garden. Occasional visits are made to the farm to see farming and dairying processes. Further, the attempt is being made "to give the ability to interpret ordinary things scientifically" by applying chemistry and physics to the study of agricultural, industrial, and domestic processes. Finally, a manual course for men, and a domestic science course for women are obligatory. These are taken in the Truro Schools of Mechanic and Domestic Science, which are close by. Truro affords an example of a Normal School affiliated to an agricultural college, but not content to limit the training of the teachers to purely rural lines. If the training of city and rural teachers is not to be separated, there is still very much to be said for placing it under the ægis of an agricultural college. Considering how fundamental is agriculture to the existence of human society, the city teacher would gain in intelligent outlook from a knowledge of its processes.

This idea is now being embodied in "Macdonald College," the great agricultural college, school of household science and teachers' training school, opened in the latter part of September, 1907, at Ste. Anne de Bellevue, near Montreal. This, the latest educational experiment of Sir William Macdonald, has been founded and endowed by him for the advancement of rural education, and has now been incorporated with McGill University. Of its three departments the first two are intended to train young men and women for life on the farm; the Teachers' Training School aims to prepare thoroughly qualified teachers for the reformed rural schools. These teachers will study not only the ordinary subjects, but nature-study, school gardening, domestic science and manual training. The Protestant Committee of Public Instruction for the Province of Quebec has closed the provincial Normal School in Montreal, and transferred to Macdonald College the work of training all Protestant teachers for the province. This will afford an interesting opportunity of studying the influence on city and rural teachers alike of a unique training in purely agricultural surroundings. Macdonald College has a magnificent position on the Ottawa River, twenty miles east of Montreal, and on the main line of the Canadian Pacific and Grand Trunk Railways. It has 561 acres of farm and woodland. Sixteen buildings have been erected, and of these five are devoted to the Teachers' Training School. Residence buildings for 200 women and 150 men have been provided; there is a practising school with school gardens attached; there are a library, a museum, a nature-study laboratory, and a manual training room, besides the ordinary class-

rooms. The students of the training school will be under a highly qualified staff of University teachers. Sir William Macdonald has thus fully realised that the training of teachers underlies the whole problem of educational reform.

But whatever the system of training adopted, the first essential is not to instil methods but to awaken in teachers individuality and responsiveness. It takes an unusual and somewhat gifted teacher to step aside spontaneously from the beaten track with any effectiveness, and educational policy cannot afford to rely on a supply of unusual and gifted teachers. No large measure of educational reform can be hoped for until the average teacher is somewhat differently trained for his work. In fact, the moral of rural school decay and rural school reform in North America, as in England, is the need of constantly vitalising the work of the schools, and strenuously resisting the tendency to mere formalism, however good the forms. This is no less true of the city school than of the country school. Neither has the monopoly of "book-education"; neither can do without it. Each needs the spirit of nature-study. Only through a constant supply of teachers of wide interests, keen sympathies, and far-seeing aims, is permanent reform possible. There are many indications that the paramount need for training such teachers is beginning to be recognised.

ETHEL H. SPALDING.

APPENDIX A.

EXTRACT FROM SHEETS ISSUED TO TEACHERS IN
NOVA SCOTIA BY THE PROVINCIAL SUPER-
INTENDENT, IN CONNECTION WITH THE
BOTANICAL CLUB OF CANADA.

(To be handed promptly on its receipt by the Secretary of every School Board to each Teacher employed within the School Section.)

LOCAL "NATURE" OBSERVATIONS.

This sheet is provided for the purpose of aiding teachers to interest their pupils in observing the times of the regular procession of natural phenomena each season. First, it may help the teacher in doing some of the "Nature" lesson work of the Course of Study; secondly, it may aid in procuring valuable information for the locality and province. Two copies are provided for each teacher who wishes to conduct such observation, *one* to be preserved as the property of the section for reference from year to year; the *other* to be sent in with the Return to the Inspector, who will transmit it to the Superintendent for examination and compilation.

What is desired is to have recorded in these forms the dates of the *first* leafing, flowering and fruiting of plants and trees; the *first* appearance in the locality of birds migrating north in spring or south in autumn, etc. While the objects specified here are given so as to enable comparison to be made between the different sections of the Province, it is very desirable that other local phenomena of a similar kind be recorded. Every locality has a *flora, fauna, climate*, etc., more or less distinctly its own; and the more common trees, shrubs, plants, crops, etc., are those which will be most valuable from a local point of view in comparing the characters of a series of seasons.

Teachers will find it one of the most convenient means for the stimulation of pupils in observing all natural phenomena when going *to and from* the school, and some pupils radiate as far as two miles from the school room. The "nature study" under these conditions would thus be mainly undertaken at the most convenient time without encroaching on school time; while on the other hand it will tend to break up the monotony of school travel, fill an idle and wearisome hour with interest, and be one of the most valuable forms of educational discipline. The eyes of a whole school daily passing over a whole school section will let very little escape notice, especially if the first observer of each annually recurring phenomenon receives credit as the *first* observer of it for the year. The observations will be accurate, as the facts must be demonstrated by the most undoubted evidence such as the bringing of the specimens to the school when possible or necessary.

To all observers the following most important, most essential principles of recording are emphasized: Better *no date*, NO RECORD, than a WRONG ONE or a DOUBTFUL one. Sports out of season due to very local conditions not common to at least a small field, should not be recorded except parenthetically. The date to be recorded for the purposes of compilation with those of other localities should be the *first* of the *many* of its kind following immediately after it. For instance, a butterfly emerging from its chrysalis in a sheltered cranny by a southern window in January would not be an indication of the general climate, but of the peculiarly heated nook in which the chrysalis was sheltered; nor would a flower in a semi-artificial, warm shelter give the date required. When these sports out of season occur they might also be recorded, but within a parenthesis to indicate the peculiarity of some of the conditions affecting their early appearance.

These schedules should be sent in to the Inspector with the annual school returns in July, containing the observations made during the whole school year and back as far as the preceding July (if possible) when the schedule of the previous school year was necessarily completed and sent in.

A duplicate copy of the schedule of observations should be securely attached to the school register for the year, so that the series of annual observations may be preserved in each locality. The new register has a page for such records.

Remember to fill in carefully and distinctly the date, locality, and other blanks at the head of the schedule on the next page; for if either the date or the locality or the name of the responsible compiler should be omitted the whole paper is worthless and cannot be bound up for preservation in the volume of The Phenological Observations.

By the aid of the table given at the top of pages 3 and 4, the date, such as the 24th of May for instance, can be readily and accurately converted into the *annual* date, "the 144th day of the year," by adding the day of the month given to the annual date of the last day of the preceding month (April in this case), thus: $24 + 120 = 144$. The annual date can be briefly recorded, and it is the only kind of dating which can be conveniently averaged for phenological studies. When the compiler is quite certain that he or she can make the conversion without error, the day of the year instead of the day of the month will be preferred in recording the dates.

PHENOLOGICAL OBSERVATIONS, CANADA.

(1906 SCHEDULE.)

For the year ending July, 190

Province County..... District.....
 Locality or School Section.....No.....

[The estimated length and breadth of the locality within which the following observations were made..... ×miles. Estimated distance from the sea coast.....miles. Estimated altitude above the sea level.....feet.

Slope or general exposure of the region.....

General character of the soil and surface.....

Proportion of forest and its character.....

Does the region include lowlands or intervalles?.....and if so name the main river or stream.....Or is it all substantially highlands?.....

Any other peculiarity tending to affect vegetation?.....

The most central Post Office of the locality or region.....

NAME AND ADDRESS OF THE TEACHER OR OTHER COMPILER OF THE OBSERVATIONS RESPONSIBLE FOR THEIR ACCURACY.	When First Seen.	When Becoming Common.
(Here follow lists of the common wild plants, cultivated plants, farming operations, meteorological phenomena, and migrating birds.)		

APPENDIX B.

RURAL SCHOOL LIBRARIES.

I.—RURAL SCHOOL LIBRARIES OF WINNEBAGO COUNTY ILLINOIS.

These are of two kinds :—

- (1) Small permanent libraries, owned by various district schools ; the money for which was raised in and by the school district concerned.
- (2) Travelling libraries owned by the County, and in charge of the County Superintendent of Schools. The money for these was partly supplied by the County Board of Supervisors, partly by admission fees to annual school gatherings all over the County.

Number of volumes added to District Libraries, September 1899 to September 1906	7,461
Number of volumes added in 81 Travelling Libraries (founded 1901)	4,565
Total	12,026
Total Expenditure on books September 1901 to September 1906	£17,307

ORGANISATION OF THE 81 TRAVELLING LIBRARIES.

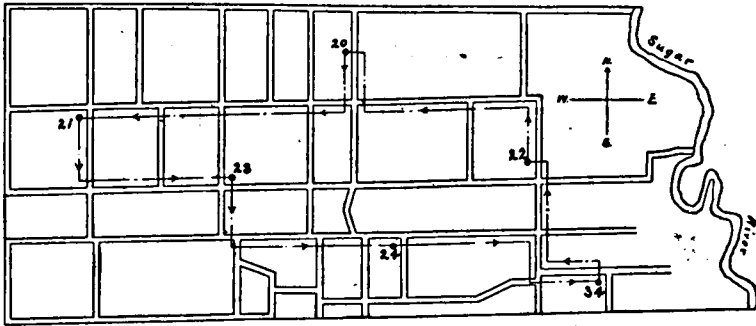
These libraries contain books on history, geography, literature, and nature-study, story-books for children, and also books on educational subjects for teachers. They are packed in strong wooden boxes, which when unlocked form useful book-shelves. Each library has its own number and they are all composed of a different selection of books. They are sent only to country schools. Small libraries are sent to one-roomed schools ; larger ones to graded village schools. They stay two months in each school.

The county is divided for this purpose into circuits of six one-roomed schools each ; and there is one circuit of nine larger village schools. Each year a series of four boxes is assigned to each circuit, and a time-card is furnished to each school indicating where each library should be during a given month. There are not as yet enough travelling libraries for every school always to have one. The conveyance is often done by the County Superintendent, who carries the boxes in his gig ; but wherever possible the districts send to fetch them. A duplicate series of postcards is sent out by the Superintendent, shortly before the end of every two months, to every head teacher, and to every district school clerk, informing them that a given box is due at their school on a given date, and stating the district from which it is to be fetched.

The children are allowed to take the books home, but teachers are directed not to allow the books to go to any home where there is danger of infection.

Once a year the books return to the County Superintendent's office to be repaired and disinfected.

Diagram showing the Schools of Circuit B. and the plan of circulation of boxes.



N.B.—Circuit B, is in a remote part of Winnebago County, twenty miles from the county town. The numbers refer to the small district schools.

Time-card for 1906-1907 showing where each of the assigned boxes 35, 36, 56, and 74 was in each two months from September to June.

Circuit.	Boxes.	September, October.	November, December.	January, February.	March, April.	May, June.
B		At District.	At District.	At District.	At District.	At District.
	35	24	34	22	20	21
	36	22	20	21	23	24
	56	21	23	24	34	22
	74	23	24	34	22	20

II.—THE RURAL SCHOOL LIBRARIES OF NOVA SCOTIA.

Extract from the Act of 1903 for the encouragement of Rural School Libraries.

“Be it enacted by the Governor, Council, and Assembly, as follows :

1. The Council of Public Instruction may pay annually out of the provincial Treasury to any teacher acting as the librarian of the school library of the school section the sum of five or ten dollars, according as the equipment of the school, the value and use of the library, and the general management of the school and library, attain the standards prescribed by regulations of the Council for the smaller or larger library grant respectively.

2. Nothing in this Act shall apply to the schools in any incorporated town, or in any school section employing a Class A teacher drawing a superior school grant, or a teacher drawing an Agricultural or Manua Training grant.”

Extract from the Regulations issued by the Council of Public Instruction under the authority of the above Act.

(1) THE GRANTS.

"The Rural School Library grants, authorized by statute (quoted above), are intended to stimulate the formation and use of libraries in school sections other than those in which Class "A" Agricultural or Manual Training grants are drawn—which grants are already conditioned to some extent by the existence of appropriate libraries.

For the *five* dollar grant the books belonging to the library in the year 1904 must be worth at least *twenty* dollars, and at least 150 issues of books must have been made during the year to readers.

For the *ten* dollar grant the books belonging to the library in 1904 must be worth at least *fifty* dollars, and at least 300 issues must have been made to readers during the year.

Each year subsequent to 1904 the minimum value of the smaller library must be *five* dollars greater than on the previous year until it becomes *fifty* dollars, when the minimum shall remain constant.

In like manner, each year subsequent to 1904 the minimum value of the larger library must be *ten* dollars greater than on the previous year until it becomes *one hundred* dollars, when the minimum shall remain constant."

(2) THE BOOKS.

"The books reckoned as library books qualifying for the grant shall be as far as possible adapted to the wants (1) of the pupils, and (2) of the residents of the school section, and shall be selected from a catalogue recommended by the Council of Public Instruction. "Blue books," reports, and any documents published by the Dominion, Provincial or Municipal Governments for the information of the public should also find a place in the library ; but their value shall be reckoned at the price paid for them, and they should be numbered as the other volumes or pamphlets.

The books shall be the property of the school section, no matter whether the funds have been raised by sectional assessment, by school entertainments, subscription or donation ; and shall therefore be primarily in charge of the school board and their secretary as an asset of which they shall present the inventory at each annual meeting ; and for the loss or injury of which through lack of efficient management or care they shall be personally liable to the section.

Books imported into Canada for school libraries are entered free of duty."

(3) THE BOOKS—HOW KEPT.

"The books shall be kept (when not loaned to readers) in a proper bookcase under lock and key. Under the direction of the secretary of the school-board the teacher acting as librarian shall be responsible for the loaning, collecting, and safe-keeping of the books to the school trustees. The librarian at the close of his period of service shall deliver up to the secretary the library and its whole equipment in good order and in good condition except for reasonable wear and tear or accidents not due to his lack of intelligence or care. The loss of any volumes or material through the librarian's fault will be chargeable against his salary, and shall be replaced at his expense by the secretary. In the case of a conflict of opinion the secretary shall arbitrate the case.

The secretary shall on the retiring of any librarian acknowledge by his signature the correctness of the inventory of the library thus given up ; and on the assumption of the duty of librarian by another teacher, the said teacher shall in like manner acknowledge the correctness of the inventory of the library handed over to him. If a book is lost or injured by anyone to whom it has been issued, the secretary of the trustees shall promptly take the necessary legal action for its recovery or the cost of its restoration on the report of the librarian who shall not be responsible for the loss, provided he has followed the instructions of the secretary in a reasonable manner, and reported the injury or loss promptly.

A book loaned to a member of a family in which infectious disease has broken out should not be returned to the library ; but its value should be promptly paid and a new book obtained.

Local regulations not inconsistent with the regulations of the Council of Public Instruction may be authorized by the school board, fixing the time of loan, fines for holding books over time, methods of assessing and collecting damages to books, and all other local matters of management ; but all books must be called in at the close of the school term. During the vacation period and the absence of the teacher, the secretary may on the written order of the school trustees issue books as librarian, all of which must be replaced by him when the library is handed over to the new librarian."

(4) **THE SCHOOL DICTIONARY.**

"There must be an English dictionary in the schoolroom ; and all pupils above Grade III. must be taught how to use it, and must be accustomed to use it freely."

(5) **THE LIBRARY CASE.**

"There must be a library case, under lock and key, for the safe-keeping of the books."

(6) **THE ACCESSION BOOK.**

"There must be an accession book kept, in which all the books of the library are entered as they are procured, so as to show all the details specified below."

(Here follow detailed directions as to making a book-catalogue, and labelling and numbering books.)

(7) **THE CARD CATALOGUE AND LOAN RECORD.**

"There must be a record of the loans of books, and each book must be loaned by the librarian to a reader (not by one reader to another), so that the library may receive due credit for the number of readings or issues of the books.

The system of loan records prescribed is the "Card system," briefly described as follows :"

(Here follow detailed directions as to making a card-catalogue for loan-record.)

"The card will look somewhat like this :—

Book 47.	Class E.	Author : <i>Dickens, C.</i>		Title : <i>Christmas Carol.</i>	
Date lent.	Borrower's name.	Date returned.	Date lent.	Borrower's name.	Date returned.
<i>1903.</i>					
<i>Jan. 13.</i>	<i>John Smith</i>	<i>Jan. 25.</i>	.....	.....	.....
<i>Feb. 3.</i>	<i>Alice Jones</i>	<i>Feb. 10.</i>	.....	.....	.....
<i>Mar. 1.</i>	<i>Fred Adams.....</i>	.....	.....	.....	.....
.....	<i>Jane Clark .....</i>	.....	.....	.....	.....

The cards should be kept in a neat wood or pasteboard box, five inches wide and about three inches deep, with the Author and Title uppermost, arranged always strictly in the alphabetical order of the names of the authors, and the books of each Author likewise arranged in the alphabetical order of the Title.

Neat card catalogue boxes containing 100 cards and the prescribed labels are being prepared by a Halifax publisher at a retail cost not to exceed twenty-five cents.

An asterisk or star should be placed over the name of each adult borrower, so that the number of these may be readily picked up by running the eye over the cards. The teacher, parents and ratepayers of the section shall have the privilege of using the library; and the number of issues of books to adults will therefore be an interesting and important item of information for the educational authorities as well as for the general public. This information has to be given in the annual return."

(8) CLASSIFICATION.

"The books shall be divided into the following twelve classes, the statistics of which must be given separately in the annual return. To make such a report possible and easy the letter indicating the class should be entered on each book and card near its number :

Class A.—*Scientific* (including all books ranging from elementary nature study to the application of science to the arts and industries, such as Agriculture, Forestry, etc.)

B.—*Travel and Description.*

C.—*Biography.*

D.—*History.*

E.—*Fiction.*

F.—*Poetry.*

G.—*Fine Arts* (Music, Drawing, Painting, etc.)

H.—*Miscellaneous* (Literature which cannot come under the foregoing or following classes, such as Mythology, Children's Stories, etc.)

J.—*Books of Reference* (Dictionaries, Cyclopedias, Gazetteers, Atlases, Year Books, School Law, Journals and Reports on Education, etc.)

K.—*Blue Books* (all government and municipal reports, publications, etc., not in J.)

L.—*Periodicals.*

M.—*Readers for Supplementary Reading in School."*

(9) ANNUAL RETURN.

(Here follow directions as to statistics to be returned annually by the teacher concerning the number of books, amount of circulation, and financial receipts and expenditure. A certificate is added which has to be signed by the teacher and by the Secretary to the School Trustees, certifying that the library has been conducted in accordance with the law, and that the returns made are correct).

(10) HOW TO GET THE LIBRARY GRANT.

"The teacher should give notice of the intention to compete for the larger or smaller library grant when intimating the opening of the school to the Inspector. Where no library has yet been organised, such intimation should be given as early as possible; but the equipment should be complete at the end of January, and the facts fully stated and certified on the blank half

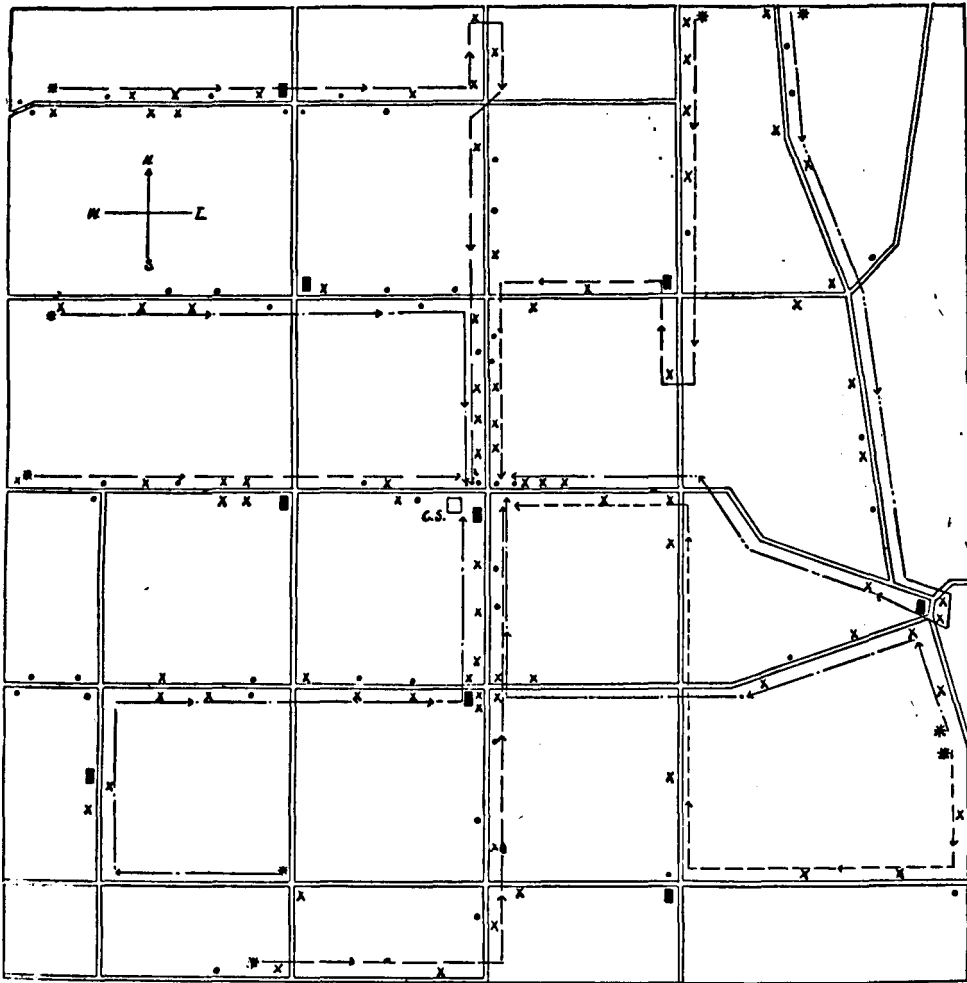
sheet of the semi-annual return of the school in February. An informal statement of the competition for the smaller or larger grant should be made by *every teacher competing*, as a notification to the inspector. Without such notice endorsed on the semi-annual return no claim for the grant can be maintained.

The library grants shall be paid with and in addition to the regular Provincial Aid at the end of the school year, provided the regulations foregoing and the instructions issued from time to time from the Education Department have been fully complied with, provided the special Library Return accurately made out has been sent to the inspector with the regular annual returns of the school, and provided the inspector, whose special duty it shall be to examine and vouch for the correctness of the returns and the deserving character of each school library in his jurisdiction, endorses the Library and other "returns" of the school with his approval and recommendation."

APPENDIX C.

PLANS OF CONSOLIDATED SCHOOL
SHOWING ROUTES.

I. GUSTAVUS TOWNSHIP, OHIO.



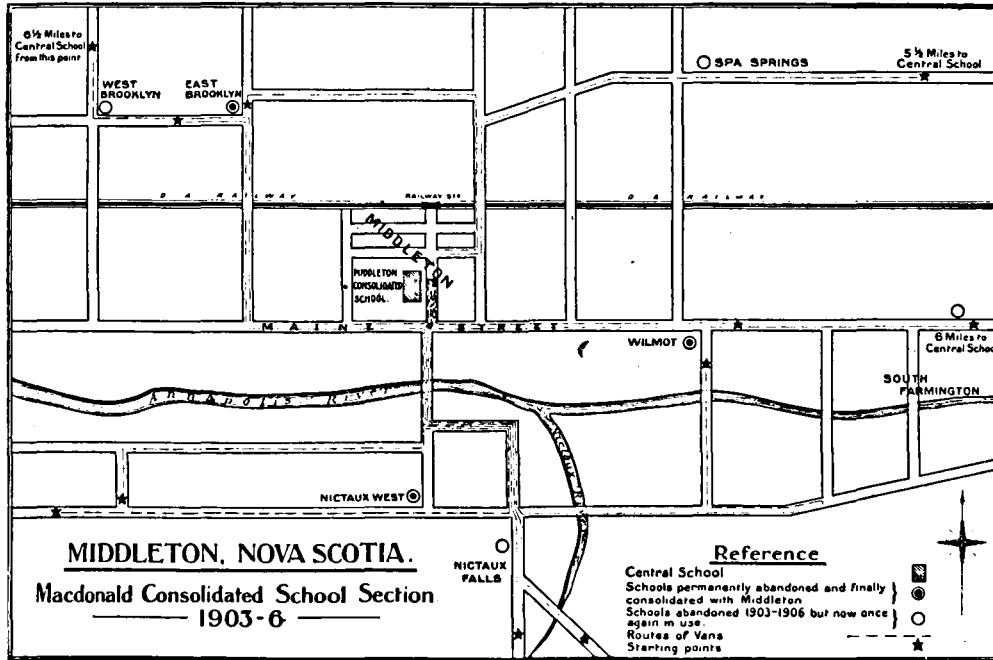
• = Farm house, no children ■ = Abandoned school. -> = Direction of routes
 x = " " with " □ = Central " * = Starting " "

The length of the longest route is 5 miles.

" " " shortest " 2½ "

APPENDIX C.—*continued.*

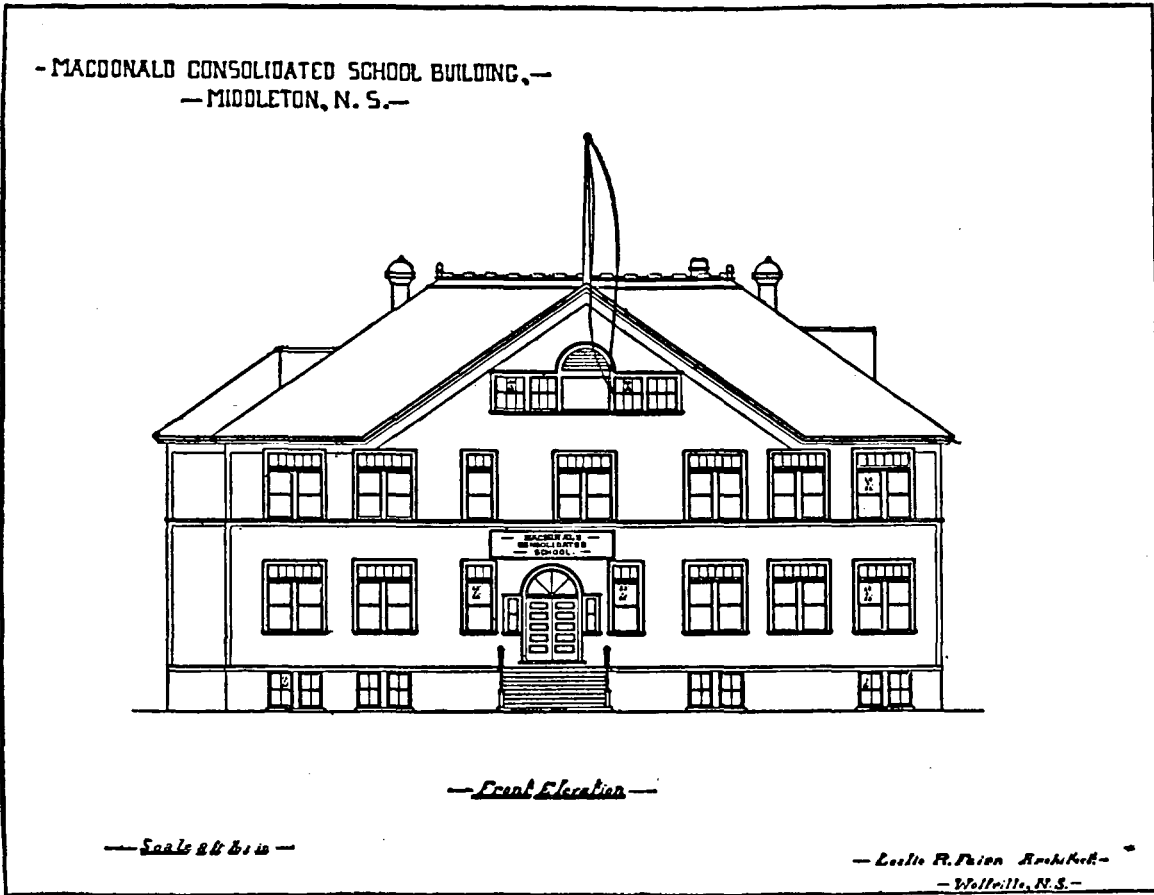
II. MIDDLETON, NOVA SCOTIA.



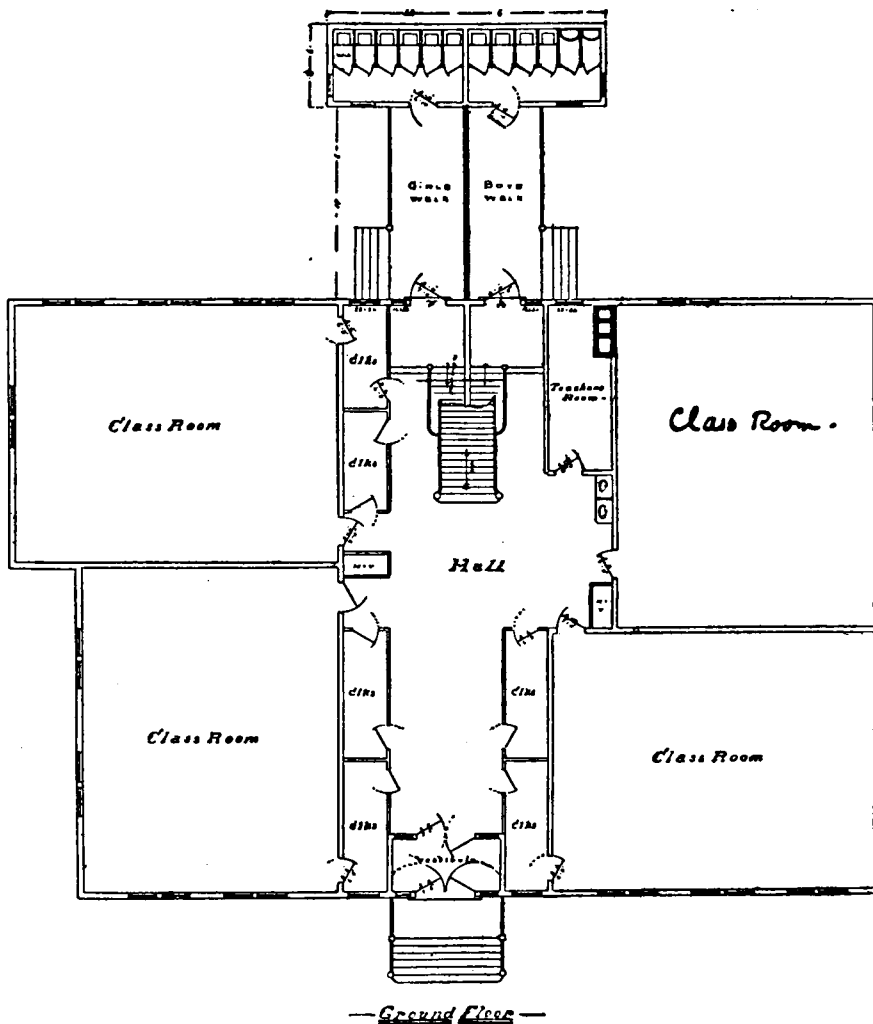
APPENDIX D.

PLANS OF CONSOLIDATED SCHOOL BUILDINGS.

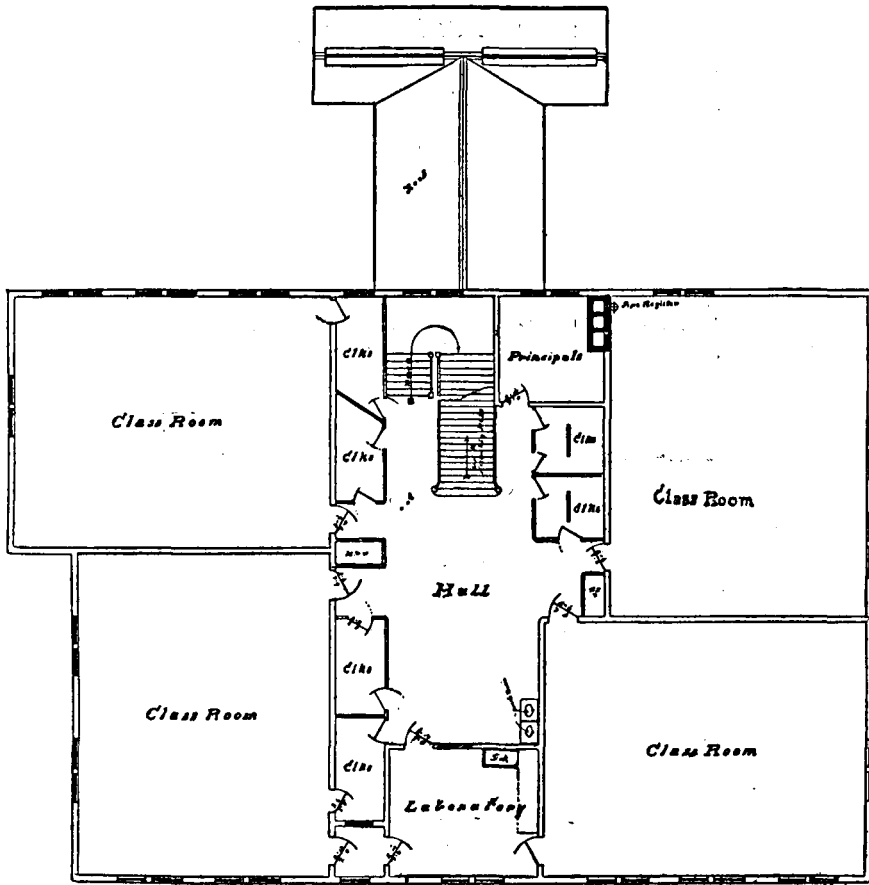
L. MIDDLETON, NOVA SCOTIA.



FRONT ELEVATION, MACDONALD SCHOOL, MIDDLETON, N. S., 1903.



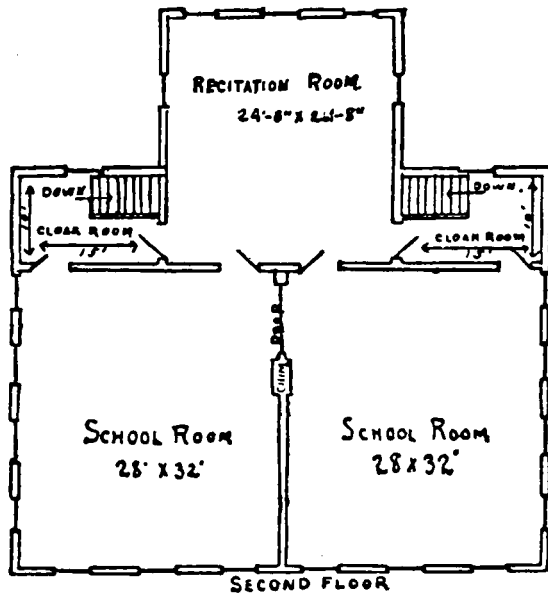
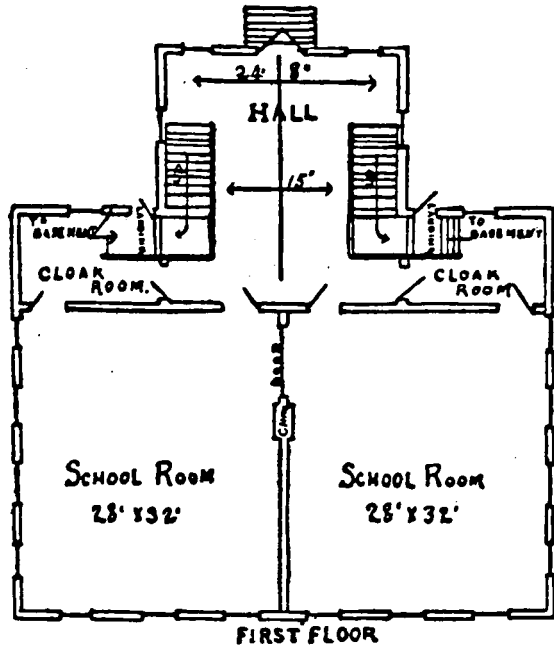
PLAN OF GROUND FLOOR, MACDONALD SCHOOL, MIDDLETON, N. S., 1903.

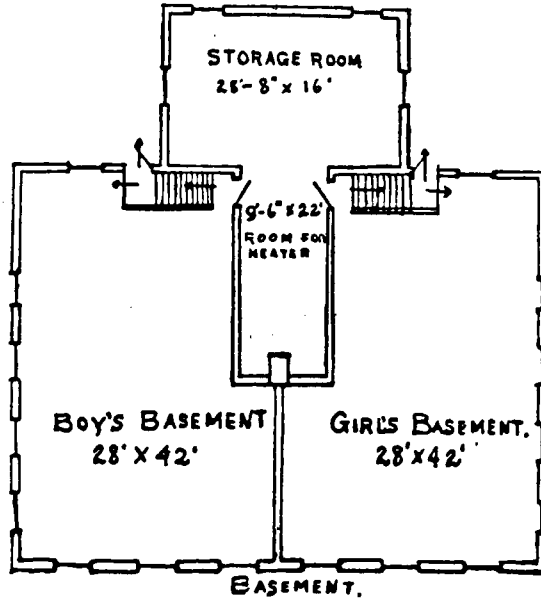


— *First Floor* —

PLAN OF FIRST FLOOR, MACDONALD SCHOOL, MIDDLETON, N. S., 1903.

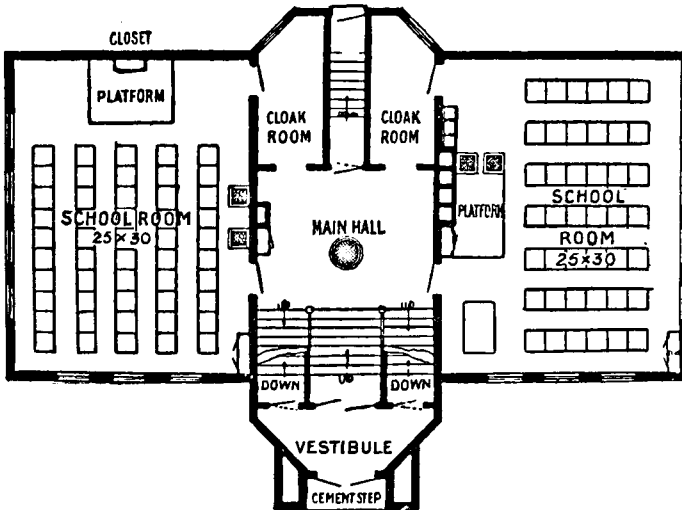
II.—PLANS OF BUILDING FOR CONSOLIDATED RURAL SCHOOL AT GUSTAVUS, TRUMBULL COUNTY, OHIO.



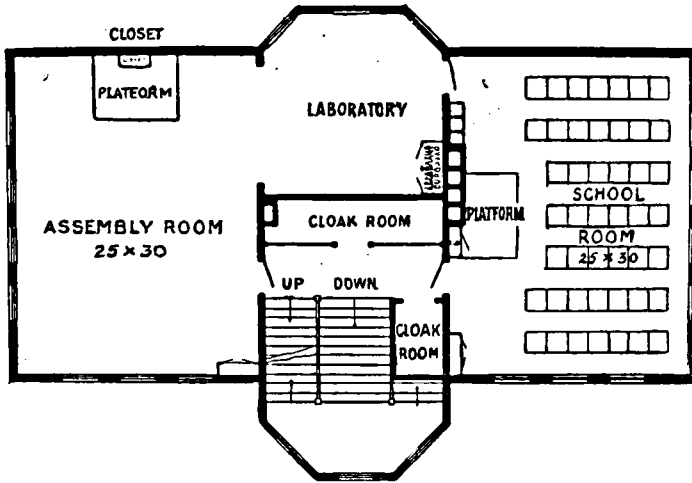


III.—PLANS OF THE FIRST CONSOLIDATED SCHOOL OF ILLINOIS AT SEWARD IN WINNEBAGO COUNTY.

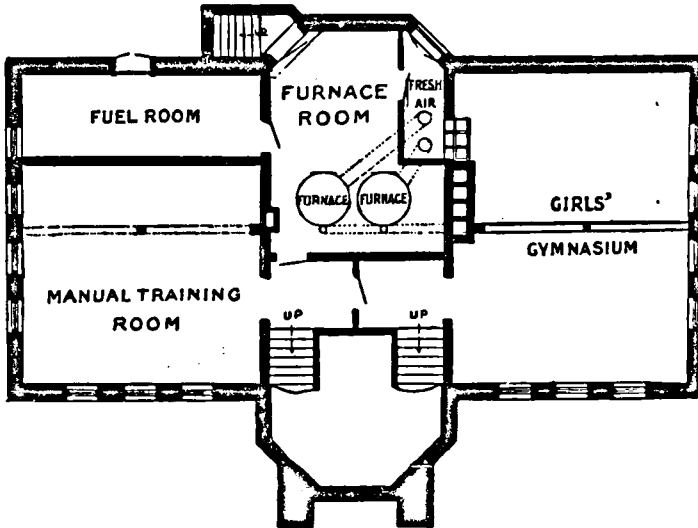
First Floor Plan.



Second Floor Plan.



Basement Plan.



APPENDIX E.

COST OF CONSOLIDATION.

I.—CONCORD, MASSACHUSETTS.

(A case of partial consolidation :—(a) Not all the schools of the township were abolished, and there are now, besides the consolidated school, ten other schools in the township. (b) There was a pre-existing school large enough for the children from five other schools to be conveyed to it without great additional change).

Number of Schools Consolidated.	Number of Children in Schools Abolished.	Cost of Up-keep of Schools Abolished.	Salaries of Teachers in Schools Abolished.	Cost of Conveying each entire School on Consolidation.	Salaries of Teachers in Central School.	Additional Teachers in Central School.	Additional Cost of Up-keep in Central School.
6	In 4 schools 8 to 15. In 1 school 30	£105 to £126 per annum.	£81 (about) per annum.	£85 to £97 10s. per annum.	£97 10s. per annum.	None at first.*	None at first.*

N.B.—Salaries of teachers in small schools before consolidation, about £81 15s. per annum.

Salaries of teachers in central school before consolidation, about £97 10s. per annum.

*Between 1879, the year of consolidation, and 1904 the number of pupils transported doubled, thus necessitating additional teachers, and increased expense at the central school. Still, Concord is saving from £20 to £100 per annum by consolidation.

II.—WARWICK, MASSACHUSETTS.

Year.	No. of Schools.	Weeks in School Year.	Number of Teachers.	Salaries of Teachers Weekly.	Additional Cost on Consolidation.
Before consolidation, 1893-4	9	24	9	£ s. d. 1 1 0— for 8 schools. 1 5 0— for 1 school.	
After consolidation, 1894-5	1	36	3 besides special visiting teachers for drawing and music.	1 7 6 (average.)	No material increase.

III.—ROYERTON, INDIANA.

Year.	No. of Schools.	No. of Teachers.	Enrolment.	Total Salaries.	Other Expenses.	Total Cost.
Before consolidation, 1901-2	6	7	190	£ s. d. 519 3 8	£ s. d. Fuel, 43 15 0 Repairs, 29 3 9 Incidental, 40 10 0	£ s. d. 632 12 5
After consolidation, 1902-3	1	4	190	300 8 4	£ s. d. Fuel, 25 0 0 Repairs, 16 13 4 Incidental, 23 7 1 Conveyance, 255 4 2	620 12 11 (without expense of high school, since added.)

N.B.—Of the six original schools, one had two teachers, and also a large disused school building containing four rooms and a division room. The children from the five other schools were conveyed to this school, 129 children being conveyed in all.

IV.—GUSTAVUS, OHIO.

Year.	No. of Schools.	Enrolment (approximate).	Total Salaries of Teachers.	Other Expenses.	Total Expenses.
Before consolidation, 1896-7	9 common schools, 1 high school.	142	£ 500	£ s. d. 115 12 6	£ s. d. 615 12 6
After consolidation, 1900-1	One consolidated school with high school department.	186	275	£41 13s. 4d. (incidental). £365 12s. 6d. (conveyance).	682 5 10
1902-3	"	192	325	£139 10s. 7d. (incidental). £423 13s. 1d. (conveyance).	888 8 8

APPENDIX E.—cont.

V.—EASTERN OHIO.

V.—Some facts bearing on the cost of consolidation in eight townships of eastern Ohio, as reported in 1905.

	Gustavus.	Green.	Wayne.	Mecca.	Johnston.	Vernon.	Kinsman.	Kingsville.
Date of Consolidation - - - -	1897	1899	1900	1904	1901	1901	1900	1894
Number of Districts Consolidated - - -	9	9	9	7	8	9	7	8
Total Enrolment of Pupils, 1905 - - -	196	170	186	180	165	178	164	265
Increase on Enrolment before Consolidation -	30 per cent.	(Large increase)	30 per cent.	(Large increase)	20 per cent.	(Large increase)	(Large increase)	(Large increase)
Months in School Year - - - -	8	8	8	8	8	8	8	9
Number of Teachers Employed, 1905 - - -	5	5	5	6	5	5	5	7
Number of Teachers Employed before Consolidation.	10	9	8	7	8	7	7	8
Number of Wagons Used - - - -	9	8	8	7	9	10	8	11
Longest Distance Travelled by Pupils - - -	4½ miles	5 miles	4½ miles	5 miles	5 miles	5½ miles	6 miles	6 miles
Number of Rooms in Building - - - -	4	6	5	8 (two buildings)	4	4	5	7
Cost of New Building - - - -	£625	£ s. d. 1,666 13 6	£ s. d. 1,041 13 4	£625 each of two buildings.	£1,250	£1,250	£1,250	£ s. d. 2,083 6 8
Salaries of Teachers per month in 1904-5	Principal - £13 10s. 10d. Assistants - £7 5s. 10d.	15 8 4	13 10 10	£ s. d. 12 10 0	£ s. d. 14 11 8	£ s. d. 14 11 8	£ s. d. 17 14 2	20 16 8
		{ 6 5 0 to	{ 7 5 10 to	8 2 6	6 5 0	6 5 0	7 5 10	7 5 10
Cost of Conveyance per month, 1904-5 - -	£56 13s. 4d.	9 7 6	10 4 2	52 1 8	7 5 0		8 6 8	8 6 8
Salaries of Teachers per month before Consolidation.	£5 4s. 2d. to £6 5s. 0d.	49 9 6	66 13 4	6 5 0	54 13 9	62 10 0	65 6 0	-
		5 4 2	5 4 2		5 12 6	5 4 2	5 8 4	5 4 2

N.B.—The salaries in the neighbouring city of Ashtabula are { For Elementary teachers, £8 15s. 0d. to £11 17s. 6d. a month per year of 9 months.
 „ High School „ £14 11s. 8d. to £16 13s. 6d. „ „ „ „

Appendix E.

III.—ROYERTON, INDIANA.

Year.	No. of Schools.	No. of Teachers.	Enrolment.	Total Salaries.	Other Expenses.	Total Cost.
Before consolidation, 1901-2	6	7	190	£ s. d. 519 3 8	£ s. d. Fuel, 43 15 0 Repairs, 29 3 9 Incidental, 40 10 0	£ s. d. 632 12 5
After consolidation, 1902-3	1	4	190	300 8 4	£ s. d. Fuel, 25 0 0 Repairs, 16 13 4 Incidental, 23 7 1 Conveyance, 255 4 2	620 12 11 (without expense of high school, since added.)

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APPENDIX E.—cont.

V.—EASTERN OHIO.

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	Gustavus.	Green.	Wayne.	Mecca.	Johnston.	Vernon.	Kinsman.	Kingsville.
Date of Consolidation	1897	1899	1900	1904	1901	1901	1900	1894
Number of Districts Consolidated	9	9	9	7	8	9	7	8
Total Enrolment of Pupils, 1905	196	170	186	180	165	178	164	265
Increase on Enrolment before Consolidation	30 per cent.	(Large increase)	30 per cent.	(Large increase)	20 per cent.	(Large increase)	(Large increase)	(Large increase)
Months in School Year	8	8	8	8	8	8	8	9
Number of Teachers Employed, 1905	5	5	5	6	5	5	5	7
Number of Teachers Employed before Consolidation.	10	9	8	7	8	7	7	8
Number of Wagons Used	9	8	8	7	9	10	8	11
Longest Distance Travelled by Pupils	4½ miles	5 miles	4½ miles	5 miles	5 miles	5½ miles	6 miles	6 miles
Number of Rooms in Building	4	6	5	8 (two buildings)	4	4	5	7
Cost of New Building	£625	£ s. d. 1,666 13 6	£ s. d. 1,041 13 4	£625 each of two buildings.	£1,250	£1,250	£1,250	£ s. d. 2,083 6 8
Salaries of Teachers per month in 1904-5	Principal - £13 10s. 10d. Assistants - £7 5s. 10d.	15 8 4	13 10 10	£ s. d. 12 10 0 8 2 6	£ s. d. 14 11 8 6 5 0	£ s. d. 14 11 8 6 5 0	£ s. d. 17 14 2 7 5 10	20 16 8 7 5 10
		{ 6 5 0 to 9 7 6	{ 7 5 10 to 10 4 2	{ 52 1 8 6 5 0	{ 7 5 0 54 13 9	{ 8 6 8 62 10 0	{ to 8 6 8 65 6 0	{ to 8 6 8 5 4 2
Cost of Conveyance per month, 1904-5	£56 13s. 4d.	49 9 6	66 13 4	52 1 8	54 13 9	62 10 0	65 6 0	-
Salaries of Teachers per month before Consolidation.	£5 4s. 2d. to £6 5s. 0d.	5 4 2 to 6 5 0	5 4 2	6 5 0	5 12 6	5 4 2	5 8 4	5 4 2

N.B.—The salaries in the neighbouring city of Ashtabula are { For Elementary teachers, £8 15s. 0d. to £11 17s. 6d. a month per year of 9 months.
 „ High School „ £14 11s. 8d. to £16 13s. 6d. „ „ „ „

VI.—MIDDLETON, NOVA SCOTIA.

(a) Figures for the three years when the main expense was borne by the Macdonald Fund.

Year.	No. of Schools.	Number of Teachers.	Total Enrolment.	Average daily Attendance.	Total Salaries of Teachers.	Other Expenses.	Total Cost.
Before consolidation, 1902-3.	8	10	367	198·4	£ s. d. 601 12 0	£ s. d. 91 9 0	£ s. d. 693 1 0
1st year after consolidation, 1903-4.	1	11	418	284·7	802 10 10	272 12 2 (incidental) 1,138 0 0 (conveyance)	2,213 3 0
2nd year after consolidation, 1904-5.	1	-	434	272	1,150 14 6	376 3 2 (incidental) 977 10 0 (conveyance)	2,504 7 8
3rd year after consolidation, 1905-6.	1	11	412	276	1,179 0 0	317 18 0 (incidental) 886 0 0 (conveyance)	2,382 18 0

(b) At the end of the three years the four districts situated furthest from Middleton reverted to the old single school plan. The consolidated school therefore now represents four original schools, and it receives a grant of £250 a year for three years from the Macdonald Fund. The figures for 1906-7 are as follows:—

Number of Schools Consolidated.	Number of Teachers.	Total Enrolment.	Average daily Attendance.	Total Salaries of Teachers.	Other Expenses.	Total Cost.
				£ s. d.	£ s. d.	£ s. d.
4	7	275	177	751 0 0	174 17 10 (incidental) 144 0 0 (conveyance)	1,069 17 10

VII.—EXTENT AND COST OF CONVEYANCES.

I.—KINGSTON SCHOOL, NEW BRUNSWICK. (THE FIGURES ARE FOR 1904-1905. IN THE FOLLOWING YEAR A SAVING OF £100 WAS EFFECTED, AND IN THE THIRD YEAR A FURTHER SAVING OF ABOUT £66.)

Miles travelled each way.		Children conveyed.	* Wage of driver per diem.
			s. d.
1	6	16	10 5
2	5	23	8 4
3	7	19	10 5
4	5	17	7 6
5	5	18	10 5
6	6	9	7 11
7	3	23	7 6

* The vans were owned by Sir William Macdonald, the driver only providing horses.

II.—GUSTAVUS SCHOOL, OHIO (1900).

Miles travelled each way.		* Amount paid to driver per diem.
		s. d.
1	5	6 4½
2	3½	4 1
3	2½	2 10½
4	5	6 3
5	3½	5 2½
6	4½	6 0½
7	4½	5 11
8	5	5 2
9	3½	3 11½

* Both vans and horses are supplied by the drivers.

NOTE ON THE SCHOOL VANS OF OHIO.

Size.—Twelve feet long and 5 feet wide. They carry from 20 to 25 children.

Construction.—They resemble a covered wagonette with glass at the front and back, but at the sides are furnished with canvas to roll up in summer, and button firmly down in winter. The best vans have leather cushions.

Furniture.—Blankets must be provided in winter, and stoves if necessary.

Cost.—About £21 if bought, but one driver, who made his own van, stated that it cost about £7 10s.

APPENDIX F.

COURSES OF STUDY FOR RURAL TEACHERS

I.—DUNN COUNTY TEACHERS' TRAINING SCHOOL, 1903-4.

First Quarter	Second Quarter.
Arithmetic. Psychology. Grammar and Composition. History.	Arithmetic. Theory and Art of Teaching. Grammar and Composition. History.
Third Quarter.	Fourth Quarter.
Reading. Theory and Art of Teaching. Physiology. Physical Geography. Manual Training.	Elements of Agriculture (10 weeks). Observation and Practice (5 weeks each). Geography. The Constitution of the United States.

II.—EXTRACTS FROM MACDONALD INSTITUTE CALENDAR, GUELPH, ONTARIO.

DEPARTMENT OF NATURE STUDY.

NATURE STUDY.

Nature Study is now engaging the attention of educators at home and abroad, both as essential to a general education and as a preparation for intelligent agriculture. To equip Canadian teachers with the necessary knowledge and skill for making proper use of the simple materials furnished by Nature is one of the aims of the Macdonald Institute.

This Department will aim especially to prepare teachers to take up Nature Study with their pupils, in connection with a School Garden, and to deal with the simpler aspects of general Nature Study. It is open to actual teachers; those not appointed to scholarships will be required to pay the regular Tuition and Laboratory fees, which amount to \$15.00 per term.

COURSES.

I.—THREE MONTHS' COURSES.

Fall Term -	- September 19, 1905, to December 21, 1905.
Winter Term -	- January 4, 1906, to March 23, 1906.
Spring Term -	- April 2, 1906, to June 21, 1906.

It is provided by the original agreement with Sir William C. Macdonald that a certain number of rural teachers from each of the older Provinces of the Dominion shall be entitled to a three months' course in Nature Study without payment of fees for a period of three years. At the same time, a fund is provided from which such teachers will receive 5 cents per mile, one way, towards travelling expenses and \$25.00 to every approved teacher who has taken a full course to the satisfaction of the President of the College and the Professor of Nature Study. This fund is available for the Fall term of 1905, and it is expected that the Governments of the various Provinces will supplement this assistance, as they have done during the past year, by granting aid to worthy teachers wishing to take such a course.

This aid has been in the nature of scholarships of \$50.00 for women, and \$75.00 for men. Nova Scotia has the right to nominate 8; New Brunswick, 8; Prince Edward Island, 5; Quebec, 10; Ontario, 14; making a total of 45. Of this number about *one-quarter will be offered to women*, and about *three-quarters to men*; so that these teachers will receive from \$75 or \$100 each, in addition to the mileage allowance for travelling expenses. *Preference will be given to the teachers of some considerable experience.* Scholarships will not be granted to teachers who are not in good health nor able to take full advantage of all the outside work.—(*From the Calendar for 1905-6.*)

Extract from the Calendar of 1906-07.

DEPARTMENT OF NATURE STUDY.

This Department was organised and equipped for the training of Canadian teachers in the knowledge of the common forms and forces of nature, as a means of training children in observation, expression, and sympathy. During the past three years, six interprovincial classes, composed of teachers from Prince Edward Island, Nova Scotia, New Brunswick, Quebec, and Ontario, under the Macdonald Rural Schools' Fund, have taken three months' courses. The work now will be chiefly with Ontario teachers in summer and special courses.

COURSES.

1. Summer Course.—This will be held during four weeks in July. The work will be arranged so that teachers may continue the work in their schools and in subsequent summer courses, and obtain a College Rural Science Certificate.
2. Normal Course.—A more advanced course of a similar nature, and extending over a full College year, will be given to teachers who wish to qualify as specialists in this department. The aim is to provide instructors fitted to carry on the work of Elementary agriculture and school gardening in a group of rural schools, in a consolidated school, or in an agricultural department of a High School.

Outline of Study.

1. SCHOOL GARDENS—Planning and keeping of school garden plots; keeping of garden records; studies of growths in different plants; control of weeds, insects.
2. AGRICULTURE—Study of experimental plots and farm crops; excursions to Poultry, Horticultural, Dairy, Field Husbandry, Animal Husbandry, Chemical, Physical Departments, and Short Lecture Courses.
3. BOTANY—Ecology of plants, including buds, fruit spurs, etc., study of trees and plant societies, identification of flowering plants, grasses, weeds, etc.; physiology of plants; collections.
4. ZOOLOGY—Ecology of insects; excursions for study of birds, mammals, and other common animals; pond life; collections.
5. GEOGRAPHY—Study of the surface of the land, an introduction to geography and geology.
6. GEOLOGY—Excursions for the study of soils, rocks, minerals, and land forms; operation of dynamic agencies, such as rain, frost, rivers, winds, etc.
7. WEATHER AND CLIMATE—Weather observations, weather maps, and the climate of Canada.
8. ASTRONOMY—Elementary work; movement of heavenly bodies; constellations.
9. SPECIAL PROBLEMS—Development of frog; stages of currant saw-fly, etc.; relation of insects to plants; value of birds, toads, etc., to the garden and the farm; hibernation forms of insects and insect homes; migration of birds, etc.

10. **METHODS OF TEACHING NATURE STUDY**—Lectures, with practice and criticisms ; pedagogical psychology.

11. **NATURE IN LITERATURE**—Reading and discussion of literature dealing with various phases of nature.

12. **ART**—Special attention will be given to the training of teachers in clay-modelling, drawing, sand-modelling, and color work, as means of expression well adapted to all sides of Nature Study work.

13. **LECTURES**—Arrangements will be made, whenever possible, to have addresses by prominent educators and scientists.

14. **MANUAL TRAINING**—Elementary exercises in cardboard work and woodwork ; use of knife and simple tools ; series of models for ungraded schools.

15. **CONFERENCES**—For discussion of methods and specific subjects mainly by students, in presence of teachers.

Detail of Work.

1. Daily excursions aiming at practical acquaintance with the common birds, trees and shrubs, wild flowers and plants, ferns, weeds, insects, rocks, etc., with laboratory work and lectures in the Macdonald Institute and other departments of the College.

2. The preparation of Nature collections to illustrate the field work and lectures as above. This will include wild flowers, pressed, dried, and properly-mounted noxious weeds, grasses, common ferns, forest trees, as shown by leaves and fruit, seeds of noxious weeds, in vials ; groups of insects to illustrate the principal orders ; rocks, minerals, woods, industrial products.

3. The making and keeping of school gardens ; every student will have a small garden plot to prepare, plant and keep ; experimental plots will also be made.

4. Materials for collecting and preserving as above will be furnished to students, who are expected to prepare the needed apparatus. This equipment will include such things as a press for botanical specimens, sheets and labels for mounting, vials for weed seeds, an insect net, a killing bottle, a spreading board, pins and cases for insects, with the necessary labels. Students will pay the cost of such material.

5. Students will keep full and accurate notes of field and laboratory work, and revise and copy the same as a permanent record. At the end of the course the records will be sorted into booklets on each department of study.

6. Library reading will be encouraged and suggested.

Students' Equipment.

1. Good health is essential. Students suffering from serious pulmonary affections, defective eyesight or hearing, or those unable to do the outside work, owing to general poor health, are not accepted.

2. Students should bring field or opera glasses, pocket knives, pocket lenses, color boxes, dissecting sets, if they already possess such. Books and bulletins on Science subjects should be brought too.

3. There is no special uniform required for the lady teachers in these Nature Study courses, except a walking skirt, four inches from the ground in length. It is urged, however, that they should provide themselves with stout boots, handy cap, coat with pockets, a large laboratory apron with pockets, and rubber boots, if possible.

4. A contingency fee of \$2.00 to cover cost of breakages and a laboratory fee of \$5.00, to cover cost of supplies of paper, colours, &c., are payable at commencement of term. Any balance is returned at close of term.

5. Students should come with enough spending-money to enable them to take advantage of the class excursions, which are really a part of the work.

APPENDIX G.

QUALIFICATIONS AND SALARIES OF TEACHERS IN
THE MACDONALD CONSOLIDATED SCHOOLS,
CANADA, FOR THE FIRST THREE YEARS.

I. MIDDLETON, NOVA SCOTIA.

		Men.	Salaries.
1.—Principal	- -	First-class Provincial Teacher's Certificate and Agricultural Diploma. Post Graduate Course in Natural Science, Pedagogy, and Agriculture at Chicago, Cornell, Columbia, and Clark Universities, U.S.A., and at Ontario Agricultural College, Guelph.	£ s. d. 229 3 4
2.—Vice-Principal	- -	First-class Provincial Teacher's Certificate and B.A. degree.	146 6 8
3.—Mechanic Science Teacher	- - -	First-class P.T.C. and Mechanic Science Diploma.	125 0 0
4.—One other Male Assistant		First-class P.T.C.	86 9 2
		Women.	
5.—Domestic Science Teacher		English Diploma - - - -	177 1 8
6.—Assistant	- -	Academic Certificate of the Province.	85 8 4
7.—Assistant	- -	Second-class Provincial Teacher's Certificate.	72 18 4
8, 9, 10, 11.—Four Assistants		First-class P.T.C. - - - -	66 13 4

II.—KINGSTON, NEW BRUNSWICK.

	Men.	Salaries.
1.—Principal-	<p>B.A. and M.A. of University of New Brunswick. Honor Graduate in Chemistry and Natural Science. Minto Gold Medallist for proficiency in Science. Post-graduate course in Natural Science, Pedagogy, and Agriculture in Chicago, Cornell, Columbia, and Clark Universities, U.S.A., and Ontario Agricultural College, Guelph. Graduate of New Brunswick Normal School. Holder of highest licence for High School Teachers. Six years' experience as teacher in New Brunswick public schools.</p>	<p>£ s. d. 208 6 8</p>
	Women.	
2.—First Assistant	<p>B.A. of University of New Brunswick. Douglas Gold Medallist for English Literature. Graduate of N.B. Normal School. Six years' experience as teacher in N.B. public schools.</p>	104 3 4
3.—Second Assistant	<p>Graduate of N.B. Normal School - Graduate in Art and Household Science in McAllison University. Ten years' experience as teacher.</p>	125 0 0
4.—Third Assistant	<p>Graduate of N.B. Normal School. Fifteen years' experience as teacher in public schools.</p>	83 6 8
5.—Fourth Assistant	<p>Graduate of N.B. Normal School. Graduate in Kindergarten of Truro Normal School. Courses in Manual Training. Twelve years' experience as teacher.</p>	93 15 0

III.—GUELPH, ONTARIO.

Men.		Salaries.
1.—Principal	- M.A. and special post-graduate course in Natural Science, Pedagogy and Agriculture at Chicago, Cornell, Columbia, Clark Universities, U.S.A., and Ontario Agricultural College, Guelph.	£ s. d. 250 0 0
2.—Manual Training Teacher	- Specialist in Manual Training	166 13 6
Women.		
3.—Domestic Science Teacher	- Specialist in Domestic Science	125 0 0
4.—Assistant Mistress	- Second-class Teacher's Certificate	135 8 4
5.—" "	- First-class Teacher's Certificate	93 15 0
6.—" "	- Ditto	83 6 8
7.—Assistant Mistress (for little children)	- Second-class Teacher's Certificate	93 15 0

IV.—HILLSBOROUGH, NEAR CHARLOTTETOWN, PRINCE EDWARD ISLAND.

Men.	
1. Principal	- B.A. degree. Special post-graduate course in Natural Science, Pedagogy and Agriculture at Chicago, Cornell, Columbia and Clark Universities, U.S.A., and at Ontario Agricultural College, Guelph.
2.—First Assistant	- B.A. Degree.
3.—Assistant Master	- Six months' training in Manual Training at Guelph Macdonald Institute.
Women.	
4.—Assistant Mistress	- Six months' training in Manual Training at Guelph Macdonald Institute.
5.—" "	- Three months' Kindergarten and special school music course.
6.—" "	- Two years' study towards B.A. degree at University, and one year of Household Science at Guelph Macdonald Institute.

APPENDIX H.

LUNCHEON EXPERIMENT.

An experiment made at Macdonald Consolidated School, Middleton, in giving mid-day lunch to some of the children in the Cooking School. The experiment was tried for 9 days, 25 children having lunch each day.

Character of the lunch.—For each child :—

Cup of cocoa or coffee (half-milk),
Bowl of soup,
Slice of Bread.

Cost of lunch.—Less than 1½d. a head. N.B.—Beef is 6d. a lb. Mutton is 5d. a lb.

Cooking of lunch.—It was done by the girls' cookery classes. Each day different girls cooked, served and washed up.

Conclusions drawn from the experiment.

Lunch could not be permanently provided by cooking classes, because it would not give the classes sufficient variety in their lessons.

But the cookery teacher could supervise the buying of provisions and general management. If large boilers were provided, and a woman engaged, the children could have each day soup and bread, or cocoa and biscuits, or boiled rice and plain milk puddings. A committee of girls might undertake the serving each day.

APPENDIX J.

MACDONALD CONSOLIDATED SCHOOL, KINGSTON, NEW BRUNSWICK.

SCHOOL TIME TABLE.
(Advanced Department.)

Day.	Grade.	9.30. 9.40.	9.40—10.	10—10.50.	10.50 —11.	11—12.	12—1. Nocn.	1—1.45.	1.45— 2.20.	2.20— 2.30.	2.30—3.30.	
—	—	10 mins.	20 mins.	50 mins.	10 mins.	60 mins.	60 mins.	45 mins.	35 mins.	10 mins.	60 mins.	
Monday	{	VIII.	} Opening Exercises.	Drawing.	} Nature Study.	30	30	Recess.	Arithmetic.	Algebra.	Recess.	Geometry.
		IX.		Reading.									Canadian History.	Geography.	British History.
Tuesday	{	VIII.	} "	Reading.	} Canadian History	40	20	Recess.	English Composition.	Analysis and Parsing.	Recess.	English Literature.
		IX.		Drawing.									Nature Study.	English Grammar.	Spelling, &c.
		X.										

APPENDIX J.—*continued.*

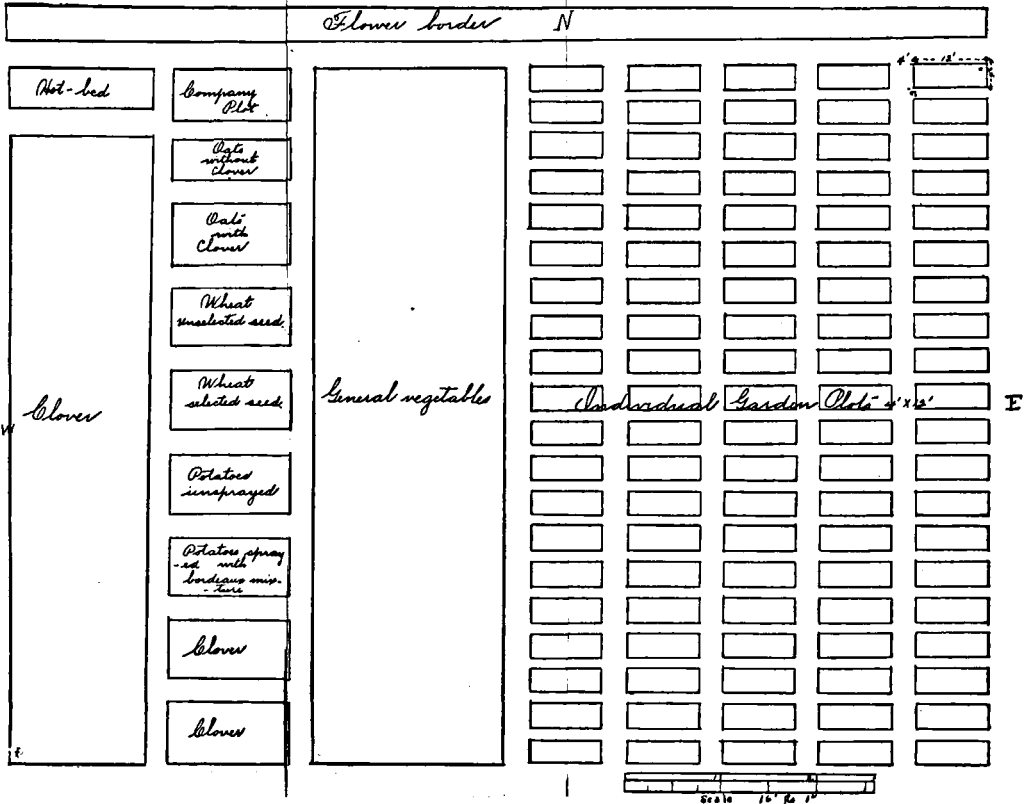
MACDONALD CONSOLIDATED SCHOOL, NEW BRUNSWICK.—*continued.*

Day.	Grade.	9.30. 9.40.	9.40—10.	10—10.50.	10.50 —11.	10—12.	12—1. Noon.	1—1.45.	1.45—2.20.	2.20— 2.30.	2.30—3.30.		
—	—	10 mins.	20 mins.	50 mins.	10 mins.	60 mins.	60 mins.	45 mins.	35 mins.	10 mins.	60 mins.		
Wednesday	VIII.	}	Drawing.	Nature Study.	} Recess.	Geography.	Common History.	Recess.	Arithmetic.	Algebra.	Recess.	Geometry:	
	IX.		Reading.	British History.									
	X.												
Thursday	VIII.	}	Reading.	British History.	} Recess.	Grammar.	Spelling.	Recess.	Boys—Manual Training.	Recess.	Manual Training.		
	IX.		Drawing.	Nature Study.					Girls—Household Science.			Recess.	Household Science.
	X.												
Friday	VIII.	}	Current Events.	Algebra.	} Recess.	Arithmetic.	Recess.	Physiology and Hygiene.	Drawing and Penmanship.	Recess.	General Exercises in Assembly Hall.		
	IX.												
	X.												

N.B.—The time-tables of Junior Departments are on the same lines.

APPENDIX K.—cont.

II.—PLAN OF THE MACDONALD SCHOOL GARDEN, MIDDLETON, NOVA SCOTIA, AS LAID OUT IN 1905.



FOR OFFICIAL USE.
BOARD OF EDUCATION.

Educational Pamphlets, No. 18.

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SCHOOLS IN GERMANY.

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PREFATORY NOTE.

No sphere of German education is more difficult of definition or admits less of accurate description than that which is embraced under the term Continuation School. This difficulty is strongly felt by the Germans themselves and produces in many writers on the subject a feeling of discomfort, as if this lack of orderliness, so uncongenial to the national temperament, were a matter for reproach. The explanation of the phenomenon is simple and historical. The chief cause of the disorder is the diversity of influences which have brought these schools into existence. It is possible to distinguish three main lines of influence—religious, economic and social-political—which have been successively responsible for the creation of a different type of school. As each of these influences is still operative, though in varying degrees of power, there has not yet been evolved out of the clash of these various movements that singleness of purpose and precision of aim on which alone an orderly system can be founded.

The earliest influence was religious in its nature. It sought to strengthen the religious sentiments of the people and expressed itself in the establishment of Sunday Schools, traces of which are found from the sixteenth century onward in various parts of Germany. In more recent times the same motives led to the passing of the Bavarian Education Act of 1803, which required attendance at Sunday School until they had reached their sixteenth year of all young people of both sexes who had left the public elementary school. The same idea underlay, too, the circular issued by the Prussian Minister of Education in 1846. The educative rather than the instructional aim of the Continuation School is strongly insisted on and a special appeal is made to the clergy to interest themselves in the establishment of such institutions. No assistance was provided out of State funds and the Minister had to depend on the efforts of private individuals and voluntary associations.

When this circular was issued the second type of school had already come into existence, created by motives which are hardly less powerful in their influence on men than those of religion. The altered conditions of industrial work which resulted from the great era of invention at the close of the eighteenth century soon revealed the insufficiency of the old traditional methods of preparation. In Germany the situation was rendered more complex still by the social reconstruction which had followed the breakdown of the old system through the Napoleonic wars. In Prussia restrictions on trade had been removed in 1810, nearly half-a-century before *Gewerbefreiheit* was introduced into any other German State. As a consequence of all these changes new opportunities were required to provide for workmen that elementary instruction connected with their trade which the masters for whom they worked were no longer

able to supply. Thus the Continuation School with a trade bias came into existence. In Wurtemberg many of the ordinary Sunday Schools were converted into Trade Sunday Schools (*Gewerbliche Sonntagschulen*), and similar schools were to be found in Baden. In Prussia, schools of this type were established in many towns and were aided by grants from the Ministry of Commerce, but the results were unsatisfactory and in 1859, the administration of these schools was handed over to the Minister of Education. In a circular to the Provincial Governments four years later, that Minister, abandoning the position taken up by his predecessor in 1846, recognised the need of a larger measure of State aid and of schools in which the instruction, while not losing sight of the elements of general culture, should bear directly on the occupations of the pupils. One great difficulty was the absence of any legal basis for compulsory attendance. This defect was remedied by that paragraph in the *Gewerbeordnung* of the North German Union of 1869 which permitted any locality to frame a local bye-law compelling the attendance at a Continuation School of apprentices, journeymen, and young workmen under the age of 18. It was not, however, till 1874 that any very definite steps were taken by the Central Government. In that year for the first time a definite sum was placed on the estimates for the support of Continuation Schools, and an official statement issued of the principles on which such schools should be founded. (*Grundzüge für die Errichtung gewerblicher Fortbildungsschulen vom 17 Juni 1874.*) It is significant of the altered position that religious instruction is expressly excluded from the curriculum of these schools.

In the meantime the third type of School had been created. It was the outcome of the national expansion which had followed the establishment of the Empire. The great events of 1866 and 1870 had produced an unparalleled economic development and aroused in all classes a lively sense of the altered *Weltstellung* of the nation. At the same time the introduction of adult suffrage had laid graver duties and wider responsibilities on many who were admittedly but ill-prepared to discharge them intelligently. The ordinary elementary school, owing to the early age at which its pupils leave, was unable to provide the kind of preparation which was needed. Accordingly many States in Central and South Germany introduced, during the seventies, laws making attendance at Continuation Schools compulsory and universal. Only in very few cases did the compulsion extend to girls, for the aim of these schools was the provision of a more liberal culture than that offered by the elementary school, with a view to the realisation of a higher ideal of citizenship. The first results were not encouraging, chiefly owing to the fact that the teachers were elementary school teachers and their methods unsuited to the more advanced age of their pupils. It was not until the curriculum was remodelled and made to centre round the

occupation of the pupil, and teachers appointed with special qualifications for this work, that the schools began to go forward. For a time this attention to the professional needs of the pupils seemed likely to divert these schools from the purpose for which they were founded, but in the last decade the supreme necessity of good citizenship has been insisted on by Dr. Kerschensteiner, the Schulrat of Munich, through whose efforts the Continuation Schools of that city have become a notable object lesson to the whole of Germany.

Prussia, on the other hand, has abstained from passing any measure of general compulsion. Such schools as do exist with obligatory attendance have been established under that paragraph of the *Gewerbeordnung* to which allusion has already been made. Thus the Continuation Schools in Prussia have a more definitely technical character than those in other parts of Germany. This differentiation is further emphasised by the fact that in 1885 they passed once more under the control of the Minister of Commerce and Industry.

In spite of this absence of a general law the acceptance of the principle of compulsion has spread so rapidly that Essen is now the only large town in Prussia in which the compulsory Continuation School does not exist. But though compulsion exists the obligation to attend school is not uniformly applied by all municipalities. Several large towns and a considerable number of smaller ones exclude from the operation of the bye-laws all workmen, some only workers in factories, some few again only unskilled labourers. Here and there the workmen are released a year earlier than the apprentices. There is, however, a growing feeling that the sphere of influence of these schools should be more widely extended.

It is perhaps not uninteresting to notice that this uncertainty as to the aim and purpose of the Continuation School has been reflected in the administration of these schools. Those of the earliest type were naturally placed under the supervision of the Churches or of the Department of Education. When they ceased to be places of purely general education there was need for a greater degree of technical knowledge than was possessed by those Authorities, but as the teachers in the Continuation Schools were of necessity in the early days elementary school teachers, a complete severance of these schools from the Education Authorities was impossible. A very interesting attempt to solve this difficulty has been made in Wurtemberg. The General Continuation School and the Industrial Continuation School are both under the Ministry of Education, but the latter are under the immediate control of a special Standing Commission, on which the central Office for Trade and Industry is represented, indeed the Chairmanship of this Commission is reserved to the chief official of the latter office.

In Prussia for a time the Ministries of Education and of Commerce each controlled schools of their own, but as this resulted in much duplication and the bulk of the work at that date was of a general rather than a technical character, all the

schools were placed in 1859 under the Minister of Education. Later on, when the influence of the Regulation of 1869 had made itself felt, demand was made for a transference of these schools to the Ministry of Commerce and this was effected in 1885; it is only the Continuation Schools in Posen and East Prussia, which owe their existence to certain reasons of general state policy, that remain with the Education Office. In these States, where the general Continuation Schools are compulsory, they form part of the elementary school system and are naturally administered by the Minister of Education. In Saxony the Continuation Schools have remained without exception under the Ministry of Education.

In spite of the increasingly technical character of the schools, it would be wrong to suppose that they form the main provision of technical instruction even for the workmen. For the leaders of industry and commerce there are, of course, the Technical and Commercial High Schools and Schools of Mines, which in standing are recognised to be fully the equal of the old Universities. Below them there are various institutions training their students for subordinate, but important, positions in factories and other industrial undertakings, while at the lower end there are specialised trade schools for those who will occupy places of minor responsibility in large works or conduct small businesses of their own. It is difficult to classify these schools, as their organisation has not been standardised in the same degree as that of the Technical High Schools. Some of these institutions, *e.g.*, the *Industrieschulen* of Bavaria, offer a general technical training, others an instruction of a highly specialised character. The Saxon schools are mostly of this type. Sometimes a single institution embraces a number of different schools, thus the Technikum of Bremen is divided into five sections: (i) the Building School, (ii) the Engineering School, (iii) the Shipbuilding School, (iv) the Naval Engineering School, (v) the School for Gas and Water Undertakings. In Professor Lexis' work, *Das gesamte Unterrichtswesen im Deutschen Reiche*, which was published in 1904, there is a table enumerating 536 public institutions of various types occupying this middle position between the Continuation Schools and the Technical High Schools, but there are unfortunately no figures available as to the number of students in attendance, nor is it possible to trace the development of these schools over a number of years, as this book was designed to present a statement of the actual position at a given date. It is possible, however, with the help of the third report of the *Landesgewerbeamt*, which has just been published, to trace the development in Prussia. This report summarises the progress which has been made in this sphere of technical instruction during the 25 years for which the Ministry of Trade and Commerce has been responsible for its administration. At the date of their transference from the Ministry of Public Instruction, these schools numbered only 56, and but 34 were in receipt of state aid; at the present time

there are over 200 institutions, all of which are subsidised by the State. The number of students shows a still greater increase, rising from about 8,000 to 44,000, while the State expenditure towards the maintenance of the schools, which amounted in 1885 to less than £20,000, nearly reached £380,000 in 1909. It must be borne in mind that this sum does not include any expenditure on higher technical instruction, nor on Continuation Schools. Nevertheless, the activities of the Department have a wide range. They embrace the schools of industrial art, the building schools—which are intended to provide the scientific basis for the practice of those actually engaged in the work of construction and to train officials for state and municipal service—the intermediate and lower engineering schools, the textile schools and schools for artisans. The conditions of admission and the length of the course vary with the institution, but in all cases the ordinary work of the school demands the whole attention of the student, who is not able to divide his time between the earning of his living and the prosecution of his studies. For this reason these schools are day institutions, though at some of them, in particular at the engineering schools, evening work has been introduced as a makeshift for those who cannot sacrifice their employment in order to give their full time to study. This development has the full sympathy of the Department, but it is not regarded as offering an alternative of equal value with the day classes, nor are these evening students admitted to the diploma examinations. It is perhaps not uninteresting to remember that the great Technical High Schools have no organised evening work.

In addition to these schools there is a regular system of courses for those who are engaged in conducting small industrial undertakings of their own—the so-called *Meisterkurse*. Germany has always evinced a desire to confine the factory system within as narrow limits as possible, and has tried to protect the small producer. It has attempted to do this largely by means of instruction, and it will be seen from the following report how much of the work of the Continuation School concerns itself with those trades in which the independence of the small producer may be preserved. This in itself tends to reduce the amount of unskilled labour, and at the present time, when the question of unemployment is so prominent, it is hoped that the description of the co-operation between industry and school, that exists in Germany, may prove suggestive for our own practice.

The Board must not necessarily be held to endorse all the opinions expressed in this pamphlet, for which the author—an official of the Education Committee of the County Council of Southampton—is alone responsible.

Office of Special Inquiries and Reports,
May, 1910.

COMPULSORY CONTINUATION SCHOOLS IN GERMANY.

TABLE OF CONTENTS.

I. INTRODUCTION :—	PAGE
Object of the enquiry -	1
Typical career of a working class boy :—	
(a) at Elementary School -	1
(b) at Continuation School -	2
(c) Military Service -	2
(d) <i>Wanderjahre</i> -	3
Apprenticeship and its coincidence with the Continuation School -	3
Boys in unskilled labour -	3
Attitude of community to compulsory system; <i>Sozialpolitik</i> -	4
Imperial Labour Law -	5
Advisory Expert Committees and Labour Bureau -	5
II. INDIVIDUAL TOWNS VISITED :—	
Strassburg :—	6
After-school training -	7
Period of compulsory attendance -	8
The teachers -	8
Attitude of employers and parents -	9
Attendance at Continuation Classes -	11
The Municipal Labour Bureau -	12
Methods employed by the Bureau -	14
Appendix A.—Classification of workpeople -	15
Appendix B.—Constitution of Advisory Expert Committee	15
Appendix C.—Statistics of Continuation Classes -	16
Appendix D.—Finance -	16
Mannheim :—	18
Organisation of the Continuation Schools -	18
Attitude of employers -	19
Appendix A.—Classification of workpeople -	21
Appendix B.—Attendance at Continuation Classes -	21
Appendix C.—Finance -	22
Munich :—	23
Attendances during 1907-8 -	24
Views of employers -	24
Municipal Labour Bureau -	29
Technical training in the Elementary School -	30
Appendix A.—Classification of workpeople -	31
Appendix B.—Attendance at Trade Schools -	31
Appendix C.—Statistics of Labour Bureau -	33
Appendix D.—Finance -	33
Nuremberg :—	34
Siemens & Schuckert's school for apprentices -	34

II. INDIVIDUAL TOWNS VISITED— <i>continued.</i>	PAGE
Leipzig :—	34
Organisation of Continuation Schools - - -	35
Opinions of Employers - - -	37
Appendix A.—Classification of Workpeople - -	38
Appendix B.—Attendance at Continuation Schools -	38
Appendix C.—Finance - - -	39
Berlin :—	39
Organisation of Continuation Schools - - -	39
Voluntary Higher Continuation Classes - - -	42
Opinions of Berlin Firms - - -	42
Appendix A.—Classification of Workpeople - -	46
Appendix B.—Attendance at Continuation Schools -	46
Appendix C.—Summons, &c. in 1907 - - -	47
Appendix D.—Finance - - -	48
Stettin :—	48
Vulcan Shipbuilding Company - - -	48
Hamburg :—	49
Present Voluntary System - - -	49
The Principal Trade School - - -	50
The Day Trade School - - -	50
The Lesser Trade Schools - - -	51
The Commercial Schools - - -	51
Hamburg Firms and Continuation Schools - - -	52
Appendix A.—Classification of Workpeople - -	54
Appendix B.—Principal Trade School - - -	54
Appendix C.—The Lesser Trade Schools - - -	55
Appendix D.—Finance - - -	55
Herne :—	56
Hibernia Colliery Company - - -	56
Essen :—	56
Krupp's School for Apprentices - - -	56
Solingen :—	57
Compulsory System - - -	57
Düsseldorf :—	57
Its Continuation Schools - - -	58
Attitude towards Compulsion - - -	59
Appendix A.—Classification of Workpeople - -	60
Appendix B.—Attendance at Trade Schools - -	60
Appendix C.—An Agreement between Trades and the Trade School - - -	61
Appendix D.—Finance - - -	62
III. GENERAL NOTES :—	
Supply of Teachers - - -	62
The Imperial Labour Law - - -	63
Indentures of an Apprentice - - -	64
Acceptance of Compulsion in Germany - - -	65
IV.—APPENDIX A.—Labour Bureau Forms - - -	66
(1) Strassburg. - - -	66
(2) Munich. - - -	68
APPENDIX B.—Hours at which the classes are held - -	69
APPENDIX C.—The Supply of Teachers for Continuation Schools - - -	73

COMPULSORY CONTINUATION SCHOOLS IN GERMANY.

I.—INTRODUCTION.

THE purpose of the journey undertaken in April and May, 1909, was to look into the actual working of the compulsory Continuation Schools in some of the large German towns and their relation in the social and industrial life of the country to the working classes and the employers. The Board of Education were already sufficiently familiar with the legislative and administrative conditions under which the continuation school system has been established in the various German States. The notes, therefore, that follow touch on some of the points of interest observed in the several towns visited, and an effort has been made to avoid repeating the same features, taking for granted what has already been described and passing on to new or particular aspects. It is consequently desirable to outline the general or universal features of the compulsory system so that the notes made on the various towns may need little or no further explanation. With this object a somewhat detailed description has been given of the system of continuation schools in Strassburg. It may be well, however, to generalise briefly and to follow the typical career of an ordinary boy of the working classes.

Before leaving the Elementary School, he has already had for perhaps three years some training in drawing and cardboard or woodwork, in order to give an early bias in the direction of skilled manual labour. Experience has shown that those who have had good and extended instruction of this kind will not readily fall into unskilled callings. In Munich, indeed, an eighth year has been added to the Elementary School period, to give this definite bias and to form a basis for the reorganised continuation trade schools. The success attending Dr. Kerschensteiner's policy is especially remarkable. In 1908 of 2,200 boys who left the highest class of the Elementary Schools, 2,150 went at once into handwork or other skilled occupation.*

As the time for his leaving the Day School draws near, the town authorities and his teachers show their interest in the boy's choice of a calling. The parents will perhaps have been invited

* See Munich, page 30.

to an informal conference, to have the intention and procedure of the Labour Bureau explained to them, and they will have received a pamphlet informing them of the various trades and employments in the district, and the prospects in each. No pressure is exercised on them as to the choice of an occupation, but the school does sufficient to awaken them to the evil of letting their children drift into irregular employment, and the authority of the schoolmaster is exerted to insist on the children going to the bureau repeatedly till they have found a post.

The occupation once chosen and entered upon, and the indentures, if any, of apprenticeship having been signed, the boy will for the next two, or probably three, years attend the Continuation School for four or six hours a week. If he is a clerk, he will of course join the commercial classes, and if an artisan or craftsman he will join the manual and theoretical classes arranged for his own trade, or, for the group of allied trades. There is the third alternative that he may be in unskilled employment, and in this case he will receive instruction in subjects which are useful in common to a large number of miscellaneous occupations, and which may help to form of the more unstable elements something like sensible citizens. He will learn systematically about the means of intercommunication (railways, shipping lines, &c.), commercial intercourse (telephone, telegraph, directories), in his own town and in the German Empire, the facts of hygiene, the scheme of government and the laws so far as they affect himself.

Whatever the calling of the boy, mechanic, clerk, or messenger, his individualist impulses are aroused. Because he sees that no subjects are superfluous, and that all are practically useful to him, he believes in the school. The German knows that the good workman, with a proper pride in his work and skill, makes the good citizen. As the boy grows older, say in his last year at the Continuation School, he will gain something of the altruistic point of view. He will understand from the lessons on citizenship (*Bürgerkunde*), which are an essential and obligatory part of the course of every group, not only that he has duties and rights but that his craft or his trade guild has an honourable history, that it is but one of many forms of labour, that he is but one of an ordered community, State and Empire, and that the welfare of all is bound together.

This wholesome objective bent of mind is further confirmed when the boy has left the Continuation School, by his period of compulsory military service from 18 to 20 years. The discipline of the unit assumes a severer and more definite form. The habit of military subordination unquestionably renders possible and easier the industrial enterprises of Germany (some of them vast, such as those of Siemens) which are models of smooth and quiet organisation. One may say that without exception the employers value military service, and prefer the man who has already passed through the ranks. The difficult

town youth learns virtues from iron necessity and the callow clumsy country lad acquires alertness, bearing and articulate expression. Character is trained and forged. At the same time it is not to be supposed that the period of military service can actually convert the unskilled into the skilled worker, except in so far that some few recruits may finally continue in the Army as non-commissioned officers and instructors. The soldier, however, is welcomed in many posts of some responsibility, such as those of hall porter in large business houses or gatekeeper in works; and even as a messenger or carrier where we should employ errand boys. This is because of the calls on the latter made by their continuation school.

The last phase of the young clerk or artisan for our purpose, is the period known as his *Wanderjahre* or years of travel and experience. Having passed through his military service he will change his master or firm from time to time in order to visit fresh places and see other methods; a clerk will seek employment in England, France or Spain to learn the languages and to become conversant with the foreign markets. Not till he is nearing thirty does he look for a settled and responsible post, for then he feels that his technical or professional training is reasonably complete and that he will be valuable to an employer.

As stated above, the question of what Continuation Classes, General, Commercial or Trade, a boy shall join on leaving school is settled by the nature of the calling which he is taking up, and if he should change this, he will as a matter of course be transferred to the corresponding school class. The apprenticeship system survives in vigour in South Germany—less so in North Germany, where the factory system is more prevalent—and is of the greatest value in its coincidence in point of time with the period of the compulsory continuation school. Both combine to impress on the young boy that he is but a learner, and he knows that to attain the status of a qualified workman he must complete a special example of his skill, the *Gesellenstück*, and that he will be examined and tested by a committee of the master-workmen of his trade. The indentures,* too, of the apprentice hinder from frivolous and capricious changes of employment, and keep the boy under the proper authority of his master and of his parents.

It is thus seen that a boy who does not enter a trade through apprenticeship but takes up some form of unskilled but more immediately remunerative employment, can only in exceptional cases raise himself into the rank of the skilled labourers, for the continuation classes do not attempt to convert boys in unskilled types of work into skilled workmen, interfering with the natural operation of the law of demand and supply. However, what is possible is done to render more stable their characters and their prospects, and this is an enormous problem,

* An example of these is given on page 64.

more bewildering and intangible than that of the provision of thorough trade training for the young craftsmen. In Berlin, shortly after the organisation of the compulsory Continuation Schools there were in 191 classes over 6,000 boys in unskilled employments, or just one-third of the total number of continuation pupils, and these figures relate, of course, only to the boys actually of school age. The difficulty is to find a course of instruction common to and advantageous to all, for owing to the constant changes in their employment it is useless, even if they are employed in the same works, to attach them to the classes of the apprentices. Generally speaking, the subjects of instruction are commercial traffic and intercourse (*Verkehr*), citizenship (*Bürgerkunde* and *Heimatkunde*), hygiene, arithmetic and German.

It is hardly necessary to refer more than briefly to the attitude of the labouring classes and the employers, for speaking broadly it is favourable, usually friendly and often enthusiastic. There must always be parents who wish to exploit their children as wage earners at the earliest age, and masters who hold the individualist point of view. That all employers would insist on their boys attending Continuation Schools if there were no compulsion is most improbable, but the large majority would encourage them to attend the voluntary classes, and some would even require it. But there is a general belief in the efficacy and the necessity of compulsory Continuation Schools, and the trade associations have welcomed them. It is universally accepted that the rising generation of the commercial and industrial classes must be fully equipped in the rivalry between town and town, no less than in the competition of the nations. For particular crafts it is perhaps the only way to save them from extinction.

And yet this is not the highest ground. Germany has a deep belief in *Sozialpolitik*, in far-seeing public policy for the public good. It is not only to give theoretical illumination to the practical skill of her workers that compulsion is exercised in the Continuation Schools, not merely to train them as efficient wage earners, but there is the ideal aim that the whole mass should be raised to a better level, that stupidity and ignorance should not mar their lives unchallenged, and that the many should be saved who might otherwise be lost.

The time at disposal did not permit of an enquiry into the peculiar needs and difficulties of the small country towns and rural districts, where for instance the paucity of numbers in any one occupation might make it impossible to form a particular technical class for its instruction. Perhaps, however, enough has been said to indicate that the combined influences of apprenticeship and of the compulsory Continuation School are living and effectual in the social and industrial life, and that there is a real and organic connection between on the one hand the Continuation School and even the Day School, and on the other the trades and industries of the large German towns. In

Strassburg, for instance, in Munich, in Düsseldorf, and even in Hamburg, where the Continuation Schools are not yet compulsory, the vigour of the schools lies in the active interest of the masters and of the trade associations. This organic entity is the central perfection which must be worked towards in England. The questions of the supply of soundly equipped teachers, of school accommodation, and of the additional burden of finance, great as they are, are secondary in vital importance and difficulty to that of compelling the attention and adherence of the employer of every type. He is the key to the problem as a whole.

The Imperial Labour Law of 1897 (*Reichsgewerbeordnung*) puts on the master the duty of providing that his apprentice shall learn his trade from him, and that he shall attend the Continuation School, and, this is the basis of the *Ortsstatut* or byelaw of those towns which have established compulsory attendance. The Imperial Law may thus be said to lay down the principle of the moral obligation of the employer, and the municipal byelaw to enforce his active concurrence. He is held chiefly responsible for the regular attendance at the Continuation School of the boys whom he employs, and a public opinion is formed against those masters who wilfully resist the law. Compulsion of the employer there must be in the last resort, but this alone cannot breathe life into any organisation. He has to be brought to see that his interest is served by the trade and commercial schools. He must be made to believe in the public policy.

He must realise that the teaching is really practical and concentrated upon his own, that is, his employee's trade or calling; that much is taught in the school which, because of the limitations or the specialisation of his business, he could not teach the boy himself. There should be periodical displays of the work, theoretical and practical, done by the trade and other classes in the 1st, 2nd, and 3rd years. Brief technical explanations should be printed and distributed, showing how the instruction aims at giving each boy a rounded knowledge of the scope and principles of his work. The teachers must have expert knowledge and training, not only for the sake of their instruction but to win the confidence of the employer. Close contact with trade and industry is essential to a school which concentrates its energies on the callings of the pupils, and which must therefore keep abreast of new developments. There must be for each school advisory expert committees* for every trade or occupation or group of allied trades, and the employer must feel that he is really represented thereon, and that it is an honour and a public service to be chosen a member by his business colleagues.

He should be asked on public grounds to make use by preference of the labour bureau for boys and girls; this should endeavour to meet his requirements with the best and most

* *Fachschulkommissionen.*

suitable material. The officials should have firsthand knowledge of the labour market and of the aptitudes and strength or health needed for each calling. They should avoid placing children with masters of known unsatisfactory character,* with whom little or nothing can be learnt. The bureau should exist to foster skilled manual labour, not to help the drift into casual and unskilled occupation. It should co-operate with the Continuation School to protect children against their parents and themselves, and where necessary against individual employers.

The real and organic connection existing or aimed at in Germany between the compulsory Continuation School on the one hand and the life of the pupils who are leaving the Elementary School, and on the other the trades and industries of the place, should not be less possible of attainment in this country. In the course of time, as in Germany, after an initial period of aversion and some hostility, the Continuation School will be accepted as a matter of transition and growth by the pupils and their parents and by the employers. There will be apparent the advantages of longer discipline to the child population, and of completed sessions and courses of study, as against the fragmentary attendances which are now by no means the exception. It will be seen that the compulsory classes will be the constant source of supply of adult skilled workers who will voluntarily seek advanced instruction in the technical colleges. Something will at last have been done to mould and train the great mass of youthful unskilled labour, which, necessary as it is to the community, needs and deserves the most careful forethought of the State. Perhaps even in their case it will be possible to arrive at some kind of contract for definite periods of employment. But whatever is done by the local authority and by the State, the employer is the arbiter of its success, he is the guardian and trustee for the future generation of workers.

II.—INDIVIDUAL TOWNS VISITED.

STRASSBURG (ALSACE-LORRAINE).

Strassburg was one of the first towns in Germany to adopt, in 1903, of its own choice a system of compulsory attendance† for boys leaving the Elementary Schools at the age of 14 who proceed directly to work or business, and it will be well first to give an outline of the organisation of the courses provided. The population is 170,000, and the chief occupations are connected with brewing, tobacco, tanning, printing, and flour mills; it is not a manufacturing town in the large sense, but there is a variety of small industries, for it is the chief centre of Alsace.

* The Chambers of Trades and Commerce in German towns have records of masters who are not to be recommended.

† The municipal rivalry of the great towns has obliged others to follow.

AFTER-SCHOOL TRAINING.

On leaving school at the end of his fourteenth year, generally at Easter, a boy must at once, whether he has already found work or not, join one of the following* :—

- (a) The General Continuation Course (for unskilled workers).
- (b) One of the Technical Courses (*gewerbliche*).
- (c) One of the Courses for Building or other Industries.
- (d) The Commercial Course.

While still at school he has been put into touch with the Municipal Labour Bureau, of which some account is given on page 12, which has separate departments for boys and girls. He has thus decided what he wishes to be, and has been advised as to his choice. Should he take up one of the unskilled branches of work, becoming an errand boy or chimney sweep, or mason's help (*Handlanger*), he must join the general course, until such time as he may have passed over to a more skilled occupation. If he is too backward for even this instruction, he will be put into one of the preparatory classes.

If, however, he is to be engaged, or apprenticed, in one of the ordinary trades, he will join at once one of the technical courses, each complete in itself, for bakers, confectioners, butchers, waiters, druggists, grocers, shoemakers, tailors, hair-dressers, printers, typesetters, or bookbinders, as the case may be.

Similarly, there are groups in the Building Continuation School, for stonemasons, cementworkers, stove makers, joiners, cabinet makers, coopers, locksmiths, boiler makers, tin and copper smiths, upholsterers, and so on. The Commercial Classes are equally strictly adapted to the daily occupation of the clerk or bookkeeper.

It will be seen that, with the exception of the unskilled workers†, the boys have already decided what is to be their calling and this is accentuated by the fact that they are apprenticed or indentured by written contract to their master for a term of years. The result must tend, with the better or even the average element, to a thorough mastery of the work in hand, and to the proper self-respect of the competent workman. It may here just be mentioned that to leave the status of apprenticeship, there is a test of proficiency to be passed by the adult would-be assistant (*Gesellenprüfung*) and later by the would-be master worker (*Meisterprüfung*).

In order that the training of the young worker may proceed at the Continuation School, his master is obliged by Imperial Order to allow him to attend his full number of classes week by week, and these are held as far as possible in the morning

* This is stated on his leaving certificate from the Elementary School (*Entlassungszeugnis*).

† The wages for these are relatively high, being on an average, according to age, from 5-12 marks a week. They are, therefore, unfortunately attractive to parents pressed by poverty and with large families.

or afternoon. At the same time every trouble is taken to meet the convenience of employers; for instance, tram journeys to and from the classes are given free, to minimise the loss of time, and with this end parallel or alternative classes are formed on various days and at various hours. Employers there still are who consider the boys merely as cheap labour, but in general they co-operate cordially with the school. Attendance is secured by warning, interview, and summons, followed by detentions in the case of the pupil. One ingenious form of punishment consists in sending him to the classes at the side of the town remotest from his nearest natural school. In the case of parents and masters fines are levied ranging from 20 to 150 marks, or if they cannot pay, by imprisonment from 3 days to 4 weeks. The extreme penalty is very rarely if ever enforced.

PERIOD OF COMPULSORY ATTENDANCE.

The period of compulsory attendance varies according to the type of Continuation School attended. The General and Technical Courses are usually of two years each. For the courses for the building and allied trades there are also preparatory classes where necessary. The Commercial classes are arranged for three years. With a certificate of proficiency from the advanced course a pupil can leave before he is 18. Those for the druggists are also of three years. There is a general feeling on the part of administrators and teachers that the period of compulsion should be extended to coincide with the whole period of the engagement or indentures. At present a leaving certificate may be obtained on the completion of the two years' course. It is felt not merely that the longer instruction, but also that the longer discipline at the difficult age of boyhood is advantageous.

The number of class hours per week is also varied. The General Courses consist uniformly of four hours a week, those for the trades are generally six to eight hours a week (*see Appendix C., page 16*). The Building Courses are of eight hours a week, and the Commercial Courses of nine hours.

THE TEACHERS.

The theoretical teaching is given generally by men from the *Mittelschulen* or higher grade Elementary Schools, who become specialists by study of the subject and by keeping in constant touch with the master workers as to the prices of material, inventions, state of the market, and so on. Their whole time is given to this instruction, and the advantage must be apparent. For instance, a class for bakers which was visited was being exercised orally in the prices of flour, working expenses of the business and the weight, number, and retail cost of rolls and loaves which could be made from a sack; this was followed by a lesson on the various forms of insurance for working men, and the respective contributions of the workman, the employer and the State. The teacher who had studied this particular branch

was the Director of the whole of the Technical Classes. The twenty boys had come straight from work in their white linen coats and aprons, and one felt how much more this definitely adapted arithmetic appealed to them than general examples could do which had no bearing whatever on their calling or knowledge. The practical teaching, on the other hand, is given by men who are actually in the trade. A class of confectioners (*Konditoren*) was being taught how to make the sugar decorations on the elaborate German cakes and tarts, or on Easter eggs, fruits and flowers. The designs were learnt by heart from the drawing lessons held in connection with the theoretical instruction. The drawing is always allied to its trade use, *e.g.*, it is taught with a view to tailoring, shoemaking, &c.* Similarly practical workmen teach printing and typesetting; there was the newest type of machine, that had cost 11,000 marks, and varied sets of type in every style to the value of perhaps 20,000 marks. It is always to be remembered, however, that the practical instruction is in no way intended to supersede the training of the workshop; it is meant to be its explanation and complement and the basis of the theoretical teaching. The employers show much interest in the newest apparatus and practical arrangements, for they are not all in a position to give the instruction themselves.

To return to the general conduct of the classes, one should notice that social efforts are not overlooked. The boys are encouraged to make use of the public library, lectures and entertainments are arranged, and excursions for pleasure or instruction. A savings bank has been formed, and tickets are given at reduced prices for the palatial swimming baths. One sees in this something analogous to the boys' clubs and brigades of English life, with the important difference that discipline and training for life are here the first consideration, with recreation or other advantages as auxiliary. Each of the technical courses comprises compulsory instruction in health and citizenship. One is led to hope that, should any system of compulsory continuation schools be introduced into England, the opportunities will be used to influence socially those as yet untouched by the voluntary agencies and unable to use their leisure sensibly.

ATTITUDE OF EMPLOYERS AND PARENTS.

After this general survey of the activity of the evening schools, we may consider their relation to the employers, or rather the attitude of the employers to them. As was to be expected, when compulsion first was brought in there was some amount of hostility and even indirect resistance. There was the loss of the boys' time to create a feeling of dislike, and the annoyance at being obliged by law to pay the school fees, where these are charged, moderate as they are. As a result, many boys at first lost their employment, though the Labour Bureau

* Even citizenship is taught with special reference to the particular calling of the pupils; so with hygiene.

was able to re-place some of them. Others again deducted the amount of the school fees from the wages earned, or made systematic difficulties as to sending their boys to the classes. But within less than five years one can say that the initial opposition has died away. They realise that their boys are more keen and intelligent in business hours, and that consequently they are more useful. As the selfish point of view is lost, the larger view of the advantage to the State is gained.

Collectively, however, the trade societies and the Chamber of Trades (*Handwerkerkammer*) have always been in favour of compulsion, and have co-operated cordially with the municipal and government authorities. They have contributed liberally and voluntarily to the cost of apparatus and machinery for the purpose of teaching, and they act in harmony with the Labour Bureau in deciding what employers are fit to engage boys as apprentices. Only masters approved by the Chamber of Trades are permitted to have them and the number is fixed according to the number of adult assistants. The Chamber, which consists of 36 members elected from the various trades, is in a position to know the suitability of each master, and how far he does his duty towards the lad, and it hears the complaints, if any, on either side.

Apart from this, the employers are in close connection with the technical classes through their advisory school committees.* Thus, there are expert groups (*Fachschulkommissionen*) of mechanics, masons, photographers, grocers, butchers, and hairdressers, for instance, representing every imaginable trade. These have the right to, and do visit the classes, and give valuable opinions as to the direction of the theoretical and practical teaching.

It cannot however be said that the individual employers in the business houses are yet as favourably disposed as the trade masters, for many find that the school attendance is a disturbance of the office work. The possibility is now being considered of having preparatory whole day classes for one year (Preparatory Commercial School, *Handelsvorschule*) which would dispense, if proficiency is certified, from attendance at the compulsory Continuation Classes. The period of apprenticeship (if one may so call it, for there are no indentures as yet, though considered desirable by the authorities) need not then exceed two years.

The parents—who are the third of the three factors, parents, school and employers—have presented no serious difficulty. Poverty only too often compels them to place their sons in unskilled work to earn an immediate wage. But they regard the compulsory attendance as a survival or continuation of the elementary school time. They are pleased to feel their boys are learning, and are ready to complain when the employer prevents them from going to the classes, or when he does not teach them in the workshop all that might be expected. A proof of the interest in the Continuation Classes taken by the public at large

* See Appendix B, page 15.

is that 3,500 people recently visited a five days' exhibition of the practical work of the pupils.

ATTENDANCE AT CONTINUATION CLASSES.

Some brief statistics may here be given, showing the hold that the compulsory system has on the mass of young workers.

The town has 170,000 inhabitants; in 1907-08 there were:—

Some 8,250* boys between 6-14 years (*i.e.*, of Elementary School age);

Some 4,000 boys between 14-18 years (*i.e.*, of Continuation School age).

Of these last over 2,000 were attending the compulsory continuation classes, as follows:—

(a) General	-	-	-	-	517	}	See Appendix C, page 16.
(b) Technical	-	-	-	-	560		
(c) Building and other Industries	-	-	-	-	669		
(d) Commercial	-	-	-	-	414		
					2,160		

A large number of the remaining 1,800 boys, making up the whole total of 4,000 given above, would be those at the various Secondary Schools (*Gymnasien* and *Realschulen*), or private schools.

One sees thus that barely 24 per cent. of the whole number of 2,160 belonged to the classes in group (a) for unskilled workers. In the spring, 37 of these 517, or 7 per cent. were out of work, and were at once and repeatedly referred to the Labour Bureau, which shows the valuable subsidiary use of the Continuation Schools in checking drift.

In groups (a) (c) and (d) wages were reduced in 49 cases only (or just over 2 per cent. of the whole total) by the employers because of the time spent at school. No instances were recorded in group (b).

The following was the number of lessons missed in the different groups from all causes, excused, unexcused, and illness:

(a) General (during a specimen week)	}	11 hours per cent. of those given.		
The unskilled element here, as might be expected, shows itself least regular.				
(b) Technical (during a specimen week) -	}	6 hours per cent. of those given.		
(c) Building, &c., (during year) - -	}	7	"	"
(d) Commercial (during year) - -	}	6	"	"

* No mention is here made of girls as at present compulsory attendance has not been thought necessary. There were 100 voluntarily following courses in commercial subjects, while about 400 took domestic subjects.

Enough has now been said to indicate the desire of Strassburg to build up the worse elements, and to help forward the better elements of the working classes in order to maintain a level of prosperity and to prevent skilled handicraft from being ousted by the factory output. In Alsace, the influence of the French Revolution did away with apprenticeship, and this is being restored. The effort is, by fostering manual labour, to combat the manufacturing influences which bring about extremes of poverty, and tend to throw wealth entirely in the hands of the capitalists.

It is here we see the value of a strong authority with a fixed policy. Experience showed that the boys who most needed it did not attend the Continuation Schools, and that, as in England, of those who did join, a large number fell out by the middle of each session. The Secretary of the *Handwerkerkammer* puts it, "without compulsion there are no Continuation Schools." The German looks on his compulsory service in the army as the best school for youth: he feels that the discipline has made a man of him, and he believes therefore in discipline for those who are not yet of age for the army, the discipline of attending classes that bear on the work of life, and of being bound or indentured to a fixed employment for a definite term of years.

THE MUNICIPAL LABOUR BUREAU.

Closely allied with the compulsory Continuation Schools in Strassburg is the Municipal Labour Bureau (*Arbeitsamt*) which in 1902 made the first effort to act as intermediary between boys leaving the Elementary Schools and the employers of skilled labour. Strassburg is the seat of the central office; there are 15 others in Alsace-Lorraine, at Colmar, Mulhausen, Metz, &c. Here too the co-operation of the *Handwerkerkammer*, or Society of Master-Workmen, and of the *Handelskammer*, or Chamber of Commerce, is secured. The Committee of Control of the *Arbeitsamt* represents employers and employed from the various occupations and trades of the town. From these information is gained as to employers* who are approved as likely to fulfil their responsibilities towards the boys. On the other hand all boys about to leave school, whether they have employment in view or not, and their parents, are sent compulsorily by the school authorities to the Labour Bureau, and a card of details is filled in. One sees, then, that something is done from the beginning to check the thoughtless drift into the overcrowded ranks of errand lads, copyists and clerks, and to prevent the unscrupulous exploiting of boy labour. No effort is made to help such into positions. The whole object of the Bureau is to enable boys to become skilled workers, and it is treated as a matter of municipal or public interest rather than as one concerning merely individual employers and the trade societies.

* See above, page 6.

The co-operation of the Medical Officer of Health is also enlisted. Each boy on leaving school is examined as to his physical strength and soundness, and the details are entered on his card. When a vacancy occurs the card is consulted. If he is puny he is dissuaded from becoming, say, a blacksmith, if with a tendency to consumption from becoming a tailor, if shortsighted from becoming an engraver, and so on. It should be mentioned that the staff of the Bureau, the men at least, have themselves been practical workmen, and thus have a ready understanding of the possibilities for individual boys, and of the demands of the labour market as it varies from season to season. Their work requires tact and individual pains; there is an absence of formality* or red tape in their methods, and it was satisfactory to see the quick and sympathetic way in which both boys and employers were met and helped. A section has been recently opened for girls leaving school, and appears to be active; statistics are not yet available.

The main difficulties experienced by the Labour Bureau are:—

(1) The poverty of the parents, especially when the family is large, which impels them to put their children where they can at once earn something.† To check this, in deserving cases, the Government is increasing its contribution for the purpose of helping boys into apprenticeships, generally by starting them with suitable clothes and boots. A special grant of £10 was made to apprentice a deaf and dumb boy. A sum of 2,000 marks (£100) was expected for the current year.

(2) The fact that the irregular day labourer can earn during the summer months better wages than the ordinary skilled workman such as a locksmith. The former will earn at 45 pfennig an hour as much as 27 marks a week, while the latter at 35 pfennig will only make on an average 21–24 marks. This attracts the unskilled worker, and he trusts to find just enough to do in the winter to keep him going.

(3) The nominal payment given by the employers during the 3 years of apprenticeship, varying from 1–3 marks a week, though with bakers, smiths, tailors and shoemakers it is customary to give board and lodging, which does render it possible for poor people to start their sons. In the north of Germany the conditions in this respect are better. On the other hand, workmen are not so readily discharged here when work is slack, as, for instance, it may be with the building trades. Here, too, there is an absence of the factory discipline, no loud bell summons hands to work, the men and women go in from the street when the clock has struck. The life is more humane, more backward if you will.

* Very much is done through the telephone.

† Errand boys of 14–15 years begin with six marks a week, getting from 15–16 years eight marks, and from 16–17 years 10–12 marks. Later the best of these will become packers or porters in large businesses, earning from 18 to 20 marks a week.

An idea of the scope of the Bureau may be gained from the following table:—

—	Boys entered on Books.	Number of Vacancies.	Boys placed by the Bureau.	After 6 months still in Place.
1903-4 .	281	198	117	—
1905-6 . .	296	532	175	109
1906-7 . .	520	605	240	153
1907-8 . .	610	450	188	133
1908-9 . .	670	340	*130	—

* Up to 10th May, 1909; probably will amount to 200.

It is generally agreed that it is early as yet to see the full results of the work of the Labour Bureau and of the compulsory Continuation Schools, but there is a tone of hopefulness, and it is felt that the coming generation will have the benefit of having better workmen and citizens.

METHODS EMPLOYED BY THE BUREAU.

The Bureau works on these principles:

(1) The teacher distributes cards* to be filled in by all boys and girls leaving the Elementary Schools, and the parents are summoned one evening to have the purpose of the authorities explained to them. The cards state the occupation desired and must be taken to the Bureau in the next few days. The children have already been medically examined as to their fitness, and a list has been issued by the school authority showing all the trades which can be learned in or near Strassburg.

(2) The employers meanwhile have sent to the Bureau their applications* for apprentices and clerks. These cards are marked confidentially for approval or otherwise by the Chambers of Trades and of Commerce.

(3) The children are seen at the Bureau and the officials put them into communication with the employers. Thus automatically, provided they are fit, they tend to fall into the occupations where there are most vacancies.

(4) All boys and girls must take control cards back to the teacher to show that they have been to the Bureau and had their names entered. The teacher exercises pressure until the card shows that they have found employment. It should be mentioned that the initial steps are taken by the teachers some four months before the children leave school.

The feature in Strassburg that immediately strikes the observer is the earnest interest taken by the Chamber of Trades in the Continuation Schools and in the Labour Bureau, and the resulting vital connection of these latter with the industries of the town and district.

* For specimens see Appendix A., pp. 66 and 67.

STRASSBURG.—APPENDIX A.

1. The branches of industry in Strassburg, with the numbers of the workmen engaged, in June 1907, were:—

	Male.	Female.
Commercial - - - - -	7,147	3,434
Clothing - - - - -	2,537	3,730
Food, drink and tobacco - - - - -	3,465	2,157
Building - - - - -	5,531	30
Hotels and inns - - - - -	1,597	2,582
Machine tool and instrument making - - - - -	2,747	66
Woodwork and carving - - - - -	1,821	347
Cleaning - - - - -	703	1,304
Metal-working - - - - -	1,564	68

2. The total population of the town of Strassburg between 14 and 18 years of age was:—

Males - - - - -	5,356
Females - - - - -	6,110

3. Of boys from 14 to 18 years of age there were:—

(a) Unemployed (belonging to families without definite occupation) - - - - -	1,380
(b) Employed in unskilled labour - - - - -	758

STRASSBURG.—APPENDIX B.

ADVISORY EXPERT COMMITTEE (FACHSCHULKOMMISSION) OF THE GENERAL AND TRADE CONTINUATION SCHOOLS IN STRASSBURG, CONSISTING OF MEN ACTUALLY ENGAGED IN THE VARIOUS TRADES.

(In office for three years.)

Number of Groups.	Number of Members.	Number of Groups.	Number of Members.
1. Bakers - - -	7	22. Locksmiths - - -	4
2. Confectioners - - -	4	23. Smiths - - -	3
3. Butchers - - -	4	24. Machine Constructors - - -	3
4. Cooks and Waiters - - -	8	25. Coppersmiths - - -	1
5. Tailors - - -	5	26. Electrical Engineers - - -	2
6. Shoemakers - - -	9	27. Instrument makers - - -	2
7. Farmers and Gardeners - - -	4	28. Watchmakers - - -	1
8. Hairdressers - - -	7	29. Tinsmiths and Plumbers. - - -	1
9. Printers - - -	7	30. Plasterers - - -	3
10. Compositors - - -	3	31. Painters - - -	6
11. Bookbinders - - -	5	32. Upholsterers - - -	4
12. Druggists - - -	6	33. Goldsmiths - - -	3
13. Grocers - - -	1	34. Saddlers - - -	2
14. Cabinetmakers - - -	8	35. Engravers - - -	2
15. Carpenters - - -	2	36. Surgical Bandage-makers. - - -	2
16. Wheelwrights - - -	1	37. Photographers - - -	1
17. Coopers - - -	2	38. Lithographers - - -	3
18. Masons - - -	5	39. Wood Engravers - - -	1
19. Stove Setters - - -	2	40. Colour Printers - - -	2
20. Sweeps - - -	2		
21. Stonedressers - - -	1		

STRASSBURG.—APPENDIX C.

STATISTICS OF CONTINUATION CLASSES IN STRASSBURG.

Occupations.	Number of		Hours per Week.	Occupation.	Number of		Hours per Week.
	Boys.	Classes.			Boys.	Classes.	
(a) Unskilled -	517	19	4	(c) Masons -	76	3	8
(b) Bakers -	82	4	5	Stonedressers -	28	1	8
Confectioners -	71	3	7	Carpenters and	24	1	8
Butchers -	21	1	6	Wheelwrights			
Cooks -	42	2	6	Cabinet Makers	68	3	8
Waiters -	40	2	6	Locksmiths -	81	3	8
Druggists -	20	1	8	Metalworkers -	24	1	8
Grocers -	48	2	6	Machine Fitters	91	4	8
Shoemakers -	20	1	6	Mechanicians -	57	2	8
Tailors -	47	2	6	Electricians -	19	1	8
Hairdressers -	72	3	8	Tinsmiths and	67	3	8
Printers -			8	Plumbers.			
Compositors -	} 69	4 {	6	Plasterers -	18	1	8
Bookbinders -			1	6	Painters -	36	2	8
	28			Upholsterers	41	1	8
				and Saddlers			
				Goldsmiths and	19	1	8
				Engravers.			
				Photo- and	20	1	8
				Lithographers			
				Total -	669	28	—
Total -	560	26	—	(d) Commercial	414	18	9

	Pupils.	Number of Classes.
SUM TOTAL (a)	517	19
(b)	560	26
(c)	669	27
(d)	414	18
	<u>2,160</u>	<u>90</u>

STRASSBURG.—APPENDIX D.

FINANCE, 1907-08.

I.—THE GENERAL CONTINUATION CLASSES.

* Receipts.	Marks.	Expenditure.	Marks.
From the Government of		Salaries - - -	7,000
Alsace Lorraine - -	200	Cleaning, &c. - - -	950
From the District of Lower		Apparatus - - -	900
Alsace - - -	2,219		
From Strassburg - - -	6,431		
	<u>8,850</u>		<u>8,850</u>

* No fees.

2.—THE COMMERCIAL CLASSES.

<i>Receipts.</i>	Marks.	<i>Expenditure.</i>	Marks.
School Fees paid by Employers and Parents	10,779	Salaries - - -	32,645
Contribution of the Chamber of Commerce	5,000	Apparatus, &c. - -	3,646
From the Government of Alsace Lorraine	10,100		
From Strassburg	10,412		
	<u>36,291</u>		<u>36,291</u>

3.—THE TECHNICAL CLASSES.

<i>Receipts.</i>	Marks.	<i>Expenditure.</i>	Marks.
Contributions of the Employers to cost of practical instruction	152	Salaries - - -	16,678
From the Government of Alsace Lorraine	2,500	Apparatus, &c. - -	5,366
From Strassburg	19,392		
	<u>22,044</u>		<u>22,044</u>

4.—CLASSES FOR BUILDING AND THE ALLIED TRADES.

<i>*Receipts.</i>	Marks.	<i>Expenditure.</i>	Marks
From the Government of Alsace Lorraine	14,138	Salaries - - -	32,587
From Strassburg	21,917	Apparatus, &c. - -	3,468
	<u>36,055</u>		<u>36,055</u>

* No fees.

SUMMARY OF EXPENDITURE.

	Marks.
(a) General Continuation Classes	8,850
(b) Commercial Classes	36,291
(c) Technical Classes	22,044
(d) Classes for Building and Allied Trades	36,055
	<u>103,240 (£5,162)</u>

SUMMARY OF CONTRIBUTIONS BY:—

	Marks.	£
The Government	26,938	approx. 1,347
The Town	58,152	,, 2,908
Lower Alsace	2,219	,, 111
Chamber of Commerce	5,000	,, 250
School Fees	10,931	,, 546
	<u>103,240</u>	<u>£5,162</u>

MANNHEIM (GRAND DUCHY OF BADEN).

This town is growing with great rapidity, the population of 184,000 having almost trebled itself within the last 20 years. It is the terminus of the Rhine traffic up from Rotterdam, and is thus the great distributing centre of imports for South Germany. There are important wharves, and several branches of industry, chiefly in connection with machinery, chemicals, tobacco and leather, are developing. According to the last Board of Trade Report some 27,000 workpeople are employed, female and juvenile labour playing an insignificant part.* The employment of children in the streets is severely restricted.

Attendance at continuation schools has been compulsory in the Grand Duchy of Baden since 1874, and, with the exception to be mentioned presently, it is now taken as a matter of course. The employers are as friendly to the school as the parents, though in the country the peasants were less ready to accept compulsion. The object of the State is, as a *Stadtschulrat* put it, to protect the children against the parents, for the sake of future generations, and to arm the individual with his weapons for the battle of life; it holds the discipline of the continuation school as necessary as the discipline of conscription.

ORGANISATION OF THE CONTINUATION SCHOOLS.

The Continuation Schools in Mannheim are organised in three divisions (*a*) the general, (*b*) the trade or technical, and (*c*) the commercial.

(*a*) The General Classes are held in reading, arithmetic, composition and bookkeeping, and are differentiated in groups and in treatment according as the boys are in offices, in certain occupations, in unskilled work, or are below average ability.† From Easter 1909 the hours given per week to these classes have been increased from three to six. For the year ending March 1908, there were 971 boys in attendance.

The girls are obliged to attend the continuation classes in domestic subjects, especially cookery and the purchase of provisions: the numbers were 1,294, including those living at home, servants, factory girls and sempstresses. There were only 44 unexcused absences during the year.

All these classes, both for boys and girls, are under the Department for Elementary Schools (*Volksschulrektorat*).‡

(*b*) The Trade or Technical Classes started in 1834 are at present voluntary, but for some trades at least they will shortly be made compulsory. A boy, however, not attending these must go to the General Classes. There were (to April 1909), 1,707 pupils in attendance, the number having risen steadily every year; of these some 800 were mechanics, tinsmiths and other workers in metal. There are no particular conditions of

* See Appendix A, page 21.

† On the principle of the Mannheim system in the Elementary Schools.

‡ See Appendix B, page 21.

entry; all are from the Elementary Schools, and those from the 6th are often found to shape as well as those from the 8th class.

It is found that a considerable number continue to attend after the compulsory period, in order to qualify as *Gesellen* (assistants) and even as *Meister* (master workmen). The examinations for these degrees, as they may be called, serve without doubt to raise the level of proficiency. They are held by the societies of the particular trades and crafts.* The different technical groups are not so sharply distinguished as at Strassburg and Munich, and one misses the activity of the special advisory expert committees of the latter places.

(c) The Commercial Classes are held, together with those just named, in the magnificent building devoted to the Continuation School. They are attended compulsorily by both boys and girls who are engaged in business. The course is of 3 years, but girls who have attended certain classes in domestic subjects† for one year, and who have reached the 8th class of their elementary school, have to attend only two years. There is a preparatory class for boys who have not reached the 8th class of the Elementary School. Up to April 1909, of nearly 1,300 pupils, just 1,100 were in apprenticeship, and of these nearly 900 were boys. About 60 per cent. of these had their school fees of 30 marks a year paid by their principals, but only about 40 per cent. of the girls' fees were repaid to them.

ATTITUDE OF EMPLOYERS.

Only 29 unexcused absences were recorded, employers being implicated 20 times. This remarkably small number might lead one to suppose that the business houses were well satisfied. They are, however, the exception alluded to at the beginning of this section. When the Commercial Classes first became compulsory in 1902, and the hours of attendance were in the daytime, during business hours, they showed hostility and their attitude is still somewhat resentful. Their point of view is easy to grasp. To quote the director of a large firm,‡ the attendance at the classes disturbs the whole routine of the office, especially when several young clerks have to be away at the same time; others have to do their work, and the various duties have to be constantly readjusted. Thus the firm prefers not to take clerks who have not passed through the necessary period. The same director, however, admitted freely that the instruction given was useful and indispensable, while for the influence on his young mechanics he had nothing but praise. Their absence, it may be noted, does not disturb the factory work in any large degree.

* Owing to the long illness and recent death of the Rector the last two annual reports on the Trade Classes are meagre.

† Those of the Society for Women's Work and Training (*Verein für Frauenstudium und Frauenbildung*).

‡ The firm of H. Lanz, employing nearly 4,000 men in the manufacture of all kinds of machines and motor engines.

Accordingly the business houses are anxious that there should be an alternative of one year at a whole time commercial school, which would allow of the apprenticeship being reduced to two years, during which there would be three hours a week of lessons, or possibly exemption from further compulsory attendance. It is obvious that this school could only be attended by the sons of the relatively well-to-do, for the urgent need of wage-earning must exclude the poorer class of boy. The matter is still under discussion. The opinion of the *Gehilfenschaft*, or Association of Employees, as well as of the school authorities, is in favour of there being no change from the present three years' apprenticeship coincident with the Continuation Classes.

The authorities are the more firm in their intention to insist on proper training, from the results of an enquiry made some four years ago, which showed that in the business houses the great majority of boys, and still greater of the girls, got no insight whatever into bookkeeping. The term "apprenticeship" under such conditions is misleading, for nothing is taught, and the young clerk would leave unaware of his limitations were it not for the all-round commercial teaching given in the classes. But for them he would not be fully equipped for his calling.

Emphasis has been laid chiefly on the commercial rather than on the industrial activity of Mannheim, so far as the Continuation Classes are concerned, the more so because Mannheim has also founded a comprehensive *Handelshochschule* or University of Commercial Science, including its highest branches, such as international law and finance.

Ludwigshafen, in Rhenish Bavaria, on the Rhine, opposite to Mannheim, is the seat of the great Baden Aniline and Soda Works (*Badische Anilin und Soda Fabrik*) which employ over 7,000 men, not counting the qualified chemists and the clerical staff. Enquiries here showed that the directors consider the General Continuation Classes to be of nothing but advantage to the boys, of whom there are 360 under the age of 16. The work of the men and boys as a whole is not of a skilled nature, but the wages earned are comparatively high, the boys getting from 9·60 to 10·20 marks a week, and the men earning on the average 27 marks a week. When the firm was consulted by the school authorities they expressed a wish that chemistry should not be taught at the compulsory classes as the little learned would not be of practical value in the factory work. They feel, however, that the advantages of the general classes quite outweigh the four hours a week of absence. One of the foremen questioned by me said that the parents have no objection to the classes provided there is no loss of wages, but that they would object strongly to a year longer of whole time at school. The firm have had no experience of the trades unions protesting against an increased output of skilled labour: in fact in Leipzig the trade associations (*Gewerkschaften*) have themselves erected a continuation school.

MANNHEIM.—APPENDIX A.

The following table classifies the industrial workpeople according to the latest Census returns (1905) :—

Group of Trades.	Number of Establishments.	Number of Workpeople.			
		Males over 16 Years.	Females over 16 Years.	Juveniles.	Total.
Building - - - -	38	819	—	35	854
Mining and Smelting - - -	4	259	—	1	260
Metal working - - - -	58	2,144	87	174	2,405
Machine, implement and apparatus making - - -	80	8,910	277	359	9,546
Textiles - - - - -	13	433	342	111	886
Clothing and cleaning - -	168	118	1,099	328	1,545
Printing, lithography, book-binding, &c. - - - -	34	515	212	77	804
Paper - - - - -	12	247	240	120	607
Woodworking and carving -	48	1,176	241	259	1,676
Chemicals - - - - -	15	1,544	50	115	1,709
Resins, varnishes, oil, soap, candles, &c. - - - -	18	521	114	9	644
Stone and earthenware - -	16	597	51	26	674
Food, drink and tobacco -	173	1,613	863	169	2,645
Leather - - - - -	8	1,754	651	272	2,677
Total - - - - -	685	20,650	4,227	2,055	26,932

In addition, there were 2,083 handicraftsmen, of whom 855 worked alone, 415 worked with one assistant each, 642 with from two to six assistants, 79 with from seven to ten assistants, and 92 with over ten assistants.

MANNHEIM—APPENDIX B.

GENERAL CONTINUATION CLASSES UNDER
THE VOLKSSCHULREKTORAT.

Attendance at the close of the Session 1908-9 :—

	Classes.	Pupils.
(a) Classes for boys* in certain occupations -	12	311
(b) Classes for boys in unskilled work -	20	570
(c) Classes for boys below average ability -	4	86
Totals -	36	967

* Locksmiths, smiths, masons, plasterers, bakers, butchers, gardeners, printers, upholsterers, shoemakers, tailors, and a few others. Attendance is compulsory for those who do not go to the Trade School.

TRADE CONTINUATION CLASSES.

The attendances were:—

Year	At beginning.	At close.
1906-7	1682	1482
1907-8	1925	1680
1908-9	1929	1707

The largest groups in 1908-09 were:—

Locksmiths	282
Electricians and Instrument Makers	113
Mechanicians	380
Metalworkers	181
Painters	103

COMMERCIAL CONTINUATION CLASSES.

There were, 1st June 1909, 972 boys and 343 girls, in all 1,315 pupils in 43 classes. The large majority were employed as follows:—

	Boys.	Girls.
In factories and offices	272	37
In wholesale houses	377	22
In retail businesses	105	210

MANNHEIM.—APPENDIX C.

SURVEY OF THE TOTAL EXPENDITURE ON THE COMPULSORY CONTINUATION SCHOOLS OF MANNHEIM FOR 1908-9.

(a) TRADE CONTINUATION SCHOOL.

	Marks.
(a) Contribution from the State	39,429
(b) Contribution from the Town	131,483
(c) School fees	11,800
(d) Interest on invested capital	319
(e) Other payments	560

Total Receipts - 183,591

(b) COMMERCIAL CONTINUATION SCHOOLS.

	Marks.
(a) Contribution from the State	23,070
(b) Contribution from District Funds (<i>Kreiskasse</i>)	1,000
(c) Contribution from the Chamber of Commerce	6,000
(d) Contribution from the Town	23,685
(e) School fees	43,700
(f) Other payments	230

Total Receipts - 107,685

(c) GENERAL CONTINUATION SCHOOLS.

	Marks.
(a) Boys' Continuation School—Contribution from the Town	40,315
(b) Housewifery School for Girls—Contribution from the Town	26,888

Total Receipts - 67,203

SUMMARY.

	Marks.	
(a) Trade School - - - -	183,591	
(b) Commercial School - - -	107,685	
(c) General Continuation Schools - -	67,203	
	<hr/>	
Total Receipts and Expenditure -	358,479	(£17,923)
	<hr/>	
Total Contribution of the State -	62,499	(£3,124)

MUNICH (BAVARIA).

The chief industries of Munich are those in connection with brewing,* instrument making and art-printing of all kinds. The population numbers 570,000, and there are 77,000 working people above 16 years engaged in various occupations, as well as over 9,000 employees in business. The Elementary Schools have 67,000 children of 6 to 14 years, and about 15,000 (6,000 boys, 9,000 girls) are in the Continuation Schools. Attendance at the latter is compulsory for boys from 14 to 18, and for girls from 13 to 16 years.

The new organisation of the Continuation Schools has been characterised by very remarkable success and has gained the admiration and attention of every civilised country. After seven years of gradual development it was completed about two years ago. The central principle is that only those Continuation Schools have an attractive power worth naming which work in the direction of the future calling of the pupils, and that such only can exert an educational influence on the masses. For the boys this technical training is indispensable in the economic, and for the girls in the social, interest of the State. Accordingly the courses are organised for each trade singly as far as possible and strictly with a view to its needs and usages. There are completely separate courses for druggists, saddlers, coopers, metal workers, watchmakers, lithographers, jewellers, to name only a few, each with its expert craftsman to teach the practice and theory, while the composition, arithmetic, book-keeping and drawing are taught also by special teachers for the purposes of the special trade. The schools are considered however not only from the economic standpoint, but also from the point of view of civic and national training, by the inclusion of religion,† hygiene, and citizenship. Technical and craft training alone are not thought enough to secure the general welfare; they may promote merely the egoistic side of man, but the outlook of the individual should be widened to include an understanding of other trades and other nations, and an appreciation of his duties to the community and the State. The Elementary Schools cannot do this, but the Continuation Schools should. The ultimate aim of a national system of education should be to train men and women for the advancement of the State.

* There is only one apprentice in Munich in the brewing trade.

† Bavaria is a Roman Catholic State.

ATTENDANCES DURING 1907-8.

The following are in brief the statistics of the attendances during 1907-8 at the General and at the Technical Continuation Schools for boys :

(a) General:			
Without manual instruction	378	Number of unexcused absences	736
With	621	" " " "	1,318
	<u>999</u>		<u>2,054</u>
(b) Technical and Commercial :			
	5,134	" " " "	*1,272
	<u>6,133</u>		<u>Total 3,326</u>

There were, moreover, 2,556 *Gesellen* or assistants attending further courses voluntarily, thus showing their appreciation of what they learned compulsorily as apprentices. It actually so happened that in three of the technical schools they surpassed the latter in numbers.

In an address given recently by Dr. Kerschensteiner, he stated that ten years ago of the 5,400 boys in the Continuation Schools of Munich, nearly 1,000 were in unskilled employment and in danger of becoming loafers. The result of bringing workshop instruction into the Elementary Schools, and of making the eighth year compulsory, was that last year of 2,200 boys who left the highest class, 2,150 went at once into handwork or other skilled employment. This indeed far surpassed the expectation of the school authorities. While in part it was due to the remodelling of the industrial Continuation Schools with their 60 workshops, the first cause was undoubtedly the pleasure in the handwork itself gained in the Elementary School. The effort has been to get both Elementary and Continuation Schools out of their isolation from all other influences affecting the life of the town child by connecting the work more closely than elsewhere with the activities of the workshop and the home. "Under the influence of joy in its work, the child is more receptive, and we gain power to influence its other likings."

VIEWS OF EMPLOYERS.

It is not here possible or necessary to describe in detail the admirable arrangement and magnificent equipment of the several school buildings devoted entirely to the Technical Continuation Classes, on the upkeep of which the city of Munich spends close on a million marks or £50,000 a year. It must be mentioned however, that each class for a special trade has its own expert advisory committee (*Fachschulkommission*). It is more important to dwell on the great interest and support accorded by the employers and trade associations of master-workmen and of assistants, because one is led to the conclusion that the ultimate condition of success is not compulsion, but their intelligent sympathy and collaboration. How far these have been gained in Munich may be gathered from a report published last year, in which are collected the views of all the

* One notices here the favourable results as compared with those of the General Classes. For details, see Appendix B, page 31.

representative societies and principals. It will be best to quote some of the more striking.

Verein Münchner Buchdruckereibesitzer (Society of Printers) (Proprietors):—

“The new organisation of the Technical Continuation Schools has according to our observations affected very advantageously the school attendance of the pupils and their desire to learn. In this respect very few complaints have been made, and they were only concerning voluntary pupils who wished to enjoy the technical instruction, but did not submit readily to the discipline. The moral effect is extremely favourable. In particular the technical teaching was a necessity, for in the workshops this cannot be carried out in the requisite degree.”

Bayerischer Drogistenverband (Bavarian Society of Druggists):—

“According to our experience in the six years since the beginning of the druggists’ courses, the attendance, the desire to learn and the interest of the pupils must be designated in general as very satisfactory. Their moral training was always furthered by the teachers and the authorities. Both the theoretical and the practical training in the business branch may be described as thoroughly good, as is shown by the yearly leaving examinations.”

Geuerbeverein der Gastwirte Münchens (Society of Hotel and Innkeepers):—

“The pupils attend the trade classes willingly, and their interest and desire to learn are remarkable. The school must have a specially good influence on their characters.”

Kaminkehrerinnung für Oberbayern (Society of Chimney Sweeps of Upper Bavaria):—

“We know no better proof (of our approval) than this, that at the last meeting of our members who live outside Munich, a resolution was proposed and carried (with only three votes against), to introduce compulsory attendance at technical courses to be organised for the boys apprenticed to our members who do not live in Munich. . . .”

Katholischer Kaufmännischer Verein “Hansa.” (The Catholic “Hansa” Society of Merchants):—

“Nowadays when there are such great demands on the principal, it is scarcely possible for him any longer to train his young clerks in the way required by their interests and those of the profession in general. This is especially the case with the book-keeping* which is particularly neglected, so that many a young man goes out into the world at the end of his indentures without a knowledge of the simplest principles of this subject and of correspondence; indeed, he scarcely understands the difference between debit and credit. . . . We do not hesitate to say to-day that many of our fears have proved unfounded, and that some of them were based on misconceptions. . . . It is not easy to give an opinion as to the effect of the school on character. We are, however, firmly convinced that the doing away with the evening instruction is a great advantage, and the moral gain far outweighs any objections to the early morning hours.”

Lohnkutscherinnung München (Society of Cabdrivers):—

“Unmistakably the school and the spirit prevailing in it exercise a good influence on conduct and behaviour, especially fostering politeness, decent manners and humane treatment of the horses, three very important factors for our calling.”

* Compare the experience at Mannheim, see page 20.

Verein Münchener Lithographie- und Steindruckereibesitzer
(Munich Society of Lithographers)* (Proprietors) :—

“It cannot be sufficiently emphasised how great a need the Continuation School meets, and how desirable it is that this view should spread and deepen among the employers. It must be stated that the compulsory pupils attend the instruction with the greatest zeal and follow the lectures and practical exercises with interest and diligence. This is also particularly apparent from the large attendance of the so-called voluntary pupils. There is no question that the school, moreover, exerts an excellent influence on the moral behaviour of the boys, though there must naturally be exceptions here and there.”

Verein der Fassfabrikanten und Schächlermeister Münchens
(Society of Coopers and Vatmakers) :—

“The good relations between the school and the society must be specially mentioned. The wishes of the school authorities are, as far as possible, gladly complied with, while those of the society have always met with a ready hearing from the school.”

Innung der Huf- und Wagenschmiede Münchens (Society of Wainwrights and Shoeing Smiths) :—

“The pupils, in fact, like going to the technical school better than to the former continuation school. . . . The society follows the endeavours of the school with the greatest interest. It has shown it materially by making a grant every year of up to 400 marks. It gives all the materials free. Its desire is that the technical school should proceed in the way in which it has begun, and that the courses for apprentices and assistants, and in future courses for masters, should be in the closest touch with the society, and thus provide that training for the trade without which in these days it cannot exist in the general competition.”

Tapeziererinnung München (Society of Upholsterers) :—

“It is for many of our masters no small sacrifice to give their apprentices two half-days off; we see, however, that it is necessary and for their good In most of the former continuation schools, our apprentices had a bad reputation, and our earlier technical school was ruined by this. The first half-year of our present school was a difficult struggle. We can now be proud that for some years our school and our apprentices have everywhere a good reputation. . . . It is gratifying that since the opening of the school the results of the assistants' examinations, previously lamentable have improved extraordinarily.”

We may add one answer from the Munich branch of the Bavarian Society of Solicitors' Clerks :—

“The school here for solicitors' clerks is the only one in all Germany which is compulsory, and is therefore alone in a position to achieve something. . . . The hours now arranged are the most practical, as the pupils do not come to school already overtired. . . . The majority have grasped that the special courses are of the greatest value for their later advancement. . . . For our profession the connection with the Commercial Continuation School is most valuable, as the knowledge of bills and of bookkeeping gained can but benefit our young people, especially in suits and liquidations.”

* Lithography is one of the largest industries of Munich.

Among the less favourable opinions were the following :—

The Society of Joiners :—

“ It has not as yet been observed that the school is stimulating to the bulk of the pupils and makes them more eager to learn. It is difficult for the master to get a close knowledge of the moral behaviour of the apprentice, as he is only in his charge during the hours of work.”

Individual masters, however, expressed themselves in terms of appreciation.

The Society of Stonedressers and Plasterers and that of the Instrument-makers and Opticians both replied in the sense that there was no change visible in the conduct of the pupils, and that they liked going to the classes because they afforded a change and more freedom than remaining in the workshops.

Other criticisms have already led to the introduction of alterations and improvements.

From year to year it has been shown more clearly that the astonishing influence on the apprentice is based in the first instance on the practical instruction. The drawing is organised exclusively with a view to its practical application in each trade. The teaching concerning the materials, tools and machines (*Gewerbekunde*) receives its life and interest from the connection with the technical teaching in the workshop. It is the same with the arithmetic and bookkeeping, which have living reference to the trade.

The Society of Bookbinders wrote concerning the school workshops :—

“ There are many places in which the apprentice does not even learn the essentials of the industry, and it would be desirable that the permission to have apprentices should be withdrawn from such masters.”

The Society of Painters and Varnishers replied :—

“ With reference to the technical education of the apprentices we are firmly convinced that the utmost possible has been achieved by the authorities and the teachers. It must, however, be mentioned that a better technical training will only be attained when the masters too show the same conscientiousness as the teachers of the Technical Continuation School.”

The Society of Shoemakers wrote :—

“ A number of employers have not sufficient new work to enable them to train their apprentices so that at the end of their time they can complete the prescribed example of work (*Gesellenstück*). This shows that it is just the practical instruction which is of the utmost importance, for it is to this that two-thirds of the apprentices owe their success in qualifying. The shoemakers attach the greatest value to the technical education. This is shown by the fact that several masters voluntarily send their apprentices a year and even longer to the school.”

The Munich Society of Watchmakers said :—

“ The establishing of the workshops increases the satisfaction in attending the school, and gives the opportunity of judging of the progress of the apprenticeship. The practical value cannot be too highly prized.”

The German Society of Metalworkers replied :—

“ The chief share of the success is due to the technical training. There can be no doubt that the practical teaching, hand in hand with the theoretical, can assure a better general training than a longer apprenticeship in the workshop without theoretical help. The loss of time which the master suffers through the teaching during the day is compensated many times over by what the pupil learns during school as it is now organised.”

A less favourable opinion was that of the Society of Instrument Makers and Opticians :—

“ The interest in the workshop is much diverted because the apprentice imagines he is taught properly only in the Continuation School. The consequence is rudeness towards the assistants and indifference to the warnings of the master. . . . As far as concerns technical training the influence is only noticeable in a small degree . . . only the drawing has a special value.”

To this must be remarked that the school authorities have already established separate classes to meet the well-founded complaint that these apprentices could not work with the ordinary mechanics.

As to the moral advantages of the new organisation one headmaster writes :—

“ We certainly owe the success to the separation of the apprentices from boys engaged in unskilled labour or unemployed. They lose touch with these, and the danger of their getting into frivolous, idle company is less.”

and again :—

“ A teacher of religion is struck by the fact that the apprentices who have left the school still salute him in a friendly way, which scarcely ever happened at the earlier continuation schools.”

Two more quotations may be given to show that the relations with the trade societies may be of the best: they are from the Associations of Smiths and Wheelwrights, and of Tinsmiths and Plumbers :—

“ The technical school being in close touch with both of our societies gives the happiest result. Not only the pupils but the employers also are conscious of the valuable aid of the school, and the endeavour of the employers to influence the pupils favourably towards the school is the outcome.”

and again :—

“ Certainly the close touch which the authorities and the staff try to keep established between themselves and the trade is an important element of help. When the practical man sees that the teachers of the technical continuation school and their chiefs are not only in some degree initiated into the technique of his craft, but also endeavour constantly to take a real part in his efforts, his troubles and success, he too extends his confidence to the school.”

Enquiries made of a large firm of lithographers showed that there is a very decided feeling in favour of compulsory attendance at the Technical Continuation School, on the ground among others that the larger the firm the more likely is the training of the apprentice in the workshop to be onesided. The head of the Munich Union of Printers (Proprietors) pointed out that each firm has its special line of work, and that thus it is impossible, without the Continuation School, for the apprentice

to get a survey of the whole scope of his trade. He is of opinion that the majority of his firms would not let the matter drop if there were no compulsion, for his society had pressed for the classes to coincide with the period of apprenticeship. Not much would be possible without the associations of employers, and though at first many made difficulties, they as well as the workmen's unions are now all very much in favour of the Continuation Schools. The loss of time and disturbance of routine are not serious. The well-known engraving and photo-type firm of Hanfstaengl and the Royal Porcelain Manufactory* are not in favour of them, in the former case because of the loss of time, and in the latter, because there are no classes for their special branches of work, as there are too few pupils to make them possible.

THE MUNICIPAL LABOUR BUREAU.

The Municipal Labour Bureau† was able to place apprentices from the Elementary Schools during 1907 as follows:—

	Applications.	Vacancies.	Placed.
Boys‡	1,829	2,345	1,560
Girls	279	452	241

The greater number of the boys became mechanics, locksmiths, joiners, bakers, printers and clerks, or went into café employment. They are medically examined here as at Strassburg, before they leave school. No domestic servants and nurse girls are included among the girls. These went mainly into dressmaking or the printing or business houses.

The general procedure by which it carries on its work is similar to that already described as in force at Strassburg, so that it is not necessary here to repeat.§ The purpose is to avoid a loss of the results of the education of the Elementary School, and this is achieved by close co-operation between the Bureau, the trade societies (including the individual employers), and the school authorities. While the Labour Bureau endeavours to put the right boys in the right places, and to prevent boys who are well able to take up a skilled trade from passing into unskilled work, the master, on his side, must be suitable and entitled to take apprentices. A guide book of the industrial occupations open to youth, explaining the work, the necessary qualifications, the prospects, the health conditions, the cost of training, &c., has been prepared. The services of the Bureau are gratis, and it is made clear to the parents that its only object is to bring boys and employers together, and that they, the parents, are free to choose the calling.

* At the Education Office, on the other hand, it was suggested that this firm had not given the system a fair trial.

† See also Appendix C, page 33.

‡ The applications from boys were fewer than in 1906, as in 1907 the 8th year at the Elementary School became compulsory.

§ For specimen card to be filled in by the intending apprentice, see Appendix A (2), page 68.

TECHNICAL TRAINING IN THE ELEMENTARY SCHOOL.

Since the autumn of 1907 all boys have been obliged to remain at the Elementary School for an eighth year, mainly devoted to manual work, as has already* been alluded to, with the purpose of giving a definite bias to their choice of a future calling, instead of their drifting into unskilled employment or lack of employment. Another weighty consideration was the completion during 1906-7 of the new organisation of the Technical Continuation Schools, so that the 8th class is now intended to form a basis or foundation for the latter. The fact that last year of 2,200 boys who left the highest class, 2,150 went at once into handwork or other skilled employment, is too eloquent to need comment.

The instruction during the last year is of an intensive nature, for of the 32 hours a week, 21 are spent in wood and metal work, drawing, mathematics and science, and two in gymnastics and swimming; the rest are given to literary subjects, including religion and modern German history.

The attendance at the Girls' Continuation Schools was as follows:—

{ <i>Sonntagschulen</i>	-	-	-	3312	}
{ Wednesday Schools	-	-	-	3956	}
Domestic Courses	-	-	-	1138	
Commercial Courses	-	-	-	819	
				<u>9225</u>	

For girls the 8th class of the Elementary School is not yet compulsory, and those who leave from the 7th class are obliged, from 13-16 years, to attend the so-called *Sonntagschule* on Sundays or on Wednesday afternoon for three hours. Those who leave from the 8th class are generally from the better working families, and these have only to attend the continuation *Sonntagschule* for one year, entering the third year class. A number, however, prefer to join the optional Continuation Schools either in commercial or in domestic subjects, which give 6 to 10 hours a week, not counting certain voluntary subjects.

The instruction in the 8th class for girls is analogous to that for boys, but to them its object is to give a strong bias for and understanding of the duties of the home and family. The teaching is therefore concentrated on cookery, needlework, domestic accounts, hygiene, and the care of infants. Economic causes break up home life in the case of many thousands of girls, and in order to preserve the first element of the State, the family, the State recognises its duty to step in with adequate requirements as to their training. A complete compulsory continuation system is only a matter of time. Few women, whatever their occupation, are entirely detached from home or family ties and responsibilities.

* See page 24.

Munich may well be proud of what is probably the most perfectly organised and most perfectly equipped system of Continuation Schools in the world. This is due not only to the resolute expenditure of public money but to the active interest and even enthusiasm of the trade associations and of the small employers, as well as of the large firms, and to the cordial collaboration between these and the school authorities.

MUNICH.—APPENDIX A.

NUMBER OF WORKMEN IN VARIOUS TRADES.

The following table classifies the industrial workpeople according to the latest census returns (1905):—

Group of Trades.	Number of Establishments.	Number of Workpeople.				TOTAL.
		Males over 16.	Females over 16.	Juveniles 14-16.	Children under 14.	
Building - - -	793	10,025	266	350	5	10,646
Metal working - -	858	4,710	300	804	11	5,825
Machine, implement, and apparatus making.	487	8,842	157	515	—	9,514
Textiles - - -	81	169	477	28	—	674
Clothing and Cleaning-	2,160	3,591	4,064	853	34	8,542
Printing, Lithography, Bookbinding, &c.	139	3,214	1,376	309	3	4,902
Paper - - -	136	477	826	107	2	1,412
Wood-working and Carving	883	4,685	501	508	3	5,697
Chemicals - - -	113	631	256	13	1	901
Resins, Varnishes, Oil, Soap, Candles,	36	612	190	36	—	838
Stone and Earthenware	195	1,348	145	67	—	1,560
Breweries and small Malting Houses.	52	4,118	153	4	—	4,275
Food, Drink, Tobacco -	1,424	3,553	827	420	5	4,805
Licensed Premises -	1,929	1,689	5,890	221	3	7,803
Leather - - -	295	1,540	511	122	5	2,178
Miscellaneous - -	74	378	38	6	—	422
TOTALS -	9,655	49,582	15,977	4,363	72	69,994

MUNICH.—APPENDIX B.

ATTENDANCE AT TRADE SCHOOLS ON 15TH OCTOBER 1907.

	Classes.	Pupils.
Barbers and Hairdressers - - -	5	144
Bakers - - -	9	247
Builders (Masons and Carpenters) - - -	6	130
Bookbinders - - -	4	76
Printers and Compositors - - -	11	268
House Painters - - -	6	124
Carried forward - - -	41	989

ATTENDANCE AT TRADE SCHOOLS—*cont.*

	Classes.	Pupils.
Brought forward	41	989
Turners and Brushmakers	1	22
Druggists	7	143
Gardeners	3	73
Hotel and Innkeepers	10	231
Glaziers	3	57
Woodcarvers	1	14
Jewellers	4	62
Chimney Sweeps	9	117
Commercial	31	955
Confectioners	4	83
Coppersmiths	5	52
Drivers	2	41
Lithographers	5	91
Mechanical Engineers	12	294
Mechanicians, Gun and Instrument makers	15	369
Metal and Brass Moulders and Gravers	8	138
Butchers	5	113
Musicians	3	49
Photo- and Chemigraphers	3	71
Saddlers, Trunk and Glove makers	4	85
Coopers and Vat makers	3	47
Locksmiths	19	427
Smiths and Wheelwrights	5	109
Tailors	6	138
Clerks and Copyists	3	58
Joiners and Cabinet makers	17	398
Shoemakers	4	85
Tinsmiths and Plumbers	5	96
Stuccoworkers and Stonedressers	2	38
Decorators and Upholsterers	8	144
Potters, Stove-setters, Clay Modellers	2	38
Watchmakers	3	53
Dental Mechanics	3	38
Pewterers	1	15
Total	257*	5,733

* 43 of these classes were attended voluntarily by adult workmen.

ABSENCES

of boys of school age during 1907 in the Continuation Schools.

Classes for	Excused.	Unexcused.	Total.
Unskilled Workers	4,447	2,054	6,501
Trade and Commercial	18,133	1,272	19,405
Total	22,580	3,326	25,906

Besides 8 Directors and a permanent staff of 71 teachers, 209 Elementary School teachers and 188 practical workmen were engaged in teaching in these schools.

MUNICH.—APPENDIX C.

STATISTICS OF THE LABOUR BUREAU
as to placing boys and girls as apprentices since 1896.

YEAR.	Applications.		Total.	Vacancies.		Total.	Placed.		Total.
	Boys.	Girls.		Boys.	Girls.		Boys.	Girls.	
1896	523	40	563	727	126	853	261	16	277
1897	365	74	439	634	104	738	243	35	278
1898	447	90	537	731	108	839	250	47	297
1899	252	88	340	658	154	812	172	61	233
1900	334	114	448	700	167	867	240	71	311
1901	337	110	447	629	130	759	196	45	241
1902	1,355	137	1,492	1,342	191	1,533	738	67	805
1903	2,610	309	2,919	2,381	440	2,821	1,493	191	1,684
1904	2,823	396	3,219	2,426	535	2,961	1,765	208	1,973
1905	2,698	440	3,138	2,510	584	3,094	1,888	256	2,144
1906	2,628	302	2,930	2,535	505	3,040	1,947	230	2,177
1907	1,829	279	2,108	2,354	452	2,806	1,560	241	1,801
Total -	16,201	2,379	18,580	17,627	3,496	21,123	10,753	1,468	12,221

MUNICH.—APPENDIX D.

FINANCE, 1907-8.

<i>Receipts.</i>		Marks.
Government of Upper Bavaria	-	397,900
State of Bavaria	-	14,000
School fees, &c.	-	28,240
		<u>440,140</u>
From other sources	-	16,541
		<u>456,681</u>
Balance met by Munich	-	449,734
		<u>906,415 (approx. £45,320).</u>
<i>Expenditure.</i>		
A. Compulsory:		
Trade Schools for Apprentices:		Marks.
(a) Salaries	-	367,920
(b) { Heating, lighting, and cleaning	-	111,000
{ Books, apparatus, &c.	-	38,300
{ Miscellaneous	-	3,920
(c) Buildings	-	92,180
		<u>613,320</u>
B. Voluntary: for adult workmen	-	293,095
		<u>906,415 (approx. £45,320).</u>

It will be seen from the table of receipts that the Government of Upper Bavaria (*Kreisregierung*) contributes about one half of the expenditure. It is estimated that the average cost of a continuation school pupil is 85 to 90 marks (£4 5s. to £4 10s.), not including the cost of building. This high figure is explained by the handsome equipment of the sixty trade workshops.

NUREMBERG (BAVARIA).

A visit was recommended to the continuation school for apprentices attached to the electric works of Messrs. Siemens and Schuckert, who here employ 3,000 men. It was founded in 1892, and was the first in date of its kind in Germany; the cost is met largely from funds bequeathed by Herr Schuckert, one of the founders of the firm. It was intended to meet the then deficiency of skilled mechanics and electric fitters and installers. The premises are those formerly occupied by the factory when in an early stage of development. The apprentices are, probably owing to present over-production, limited in number to 50, and are all sons of the firm's workmen. They must have completed their 14th year and have the necessary attainments. They are trained in the school workshops for four years, the last being devoted to practical work alone, while in the first three years theoretical instruction is given in the morning.

The school is inspected by the local government of Middle Franconia, and by the State Government of Bavaria, and the scheme of work is approved by these authorities as a substitute for the compulsory continuation work of the town schools. No agreement or *Lehrvertrag* is signed until after three probationary months, so that unsuitable candidates for apprenticeship are sifted out. Those accepted are allotted to one of the two sections (a) for machine construction (*Maschinenbau*) or (b) for delicate instrument making (*Feinmechaniker*). Every apprentice is obliged at the end of his course to complete a piece of work with drawing and description for his examination test or *Gesellenprüfung* to qualify as a competent workman.

LEIPZIG (SAXONY).

Leipzig has now a population of 538,000, not counting 79,000 in those suburbs not incorporated in the town. According to the census of 1905 there were 71,000 work-people employed in 1,649 establishments subject to inspection as factories or workshops.* The chief industries are concerned with the fur trade, cotton, and chemicals, but above all the book trade, which includes over a thousand firms. A number of these are agencies, representing 10,200 houses in all parts of the world. In close connection with this enormous trade are the allied industries of printing, bookbinding, typefounding, lithography and so on, in their many branches, and the making of the various kinds of special machinery for these.

At the public Elementary Schools there are 70,000 children (34,000 boys, 36,000 girls), and there are some 30,000 boys and 27,000 girls between the ages of 14 and 18 years. Of these over 6,000 boys attend the four town Continuation Schools,† which are compulsory for two years of six hours a week, but there must also be added a large number who attend the other

* See Appendix A, page 38.

† See Appendix B, page 38.

courses, to be mentioned below, which are accepted as equivalent. The average penalty for non-attendance is five marks. There is no compulsory system for girls.

The general principle followed is that now accepted in Germany, namely that the whole instruction must be grouped round the calling of the pupils. But, as compared with Munich, there is a tendency to confine the teaching to theory, to supplement the practical experience of the workshops, and there is less close connection with the trades by means of expert advisory committees. Through this, and the use of the premises of the Elementary Schools, and to some extent of the elementary school teachers engaged in these, it is possible to carry on the Continuation Schools of Leipzig at an obviously smaller expenditure than those of Munich. One detected indeed here and there symptoms of envy of the latter place. Another point of difference is that a considerable part of the teaching is still given after six o'clock. This may disturb the businesses less, but the classes cannot be so advantageous at the end of a long day's work.

ORGANISATION OF CONTINUATION SCHOOLS.

The town Continuation Schools are arranged in three divisions: (1) the technical groups, or *Fachklassen*, in the arts, crafts, metal work, woodwork, building, &c., (2) the combined technical groups in which there are not enough pupils to form separate courses, and (3) the courses for those engaged in unskilled work. The instruction for these latter is centred round *Heimatkunde*, or detailed practical knowledge of the Empire, the State (Saxony) and the town in which they live.

Mr. Dawson's recent work, the "Evolution of Modern Germany," points out the exceptional degree in which in Saxony* the technical schools depend on the self-help of the towns and industries which they serve. This is exemplified in Leipzig by the *Buchhändler Lehranstalt* or School for Apprentices, founded by the publishing and bookselling trades, which is now in its 57th year, and thus was founded long before the days of compulsion. The curriculum is of remarkable interest as being carefully concentrated on the actual requirements of the business, in addition to the usual teaching in applied accounts, book-keeping and commercial law. For instance, there are special courses from this point of view on the processes of book-making, illustrating and binding, and on the national and world literature in their main sub-divisions, while an optional subject is the history of music. There is ample apparatus to exemplify the different types of printing and illustrating in line and colour. One cannot imagine a more complete equipment for the young bookseller or publisher's assistant. The course lasts for three years, coinciding with the period of apprenticeship. There are

* Saxony is rather smaller than Yorkshire.

350 pupils. The school is approved by the State Government of Saxony, and attendance exempts from the Continuation School.

Another school accepted as equivalent is the *Buchdrucker Lehranstalt*, founded 23 years ago by the Leipzig Society of Printers (Owners), owing to complaints of the lack of education and training of the apprentices. It has 700 pupils and a staff of 34 teachers; instruction is provided in printing and type-setting. A principal pays just over 25 marks a year for each apprentice so that about 17,500 marks is raised in fees; the town of Leipzig grants 4,500 marks, and the State 3,000 marks, making a total of £1,250 for the upkeep of the school. Any deficit would presumably be met by the Society. The courses are of four years. At present the instruction is from 4.30 to 8.30 on two evenings a week. It is intended to introduce more practical work, in order to explain processes which do not come into every business.

Other schools, again, due to the private initiative of societies are the Sunday Trade Schools (*Sonntags-Gewerbe Schulen*) of the Masonic Lodge, and of the Leipzig *Polytechnische Gesellschaft*, intended for apprentices and others, the *Fahrschule* or Driving School of the Union of Van and Carriage Owners, the School of the Guild of Barbers, and the Commercial School or *Handelsschule* of the Merchants. They may be mentioned as indicating the very keen desire of employers to increase the efficiency and prospects of their assistants who are the coming generation.

It is possible, too, for a boy instead of attending one of the compulsory schools named, to go to the Municipal *Gewerbeschule* or Trade School as a whole-time pupil in the Day School (*Tagesschule*), which provides a one-year preparatory practical course in one or other of the following groups: (a) for metal workers, mechanics, electricians, &c., (b) for those in the building and allied trades, masons, carpenters, glaziers, plumbers, tin-smiths, (c) in the graphic trades, draughtsmen, lithographers, decorators, modellers, &c., and (d) a general class for those who have not yet selected their calling or do not fall into the preceding groups. There are also winter courses for labourers (*Bauhandwerker*). Pupils to be admitted must have attended the Elementary School for eight years and have reached the second class. On completing the year satisfactorily at the Day Trade School (*Tagesschule*) they are exempted from compulsory attendance at the Continuation Schools. The fees are 40 marks or £2 for the whole year, with a charge of five marks for materials used. The boys are thus of a rather better class, and their completed training makes them likely to be accepted by employers.

Evening classes in technical subjects are also held, at 10 marks for an hour a week, for apprentices whose masters belong to the corporations. They are intended as a voluntary continuation for those who have finished at the Day Trade School (*Tagesschule*),

and boys may also be specially admitted who have had one year at a compulsory Continuation School; these are, however, still under legal obligation and must attend at least eight hours a week; those requiring drawing and modelling have preference.

The Trade School further comprises for pupils who have had some trade experience, whole time courses for cabinet makers and designers, woodcarvers, turners and joiners, while similarly there is a school of mechanical and electrical engineering for men who have been several years in the shops. The fees are nominal and opportunity is thus given for workmen to improve themselves considerably in knowledge and skill, and to fit themselves for higher work.

OPINIONS OF EMPLOYERS.

Enquiries showed a friendly feeling in general on the part of the firms or employers. One head of a well-known firm of piano makers did indeed express the opinion that there is a disadvantage in too much education, that it tends to raise wages and to make men unwilling to do menial work, or such automatic work as is now necessitated by the sub-divided processes of machinery. To this might be set off the opinion of the *Stadtschulrat*, Dr. Müller, that it is just the education of the working classes which prevents revolution, and that the employers would still carry on continuation schools if there were no compulsion. A publisher stated that the compulsory loss of time was paid for many times over by the benefit gained by the apprentices.

The Secretary of the *Leipziger Baumwoll-Spinnerei* (cotton mills), employing 1,800 men, told me in conversation that the Continuation Classes undoubtedly do good, especially in making more intelligent the less satisfactory type of boy. Many of these go away in the summer to work in the country, and return in the winter, beginning at the bottom of the scale again. Boys and girls are first employed as cotton winders (*Aufstecker*) and then as half spinners and full spinners. Formerly there was a school for them in the factory, but now all go to the compulsory Continuation School of the district. He considers that the continuation system is a real and valuable part of the life of the country, acknowledged as such by the employers, and that, thanks to its control, as with military service, "many are saved who would be lost."* There has been no trouble nor opposition on the part of the operatives' associations. Indeed the Director of the Trade School described the unions in general as very friendly. These have their own evening classes for unskilled workers, but the teaching is in a socialistic direction, and to counteract them university students (as at Strassburg and elsewhere) have begun to hold popular courses. The Director considers that whereas the present generation of

* An auxiliary advantage of the compulsory classes in Leipzig is that they teach the language to the Polish and Czech labouring immigrants and so assimilate them into the country.

employers is not yet altogether friendly, the coming generation will be entirely so.

There is no *Arbeitsamt* or Labour Bureau in Leipzig for boys leaving the Elementary Schools, but the teachers are asked to give their recommendations. Much is done, too, through the different employers' societies and benevolent bodies, without the aid of a special organisation. But it is felt that the question of helping to employment lies within the domain of the trade corporations.

The policy of Leipzig appears to be to restrict its efforts in the compulsory Continuation Schools mainly to theoretical teaching, leaving for a later age voluntary attendance at the practical trade and commercial classes provided by the town or by the initiative of various trade associations. There are, however, signs that it is thought necessary to extend the practical teaching in the compulsory schools.

LEIPZIG.—APPENDIX A.

NUMBER OF WORKPEOPLE IN VARIOUS TRADES.

The following table classifies the industrial workpeople according to the latest census returns (1905):

Group of Trades.	Number of Establishments.	Number of Workpeople.
Building - - - - -	33	905
Metal Work and Engineering - - - - -	411	21,166
Textiles - - - - -	38	9,640
Clothing - - - - -	345	5,465
Printing and Allied Trades - - - - -	225	15,213
Bookbinding, &c. - - - - -	96	6,458
Wood-working and Carving - - - - -	114	2,926
Food, Drink, and Tobacco - - - - -	210	3,562
Other - - - - -	177	5,666
	1,649	71,001

In 1907 there were employed in industry and commerce 4,003 boys and 4,672 girls between 14 and 18 years.

LEIPZIG.—APPENDIX B.

NUMBER OF PUPILS IN THE FOUR CONTINUATION SCHOOLS FOR BOYS ON DECEMBER 31ST, 1907.

Name of School.	Number of		
	Classes.	Teachers.	Pupils.
I. Yorkstrasse 2 - - - - -	59	76	1,553
II. Scharnhorststrasse 15 - - - - -	40	51	1,083
III. Marschallstrasse 7 - - - - -	76	110	2,075
IV. Mersebstrasse 58 - - - - -	54	67	1,446
Total - - - - -	229	304	6,157

LEIPZIG.—APPENDIX C.

FINANCE.

There is no contribution from the State towards the cost of the four Compulsory Continuation Schools. The annual expenditure in 1907-8 was under 170,000 marks (£8,500), of which under 3,000 marks (£150) is paid by trade guilds and employers. In 1907-8 the main items were approximately:—

Salaries	152,600 marks (£7,630)
Heating, Lighting, Cleaning	9,680 " (£484)
Books and Apparatus	4,170 " (£208)
Miscellaneous	2,330 " (£116)
	168,780 (£8,438)

Fines for non-attendance amounted to 1,190 marks, or under £60.

BERLIN (PRUSSIA).

According to the census of 1905, Berlin had just over two million inhabitants, not including several adjacent suburbs, of which Charlottenburg is the largest. Over 321,000 persons were employed in factories and workshops, but at least another 100,000 would have to be added to take in wage-earners in all trades. Some of the main industries are mechanical and electrical engineering, the making of gas and electric lamps, of furniture and the dressing of leather.

In 1907 there were more than 228,000 children in the Elementary Schools (113,000 boys, 115,000 girls). The whole of the various Continuation Schools were attended (in 1907) by 56,800 pupils, of whom over 30,000 boys were at the ten compulsory schools: of these latter more than 10,000 were in unskilled employment. Nearly 8,000 girls voluntarily attended classes; there is for them no compulsion. It may be added that there are continuation classes for feeble-minded, deaf and dumb, and blind children.

ORGANISATION OF CONTINUATION SCHOOLS.

There are ten district Continuation Schools at which attendance is obligatory from the fourteenth to the end of the seventeenth year, for three years of six hours a week. The hours generally fall, twice a week, between 5-8 p.m., or occasionally there is one whole afternoon. The regulations of the local education authority (*Ortsstatut*) base themselves on the *Reichsgewerbeordnung** or Imperial Labour Law of 1897, which relate in part to apprentices and their training. The instruction at each is still mainly theoretical, and it is given in technical classes or groups; the so-called "general" education is being more and more absorbed into the special trade teaching. Some few courses outside of these schools are recognised as equivalent,

* See page 63.

such as the commercial course and those for printers, butchers and chimney-sweeps*, supported by the unions concerned, but in general it is intended that practical instruction shall be carried on after the compulsory period in one or other of the many optional trade schools (*Fachschulen*) which are maintained by the town or by the guilds and corporations, or by both together, and which in some instances receive grants also from the State (Prussia). Thus one large firm takes only apprentices who have passed the *einjährige* examination for the army, but though they are exempt by reason of their age and attainments from the obligatory classes they are required to attend the voluntary commercial classes during the period of their indentures. It is at the optional classes in the various technical subjects that the young workman is to perfect the skill which he has been gaining during his apprenticeship, and he may proceed from these to higher technical schools supported by the town or otherwise, to fit himself for better posts or to become a foreman or head of a business. One may mention as examples the municipal *Gewerbesaal* or Trade School for mechanics and electricians, with day classes for workmen, foremen, and managers, the schools for artisans (*Handwerkerschulen*), the municipal Textile School (*Webeschule*), and the Berlin School of Joinery and Turnery, as well as some 20 schools maintained by various guilds, including, for instance, the plumbers, potters, carriage-builders, coopers and glaziers.

The compulsory system has been in force in Berlin for only $3\frac{1}{2}$ years, and its introduction led at first to considerable resistance† on the part of some of the retrograde employers, though in general the difficulties were with business houses as to the arrangement of times rather than the principle. The parents (though widows are often troublesome), the smaller trades and handicrafts and the workmen's associations have all along been friendly, the Social Democrats in the city council were zealous for compulsion. There was opposition due to jealousy from some of the voluntary technical schools (*Wahlfachschulen*), as these lost in numbers through the establishment of the obligatory schools. Public opinion has, however, now come to be generally favourable, and I was assured that it is seldom necessary to enforce penalties for non-attendance.‡ Some guilds even wish to add a year of instruction to coincide with their period of apprenticeship. One may say that as a whole employers are convinced of the advantage and necessity of the Compulsory Continuation Schools.

* A rich corporation, because of its monopoly. If such schools are recognised by the town, they must be independent of the town financially.

† See Appendix C, page 47.

‡ Recently a large hotel was fined 20 marks for each of three pages who were absent without good reason. The usual fine is from 3 to 15 marks according as parent or employer is the offender. When the system was brought in, penalties were resorted to as little as possible; in the second year many were inflicted, and in the third year fewer were necessary.

There is no special organisation for guiding boys on leaving school into particular trades, though it is possible that a Labour Bureau will be formed for them and communication established with the guilds and employers and the Elementary Schools. Seeing that the teachers know what boys are leaving, and their probable mental and physical capabilities, such a step could only be beneficial. There were in November, 1908, over 10,000 boys in Berlin attending the Compulsory Schools who were in unskilled labour, that is, they were under no agreement or contract as the apprentices are, and might be dismissed any day; while on the other hand, there were not enough apprentices by at least 4,000, because of the rush from the Elementary Schools to earn the higher wages offered at first by unskilled employment. One remedy suggested for this excess of irregular labour is to require contracts for definite periods even in the case of young unskilled workers. But with the population of the empire increasing every year by nearly a million, it cannot be supposed that in a city like Berlin either Compulsory School or Labour Bureau will fully solve questions of unemployment. Unemployment in detail is a local matter arising from local conditions, and in the smaller towns it is susceptible of fairly effectual treatment. But in the aggregate, unemployment becomes a national matter and is concentrated on the capital. Several times last winter four or five hundred boys of 14-17 years were to be seen waiting outside the Labour Bureau because they were out of work. Nevertheless, it is to the credit of the municipality to have taken these masses of unskilled workers in hand, and whereas formerly little or no account was taken of their progress after leaving the Elementary School, the school and other authorities are now better able to keep a watch on their occupations and on the movements in the labour market.

It was stated above that in Berlin the instruction is still mainly theoretical. The head of one of the Continuation Schools, of 3,600 boys, stated that more practical teaching would have to be introduced to meet the wishes of the trade guilds, and that he was already starting with workshops.* He has them already for carriage-builders, for jewellers and for gold and silver smiths. Here, as in every town in Germany, the manufacturers are generous in presenting apparatus and specimen parts of machines and models. It is important, however, to make it clear to the employers that the school workshop (*Schulwerkstatt*) is in no kind of rivalry to their trade workshop (*Lehrwerkstatt*). It is also important to consider in each subject what plan of instruction is to be followed, whether it should be practical or experimental. For instance, in this school, instead of giving the bakers' boys lessons in baking, of which they already have enough in the shop, or empty verbal descriptions

* In Munich Dr. Kerschensteiner has paved the way for the Continuation Schools by introducing manual work as early as the third class of the Elementary School, with a success that has already been alluded to (see page 24).

of ingredients, such as cinnamon or saffron, experiments are worked out in the fermentation of yeast and the results of mixing the various sorts of flour, the object being to create a deeper interest and a more scientific understanding of their work.

VOLUNTARY HIGHER CONTINUATION CLASSES.

The ten Compulsory Continuation Schools of Berlin are the bedrock on which is built the higher continuative instruction that is available for voluntary students. The organisation is still young and in a state of development, and the problems must at first be greater in the capital than elsewhere. One did not observe that as yet adequate measures have been taken to secure the active collaboration of the employers by means of advisory expert committees for the various trades and grouped trades.

OPINIONS OF BERLIN FIRMS ON COMPULSORY ATTENDANCE.

KEYLING & THOMAS (Iron Founders and Engineers).

This firm employs from 700–800 men and about 20 apprentices who are indentured for four years, and begin by earning from 5·50 to 6 marks a week for a nine hours' day. One afternoon a week they attend the Continuation School from 2–8 o'clock. The firm considers this an advantage and that it does not disturb routine. If there were no compulsion they would recommend attendance but would not insist on it.

LUDWIG LOEWE & Co. (Iron Founders and Engineers).

This firm established a school for its apprentices 10 years ago, before the days of compulsion, in order to give "theoretical illumination." The course of work is approved by the town authorities. There are 2,000 workmen and 60–80 apprentices, about 80 per cent. of whom are from the Elementary Schools. The teaching is given mainly in the morning from 7–8 o'clock, the juniors getting an hour a day, while the older classes get seven and eight hours a week, with drawing from 4–6 p.m. The boys work in the factory itself and are paid according to their achievements, beginning with 5 to 6 marks a week. The unskilled boys go to the municipal Compulsory School; no indentures are signed in their case.

The closely allied firm of Loewe, which manufactures rifles for the Government, has also its own school for apprentices.

HUGO HARTUNG (Engineering Works).

This is a small firm with 200 workmen and 20 apprentices. While considering school attendance of advantage to both boys and themselves, they regret the loss of time and the interruptions.

Messrs. A. BORSIG (Engineering Works at Tegel, near Berlin).

This eminent firm employs 5,000–6,000 men in making locomotives, engines, pumps, and hydraulic machinery. There are between 300 and 400 apprentices in the various shops, mostly from the Elementary Schools and sons of the workmen. Those who wish to become skilled in one branch remain in the one shop, while some of the better sort are put in turns through several of the shops. On occasion the firm has sent especially intelligent young men to one of the lower grade schools for engineers. The boys apprenticed in the office are all *Einjährige*, thus ensuring a higher standard of education in the clerical staff. The head of this firm expressed himself as an opponent of the cheap labour of over many apprentices, and quoted a bank which had as many as 12 boys to 6 adult clerks. His opinion was that Compulsory School attendance raises the whole mass to a higher level.

SIEMENS & HALSKE (Berlin).

The firm of Siemens and Halske employ 12,000 men in their electrical works at Nonnendamm, near Berlin. While the firm at Nürnberg makes the dynamos, motors, transformers and apparatus for strong currents (*Stromkraft*), the Berlin firm make, in that section which I visited, the various kinds of instruments and apparatus connected with weak currents (*Schwachstrom*), for telegraphy, telephony, watermeters, signals and submarine mines, fire alarms, electric steel, Röntgen rays, medical inhalation and galvanization, electro-chemistry, ventilators and the sterilization of air and water for ships and hospitals. This section alone employs 5,000 men; the other sections are those of land and river cable making, "blockworks" for interlocking on railways, incandescent and tantalum lamps, motors, and the construction of the larger kinds of machinery.

The firm has its own school for 160 apprentices, who enter at 14 years and are employed for one year in the school workshop, after which they are put into the different shops of the works, while during the whole four years of the apprenticeship they must go to the classes. These take two or three hours per diem of the 8 hours' working day. There is no form of indenture. The sons of workmen do not pay fees, but others pay one sum of 300 marks for the four years; this money goes into the workmen's fund. In the second year the apprentices are paid six marks a week, so that those who have paid fees earn back their money in 12 months, and in the third and fourth years they are paid 9 marks a week.

The school has been in existence three years, and compulsory attendance at the Continuation Schools has been in force in Berlin for three and a half years. There is not time for the apprentices to get back from Nonnendamm to Berlin, and the Siemens' school was therefore established with the approval of the Prussian government. The teachers are all

engineers in the employment of the firm. German and citizenship are taught in addition to the mathematical and technical subjects. Some remarkably finished work is done in the school workshop even by those in their first year, as the Director who was my guide freely declared; a non-expert opinion would be valueless, but the work done appeared to indicate the highest degree of intelligence and skill, and of able teaching. The boys are taught as far as possible to make and repair their own tools. So far as there are vacancies they are employed by the firm after their apprenticeship.

If possible, too, the trained workmen are taken back after their period of military service (two years), and after the shorter subsequent periods they are taken back as a matter of course. The soldier who has served his time is preferred by large employers; he is prompt, cleanly and respectful, he has better manners and address, he has learnt to be handy in many ways and is more generally reliable.

My informant stated that 60 per cent. of the firm's workmen belong to the "yellow" or more moderate group of Socialists, and that these are in the main friendly to the employers and approve entirely of the school. What trouble there was, two or three years ago, arose from the "red" or more advanced and hostile party, who thought to restrict the output of skilled labour, but this is no longer serious. He added that even if the employment in the factory were of the most mechanical or automatic kind, he would still think it desirable that the apprentices should have compulsory instruction; one cannot know too much of what concerns one's work.

MESSRS. JORDAN & Co. (Linen Drapers and Outfitters).

The manager of this firm, which has 1,000 employés, stated that so far as concerned the apprentices in the technical or practical part of the business, compulsory school attendance does not interfere with the routine, and that there is certainly a resulting advantage in their greater intelligence. He only regretted that the teaching was not more directly practical, for instance in the matter of cutting out to measurements. With regard, however, to the apprentices in the office he objected to the great inconvenience of their attendance two or three times a week during the daytime, which upset the regular distribution of work. Thus he preferred to have girls, who have no indentures and no compulsory attendance. At the same time he granted that instruction is necessary, and that if there were no compulsion he would still expect attendance at the commercial classes. The clerks learn how to write and express themselves properly, and to reckon up accounts and percentages accurately and quickly. He agreed to my suggestion that if they had evening classes they might be allowed to leave the office one hour earlier at the end of the day; it is in the morning and early afternoon that their absence is most deranging.

For the same reason the firm does not employ errand boys, because their services cannot be relied upon; perhaps just when wanted urgently, they are away at school. Consequently adults are employed on a more permanent footing, preferably after their military service.

For those serving behind the counter as well as others, he would like to make attendance at the Textile School (*Webeschule*)* obligatory, in order to learn what is known as *Waarenkenntnisse*, or the value and quality of goods. There is many an assistant who does not know real silk, nor linen from cotton, and who recommends from the price and not from the material, whereas the firm's first object is to secure the absolute confidence of the purchaser.

AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION
(Aniline Dye Works).

Enquiries of the *Aktien-Gesellschaft für Anilin-fabrikation*, employing 1,200 to 1,500 men in their Berlin branch, showed that no apprentices in the works are taken from the Elementary Schools. The secretary instanced, however, the case of a young man in the office who had gained his footing through influence and had not gone through an apprenticeship; after ten years of service, he still noticed the gaps or deficiencies in his knowledge. Were apprentices taken by the firm, he would be in favour of compulsory school; he believed this, together with the apprenticeship system, to be full of blessing (*segensreich*) to the country.

BRÜCKNER, LANPE & Co.

This, a considerable firm of wholesale chemists, established in the year 1750, employing about 30 warehousemen and 40 clerks, puts its apprentices first of all in the warehouse, and then drafts them into the office. They are, however, already 17 years old, and have gained the *einjährige* certificate entitling them to only one year's service in the army. They are not, therefore, obliged to attend one of the Compulsory Continuation Schools. There are also, of course, a certain number of office boys, copying letters, running messages and so on, who are so liable, and as far as these are concerned the firm is disposed favourably to school attendance.

EHRICH & GRAETZ.

This firm employs 1,200 to 1,500 men, according to the season, in making the various kinds of lamps for lighting streets and public buildings by gas and electricity. There are about 12 apprentices in the factory who are put in turns to work in the different branches; the pay is nominal, 3-5 marks a week, and there is a three years' agreement. Most of these boys went to the Continuation School before compulsion became legal. In

* Maintained by the trade societies and firms, with aid from the town and State.

the office, which has 150 employes, there are six apprentices, but these have all passed the *einjährige* examination for the army; they are, however, expected to go to the Commercial School during their period of apprenticeship.

BERLIN.—APPENDIX A.

NUMBER OF WORK-PEOPLE IN VARIOUS TRADES.

In 1906 the principal industries and work-people employed in them, were as follows:—

GROUPS.	Number of Establishments.	Males over 16.	Females over 16.	Juveniles and Children 16 and under.	TOTAL.
Metal working - -	1,050	27,770	4,662	2,527	34,959
Machines, implements - -	1,357	68,233	13,340	4,192	85,765
Textiles - - -	242	3,369	4,050	410	7,829
Clothing and cleaning - -	7,582	12,017	50,681	4,797	67,495
Printing, lithography - -	781	19,353	6,092	2,011	27,456
Paper-making - - -	437	6,633	8,969	1,726	17,328
Woodwork and carving - -	1,393	28,497	1,734	1,303	31,534
Chemicals - - -	130	2,207	888	168	3,263
Resins, varnishes, oil, soap.	135	5,630	839	110	6,579
Stone and earthenware	213	3,577	371	217	4,165
Food, drink, tobacco - -	3,947	22,559	5,102	833	28,494
Leather - - -	218	5,079	1,192	377	6,648
	17,485	204,924	97,920	*18,671	321,515

* Only 63 were under 14 years of age.

BERLIN.—APPENDIX B.

ATTENDANCE AT CONTINUATION SCHOOLS.

In the winter half-year, 1907-8, the Compulsory Continuation Schools were attended by 28,662 boys,

3,513* attended classes recognised as equivalent.

Total - 32,180

The optional classes were attended in addition by 6,064 of these 32,180.

	Apprentices.
The Building Trade School (<i>Baugewerkschule</i>) was attended by - - - - -	175
The Textile School (<i>Höhere Webeschule</i>) was attended by - - - - -	65
The Artisan School (<i>Handwerkerschule</i>) (No. 1) was attended by - - - - -	1,057
Carried forward - - - - -	1,297

* Commercial School of the Guild of Merchants - - - - -	2,016
School of Printers' Guild - - - - -	1,205
School of L. Loewe & Co. - - - - -	80
School of Butchers' Guild - - - - -	139
School of Chimney-sweeps' Guild - - - - -	78
	3,513

BERLIN.—APPENDIX D.

FINANCE.

The total expenditure on the ten Compulsory Continuation Schools for 1908-9 was 893,577 marks (approx. £44,678), not including repayments of capital and interest.

The amount for 1907-8 was 822,244 marks (approx. £41,112). The whole cost is borne by the City of Berlin. There is no contribution for these Schools from the State nor from the trade guilds.

STETTIN (POMERANIA).

According to a recent Board of Trade Report, Stettin is the second in size of the six great seaports of Germany; in 1905 it had a larger population, 224,000, than Bremen or Lubeck, though handicapped by the difficulties of its approach from the sea. There is an agitation for a direct ship canal to Berlin, and great hopes are based on the scheme. Its foremost industries are shipbuilding and marine engineering. In 1906 one local firm alone delivered five vessels aggregating 41,000 gross registered tons, and had in hand a further six vessels of 31,900 gross registered tons. Among the other industries of local importance are the manufacture of motor cars, bicycles, typewriting and sewing machines, fireproof clay ware and chemicals, sugar-refining and spirit distilling. It is the chief town of the Prussian province of Pomerania, and is therefore the seat of civil and military government for the area.

At present attendance at continuation schools is voluntary, but the local education authority have already prepared a byelaw (*Ortsstatut*) for making it compulsory up to the end of the seventeenth year.

Enquiries of the Vulcan Shipbuilding and Marine Engineering Company, which employs 8,000 workmen in Stettin, showed that 350 apprentices between the ages of 14 and 17 are engaged in their yards, and that attendance at the firm's own Continuation School is one of the obligations imposed by the terms of the indentures. The instruction is purely theoretical, and is given on Sunday mornings from 8 to 11.30, so that there is no disturbance in the routine of the workshops. If an apprentice systematically absents himself from the school, his indentures are cancelled.

In this case it is clear that the firm have not waited for the compulsion of the State to provide the instruction which they believe to be necessary for their apprentices and future workmen.

HAMBURG.

The principal seaport of Germany and of the Hanseatic Free Cities, Hamburg had in 1905 over 800,000 inhabitants. The total value of the merchant fleet was estimated at twenty million pounds, and the chief industries of the district are shipbuilding and marine engineering. In 1908 there were 104,466 children at the public Elementary Schools (51,975 boys and 52,491 girls), not counting 1,400 at the schools for defective children. There were (in 1905), 19,800 boys and 22,100 girls between 15 and 17 years of age.

PRESENT VOLUNTARY SYSTEM.

At present Hamburg has no system of compulsory continuation schools, but a scheme is under consideration. One was brought forward in 1906 in the *Bürgerschaft* or Lower House, and the Committee of the Trade Schools (*Verwaltung des Gewerbeschulwesens*) was requested to report on it. It was rejected by the Senate or Upper House about a year ago. The question of a new bill is now being discussed by the Senate, and the school authorities are working out a scheme. As it stands at present, it is meant only for artisans, but it is possible that all apprentices and clerks will be included, but not boys in unskilled labour. Three years' school attendance will be required of at least six hours a week. The penalties are not yet decided, but there will certainly be no "arrests" as in other German cities. Hamburg as a Republic prides itself on its independence, public and individual, and this will, as in England, be a great factor in the solution of the problem of its Continuation Schools.

By way of helping boys into regular employment notices are put in the papers before Easter (*i.e.*, at the end of the school year), advising parents to apply for vacancies to the *Gewerbekammer* or Chamber of Trades. Besides various guilds which have their Labour Bureau for apprentices, there is one maintained by the Patriotic Society and aided by the city. There is said to be no serious unemployment in Hamburg except in winter, and then not among boys. On leaving school each boy is given a copy of a book (*Ratgeber für die Berufswahl*) containing information and advice as to the various callings.

As in other parts of Germany, a boy does not join the special trade classes unless he has entered on an apprenticeship; an office boy, for instance, could not join the carpenters' class. One must not of course suppose that only unintelligent boys go into unskilled employment; that is mainly a question of their parents' means.

As matters at present stand, the working classes and working men's unions (largely Social Democrat) are in favour of a system of compulsion, as well as the artisan employers, but the business houses and manufacturers are likely, at first at any rate, to be much opposed to such an interference with their independence. The Chamber of Commerce opposed the last

bill by a small majority. The individualist spirit is more developed in Hamburg than in any other German city; it is believed that each must rise by his own efforts alone, and that there is little advantage in helping those who will not help themselves.

THE PRINCIPAL TRADE SCHOOL.

(*Hauptgewerbeschule.*)

This school enjoys a good reputation, but it is still hampered by the want of suitable premises. It is well supported by the trade guilds, who co-operate by securing the attendance of their apprentices, by the visits of members of their committees, by presents of materials and models for instruction, and by aiding in the qualifying examinations (*Gesellenprüfung*). Among the special courses are those for tailors, confectioners, locksmiths, upholsterers, potters and painters. The largest classes were those for engineers, shipbuilders, wood and metal workers. In the winter 1907-8 the classes as a whole were attended—

Voluntarily by	-	-	1,058	apprentices.
Compulsorily (through	}	1,634	,,	(= 60·7 per cent.).
the guilds) by				

TOTAL	-	<u>2,692*</u>	,,
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The statistics prepared show that while of the apprentices in the engineering and shipbuilding trades a large percentage (80 per cent. and upwards) had reached a satisfactory standard in the elementary school, this was by no means the case with the lower artisans, and it is a reflection upon the guilds who admit them. A decline in the average of preliminary knowledge and intelligence is likely to be associated with a distaste for honest work, and it must inevitably affect the efficiency of the next generation of workmen and masters.

THE DAY TRADE SCHOOL.

This was intended originally, before the schools for engineering and the art crafts were established, for the instruction of apprentices in these trades. Now, however, the building is used for pupils who have not yet chosen their calling because they are delicate or have not yet found a place, or because they wish to extend their elementary school knowledge. The course is of one year, and of 36 hours a week. A large proportion of the time is given to freehand and geometrical drawing and clay modelling (26 hours). To this school is attached one for paviors (*Steinsetzer*) of 38 pupils, with fulltime teaching of 36 hours a week. There is also a school of carriage-building with 17 pupils (winter 1907-08).

* See Appendix B, page 54.

THE LESSER TRADE SCHOOLS.

Besides these there are 10 so-called *Kleine Gewerbeschulen* or Lesser Trade Schools, consisting, as the Chief Trade School, of (a) evening and Sunday classes; (b) trade classes supported by the guilds, compulsory for their apprentices; and (c) a division for elementary school boys with teaching in drawing.

The evening classes are attended by the apprentices for whom there is no special trade course, either because there is no guild, or because the guild has taken no steps. As there is no compulsory attendance it is not possible to follow out a systematic course of instruction, and only classes in single subjects can be formed. The apprentices,* however, of the locksmiths and plumbers are, by resolution of the guilds, obliged to attend regularly. That the school attendance was more regular in 1908-9 than previously was due to the support of the Chamber of Trades and the various guilds, though even thus there is room for improvement. The masters do not always make punctuality possible, and some prevent their boys from attending even on Sunday mornings.

A six months' course was held to train teachers for the plumbers' and gasfitters' technical course, and this was followed by eleven practical workmen.

In the winter 1908-9 there were—

3,328 pupils voluntarily attending the 10 lesser trade schools, including (compulsorily) the locksmiths' and plumbers' apprentices.

2,591 of these were apprentices.

686 were elementary school boys.

51 were miscellaneous pupils.

The official returns do not show how many attended regularly, nor how many unexcused absences there were, but the Chief Inspector informed me that the attendances, although voluntary, are fairly satisfactory.

The largest classes were those attended by the locksmiths, plumbers, masons, carpenters, engineers, and electricians (see Appendix C, page 55).

THE COMMERCIAL SCHOOLS.

There are eight of these in Hamburg, housed in elementary school buildings. Attendance being voluntary, it is not possible to form systematic complete courses for two or three years, nor to grade pupils adequately, and classes are therefore held in

* There were 8 parallel classes for the 1st year course.

7	"	"	"	2nd	"	"
6	"	"	"	3rd	"	"
<hr/>						
21 classes.						

optional single subjects. The main difficulty is that employers do not allow sufficient time to their boys to attend regularly, although the hours of instruction are 7 to 9 p.m. It is hoped next session to have one building wholly given to the commercial classes and to arrange alternative hours from 7-9 a.m. and from 2-4 p.m. Under the voluntary system the schools can only look to the principals to aid them in securing a regular attendance, which must be to the advantage of their posterity in the business world.

As in the Technical Schools, there are classes for boys still in the Elementary Schools, in which French is taught, provided that they have reached the 1st class or the *Selekta*. English is begun in the Elementary School itself.

The course (1908) for training teachers of commercial subjects was attended by 25 pupils.

There were in the winter 1908-9

3,323 pupils at the eight commercial schools.

2,249 of these were apprentices.

304 were clerks.

The rest were teachers, officials, elementary school boys and unclassified.

For girls already in business there are Continuation Classes in single commercial subjects, and there is also an organised course for those preparing to enter business, which consists of 24 hours a week for 18 months. The fee for the latter is 20 marks per half year. In the winter 1908-9 there were 904 pupils, as follows:—

309 in business.

160 teachers.

435 not yet in places.

904

MESSRS. BLOHM AND VOSS (Shipbuilders).

This great firm, which builds the largest ocean-going steamers, employs about 4,000 workmen and 220 apprentices in the workshops, but none of the latter in the counting house, and no unskilled boys except rivet boys. There is a difficulty in getting apprentices for the various branches (boiler makers, copper-smiths, joiners, pattern makers, founders, riveters, &c.) because it is easier for the boys to go at once into unskilled employment; the one exception are the candidates for engineering on board ship, of whom there are too many; all vacancies until 1913 are promised.

The head of the firm considers it necessary that the engineering apprentices should have drawing and other instruction in the Trade School, but that it is superfluous and useless for rivet boys and messengers to have compulsory classes. He thinks it

may be advisable for clerks, but he is frankly individualist, and believes the proper course is to leave each to progress as he deserves; Germany and England are going on the wrong road if by many provisions for the individual's welfare they think to make men happier and more productive workmen.

MESSRS. TRAUN (Vulcanite Works).

This old-established firm employs 2,000 workmen. The apprentices in the workshops go to the Trade School while the unskilled boys may or may not go to the general Continuation Classes. It is thought that a compulsory system would disturb the routine. The firm has many benevolent and provident funds for its people; a notable feature is that every boy between 14-18 years must attend their gymnastic club.

THE HAMBURG-AMERICA LINE.

This, the largest and best known shipping company of Germany, employs about 1,400 workmen in its repairing shops alone, together with 150 apprentices who are indentured for four years, and are by the terms of their agreement* obliged to attend regularly Continuation Classes at the Trade School on two evenings a week, when they are allowed to leave the works earlier. Should they not attend, information is sent at once by the school to the head of the department and a boy who is irregular may have his indentures cancelled. The apprentices are from the Elementary Schools and are generally the sons of the workmen. They are employed and trained in the various departments of the repairing shops as carpenters, sail makers, painters, basket workers and mechanics. There is at present no final examination for them, but it is proposed to form a separate guild of the shipbuilding industry, as those of the trades just named, who would like to impose their examinations, are generally Social-Democrat. No unskilled boy labour is employed, as boys under 17 or 18 are too young and weak. There are a number of permanent workmen, former sailors, employed as dock labourers, stevedores and coaling men, and these are supplemented and aided as required by irregular piece labour (*Hilfsarbeiter*).

* Based on the Imperial Labour Law of 1897 (*Reichsgewerbeordnung*).

HAMBURG.—APPENDIX A.

OFFICIAL CLASSIFICATION OF INDUSTRIAL WORKPEOPLE.

The industries of the district include shipbuilding, machine works, iron foundries, rice and corn mills, oil refineries, chemical, rubber and asbestos factories, wool combing, jute spinning and weaving, glass bottle blowing, tobacco and cigar manufacturers, and a considerable clothing trade.

The following is the official classification of industrial workpeople in Hamburg for 1906 :—

Group of Trades.	Number of Establishments.	Number of Workpeople.			Total.
		Males over 16 Years.	Females over 16 Years.	Juveniles 14-16 Years.	
Building - - -	127	2,616	—	85	2,701
Mining, smelting, salt-works - - -	6	559	14	4	577
Metal working - - -	364	5,017	389	376	5,782
Marine and other engineering - - -	374	17,141	425	646	18,212
Textiles - - -	25	302	463	23	788
Clothing and cleaning -	1,500	1,255	7,424	502	9,181
Printing, lithography, bookbinding - - -	250	3,194	1,153	225	4,572
Paper - - -	24	138	159	24	321
Woodworking and carving	360	4,685	358	198	5,241
Chemicals - - -	54	1,723	256	24	2,003
Resins, varnishes, oil, soap, candles, &c. -	84	2,269	276	21	2,566
Stone and earthenware -	43	1,185	52	27	1,264
Food, drink, and tobacco	899	6,437	2,390	205	9,032
Leather - - -	40	2,722	971	120	3,813
Others - - -	8	65	2	7	74
Total - - -	4,158	49,308	14,332	2,487	66,127
Percentage of total workpeople -	-	77·2	19·1	3·7	100

No children under 14 years were employed in the factories.

There are about 17,000 harbour and dock labourers; the stevedores number some 5,000. There are about 2,000 warehouse labourers.

HAMBURG.—APPENDIX B.

THE PRINCIPAL TRADE SCHOOL.

(a) Apprentices voluntarily attending: of these the largest groups were—

Electrical Engineers, Opticians and Instrument Makers -	134
Plumbers and Fitters - - -	61
Masons - - -	134
Lithographers and Printers - - -	47
Shipbuilders - - -	104
Carpenters - - -	46

(b) Apprentices attending compulsorily through the guilds: of these the largest groups were—

Cabinet Makers	-	-	-	-	-	-	306
Paperhangers	-	-	-	-	-	-	116
Lacquerers and Varnishers	-	-	-	-	-	-	389
Locksmiths	-	-	-	-	-	-	344

HAMBURG.—APPENDIX C.

THE LESSER TRADE SCHOOLS.

The largest groups were—

Electrical Engineers	-	-	-	-	-	-	123
Machine Constructors	-	-	-	-	-	-	516
Plumbers	-	-	-	-	-	-	574
Masons	-	-	-	-	-	-	368
Locksmiths	-	-	-	-	-	-	436
Carpenters	-	-	-	-	-	-	151

HAMBURG.—APPENDIX D.

EXPENDITURE IN 1908-9.

(a) On the Trade Continuation Schools :—			
For salaries	-	Marks.	344,000
For apparatus, heating, lighting, &c.	-		47,000
Total	-		<u>391,000</u>
(b) On the Commercial Continuation Schools :—			
For salaries	-		84,000
For apparatus, heating, lighting, &c.	-		8,500
Total	-		<u>92,500</u>
(c) On the Women's Commercial School :—			
For salaries	-		33,000
For apparatus, heating, lighting, &c.	-		5,000
Total	-		<u>38,000</u>
<i>Summary.</i>			
(a) Trade Schools	-		391,000
(b) Commercial Schools	-		92,500
(c) Women's Commercial Schools	-		38,000
Total	-		<u>521,500 (£26,075)</u>

The whole expense of these schools is defrayed by the State of Hamburg. There is no contribution from the guilds.

HERNE (WESTPHALIA).

The Hibernia Colliery Company, which possesses six or seven mines, employs 20,000 men, including large numbers of Poles and Slavs, and has its headquarters at the Shamrock shaft at Herne. Section 87 of the Mining Laws of 1865 for the Prussian States (1905 edition) obliges mine-owners to let their boys under 18 years attend a continuation school that is recognised by the local authority or by the State. The little town of Herne, however, has not yet adopted a compulsory system, although other places in the mining district have done so, and the Government of Prussia is pressing in this direction. The managing director of the Hibernia Company prefers to appoint as clerks in the office boys who have passed the *einjährige* examination, because they are better educated and better material. He has about 20 of them to 150 adult clerks, and they are paid according to their efficiency; there is a probationary period of three months. He considers that experience is the main thing, although the larger the business is, the more one-sided, necessarily, must be the training in the office. In this part of Germany the apprenticeship of clerks is dying out, and they are usually engaged at once as assistants at about 50 marks or £2 10s. a month.

Boys are not permitted by law to go into the pit until the end of their sixteenth year. Technical courses are available at Bocum and other places in Westphalia for those who aim at becoming foremen of gangs, which may number up to 200 men. Only those recommended by the company as suitable are admitted to these courses. The boys engaged at the mouth of the pit are classed as *jugendliche Arbeiter*, i.e., unskilled boy labour. Later they become drivers in the mines or assistant pitmen (*Lehrhauer*), generally for three years. For such my informant considered attendance at school superfluous, for only the few endowed with intelligence and character could and should rise to be foremen of gangs. The other boys employed by the company are apprentices in manual work, such as smiths, joiners, and mechanics, and these are obliged to attend technical classes in those places in this district where they are provided.

ESSEN (RHENISH PRUSSIA).

The celebrated steelworks and cannon foundries of Krupp now employ 30,000 men. Information was not forthcoming as to the proportion of boy labour, but even taking it as low as one boy to every 50 or 60 men, there must be some hundreds of boys employed.

The town of Essen has no compulsory continuation schools, and the firm of Krupp formerly supported the voluntary classes; it has now established its own school at which attendance is obligatory. There is a form of indenture. Normally boys

begin as messengers, and as vacancies occur they are taken into the works as apprenticed smiths or turners or draughtsmen for 3 years. In the office there are no apprenticed clerks; the trouble of training them is not considered to yield any adequate compensation.

SOLINGEN (RHENISH PRUSSIA).

Solingen has been for centuries the chief home of the German cutlery and fine steel goods industry; the history of its sword manufacture goes back to the time of the Crusades, and swords made in Solingen are still purchased by British officers. During the last twenty-five years the town has developed rapidly. In 1885 the population was under 18,000; in 1905 it was 50,000. Although the factory system is gaining ground, there is still a large amount of home industry with hand labour. There are just over 8,000 children in the elementary schools. Attendance at the Continuation School is compulsory, twice a week for three years in the commercial section, and for two years in the trade section; in the former there are 200 boys, in the latter 800. There is no compulsion for girls. The town is still primitive and very scattered, and there is not yet special trade instruction in the Continuation School, the subjects being German, arithmetic, drawing and citizenship, but there is the advanced Technical School for the steel industry of Solingen, at which attendance is, of course, optional. This has been established four years and is supported financially by the town, the district and the State. It is considered to be of importance, and has about 150 full time pupils, but not twenty of these are under sixteen years.

The manager of the one firm which the time available allowed of my visiting was not too friendly towards the Continuation School. He has from 800 to 1,400 men at work, according to the demand, and about 50 apprentices and other boys. His antipathy was understood afterwards, when it became clear that the teaching is general, not technical. At the Education Office it was stated that the employers are not hostile, but they find it inconvenient that their boys should be absent during the day. The working men's unions and the parents are well disposed.

DÜSSELDORF (RHENISH PRUSSIA).

Düsseldorf, one of the most important of the large manufacturing towns of Germany, numbered 95,000 in 1880, but at the end of 1905 its population was over 253,000, being in size the tenth of German towns. The growth has been continuous and not the result of spasmodic influences. Its industries

include many large iron and steel and machine works, the manufacture of chemicals, dyes and colours, and several textile, porcelain and earthenware factories. The machinery works rank among the best equipped and best organised in Germany.

THE CONTINUATION SCHOOLS.

In the Elementary Schools there are 35,000 children (over 17,000 each of boys and girls). There are 8,800 boys between 14 and 17 years, of whom about 5,000 are attending the Continuation Technical and Trade Schools.* These, established in 1902, are compulsory for three years for boys,† but not for girls except those in the Commercial Classes. Pupils with sufficient knowledge may instead attend advanced Technical Classes. The ordinary penalties for non-attendance are fines from 3 to 20 marks, and also detention and imprisonment. To avoid friction the law is enforced mildly, and refractory employers are troubled with numbers of letters from the school authorities, so that finally they find it less irksome to send their boys to the classes. It is found here, contrary to the general experience in other German towns, that the artisan pupils from the large works are more regular in attendance than those who come from small employers. In this industrial town, close to the "black country" of Westphalia, from one-third to one-half of the boys in the Continuation School are unskilled workers in factories and otherwise, but, as elsewhere, owing to their more frequent change of employment and of residence it is not practicable to include them in the apprentices' classes of their respective callings. In order to give an early bias in the direction of skilled manual work, classes in drawing are held on two afternoons a week, which are attended voluntarily by Elementary School boys in their last three years. The charge is 6 marks a year for 3 hours a week. Experience is said to have shown that boys who have had good and extended instruction in drawing do not willingly fall into unskilled labour. To the present drawing and modelling, wood and metal work will be added. While the total number of pupils in 1907-8 was as many as 792, it rose in 1908-9 to 1,268, and the necessity has now arisen of decentralising the classes, to make attendance more convenient. Great attention is also paid to trade drawing in the Continuation School, while the danger is not lost sight of of giving too much theory and too little practical work. In the art-craft section, for instance, the object is to train not artists, but craftsmen.

One gathers in this neighbourhood that the State (Prussian) policy is to press everywhere for compulsory continuation schools. A new bill was spoken of proposing to impose them on all towns with a population of over 10,000, and even for grouping districts (*Landkreise*) to the same end. The necessity of compulsion is

* See Appendix B, page 60.

† The period of attendance has recently been lengthened by one year for boys in unskilled labour.

illustrated by the case of a large manufacturer, who is practically lord of his district, and who refuses to hear of a continuation school; the bill would, of course, if passed, take away his power to refuse instruction to his employees.

An opinion was expressed to me in Düsseldorf quite different from that generally prevailing in Germany, namely that the two years' military service is detrimental to character. A conference had recently been held which discussed the falling of boys into rough and unruly ways (*Verrohung*), and it was stated that after their service men who were industrious return idle fellows, and that they have moreover lost their aptitude for manual work. I am unable to say whether this is the uniform experience of the "black country;" it is certainly not that attested to elsewhere in Germany by unanimous consent.

Düsseldorf does not possess any form of whole time Day Trade School such as that in Leipzig. Crefeld and Aachen (Aix) are so provided, but I was informed that their schools are without workshops, and if so the benefits therefrom must be somewhat doubtful. The similar artisan Day Schools (*Handwerker Tageschulen*) of Austria and Holland with workshops are said to be most efficient.

In Hagen, a small town in Westphalia, attendance at the Continuation Classes was formerly not compulsory. Prizes were offered, but no one won them. The difficulty, known well enough in England, was experienced of classes beginning the session with satisfactory numbers of pupils, but dwindling steadily as time went on.

ATTITUDE TOWARDS COMPULSORY ATTENDANCE.

The attitude of the working class parents and of the trade organisations (largely Social Democrat) was described as entirely favourable, but the Director of the Continuation Technical School does not suppose that the employers would support it if compulsion were removed. It must be added, however, that the interest of the trade guilds has increased, and that valuable agreements have been come to between them and the school authorities*, relating among other points to the apprentices' final examination† (*Gesellenprüfung*), and to the practical teaching on which all lay emphasis. It is realised here that close contact with trade and industry is essential to the Technical School, and that only through the trades themselves can it keep abreast of modern developments.

* For an example see Appendix C, page 61.

† This examination will now be held as far as possible at the close of the school course by the examining body of the guild, so that a definite aim will be before the pupil during his three school years. There will thus be the one leaving examination instead of two as formerly, that of the school and that for the *Gesellenstück* by the guild. Thus too, the whole of the work and drawings of the apprentice will be under judgment.

DÜSSELDORF.—APPENDIX A.

RETURN OF EMPLOYEES IN FACTORIES AND WORKSHOPS.

The following is the last return of employees in factories and workshops and undertakings under official inspection:—

Group of Trades.	Number of Establishments.	Number of Workpeople.				Total.
		Males over 16 Years.	Females over 16 Years.	Juveniles 14-16 Years.	Children under 14 Years.	
Mining, smelting, and salt works -	22	5,029	—	104	—	5,133
Metal working -	117	7,542	169	501	1	8,213
Machinery, implement and apparatus making -	86	5,788	12	405	—	6,205
Textiles -	28	1,011	876	235	—	2,122
Clothing and cleaning -	242	285	1,183	310	8	1,786
Paper -	26	583	236	67	—	886
Printing, lithography, book-binding, &c. -	39	991	371	104	1	1,467
Wood working and carving -	79	1,800	70	100	—	1,970
Chemicals -	15	179	163	41	—	383
Resins, varnishes, oil, soap, &c. -	28	500	234	25	—	759
Stone and earthenware -	35	927	81	69	—	1,077
Food, drink, and tobacco -	197	1,281	221	121	—	1,623
Leather -	3	7	2	3	—	12
Total -	917	25,923	3,618	2,085	10	31,636

The engineering trade is manysided, and on this the town rests its high industrial reputation. The principal manufactures are steam engines, locomotives, bridges, boilers, cranes, machine tools, mining plant and electrical machinery. There are also important iron and steel works, which make plates and railway material.

DÜSSELDORF.—APPENDIX B.

ATTENDANCE AT TECHNICAL AND TRADE SCHOOLS.

The Technical and Trade Schools were attended in February, 1909, by nearly 3,900 boys, some of the largest groups being as follows:—

Bakers -	117	Printers and Compositors -	113
Builders and Architects -	95	In unskilled Labour -	1477
Plumbers -	145	Including:—	
Locksmiths -	148	Errand boys -	281
Machine Constructors -	210	In Iron and steel works	269
Engineers & Draughtsmen	128	In Textile works -	59
Mechanicians -	107	In Paper mills -	48
Metalworkers -	281	In Enamel ware works	59
Carpenters and Joiners -	88	In Timber works -	58

The attendances for the last three years were:—

	1906-7.	1907-8.	1908-9.
Classes with Drawing	1,903 pupils in 67 classes	1,862 in 76 classes	2,318 in 95 classes
Classes without Drawing	2,236 „ 71 „	2,189 „ 72 „	1,575 „ 51 „
Total	<u>4,139</u> „ <u>138</u> „	<u>4,051</u> „ <u>148</u> „	<u>3,893</u> „ <u>146</u> „

During 1907-8, imprisonments, mostly of several days, were inflicted on 109 pupils. It is noticeable that 103 of these belonged to the unskilled workers. In 1908-9, however, imprisonment was necessary in 46 cases only, and the length of the imprisonment did not exceed from one to two days. Minor detentions were necessary in 405 cases.

DÜSSELDORF.—APPENDIX C.

ONE OF THE AGREEMENTS BETWEEN THE TRADES AND THE TRADE SCHOOL.

FROM THE ANNUAL REPORT OF THE TRADE SCHOOL FOR 1907-8.

“ In the reorganising of the courses of study the committees of the trade guilds concerned and the members of the examining body for the *Gesellenprüfung* (qualifying test for adult workmen), were consulted. The subject of the teaching of apprentices was discussed at more than 20 meetings, always from the point of view of each particular trade. The School thus had ample opportunity of doing away with misapprehensions and creating enthusiasm; a wider sphere of interest was made, prejudices were removed, and the collaboration of many employers was secured. It must be the task of the School to maintain this interest in future and to increase it. Especially does it lay stress on the value of their co-operation in the workmen's qualifying test.”

To take as an example one of the nine separate trade agreements, the following points were agreed upon in the case of the Art Craft group of trades:—

1. It is desirable that a comprehensive course of instruction in drawing shall be given besides those in German and Arithmetic.
2. The time allotted to the subjects shall be: German and Commercial Correspondence, 2 hours; Arithmetic, Geometry, and Book-keeping, 2 hours; Freehand Drawing, 4 hours: total 8 hours a week.
3. The hours of instruction for apprentices shall be on two mornings, Monday and Wednesday or Tuesday and Thursday, between 7 and 12 or 7 and 10 o'clock. In the winter they shall begin half an hour later. There shall be no school on Saturdays.
4. The school fees shall be according to the bye-laws.
5. In those callings for which a qualifying examination is held, the leaving certificate of the Continuation School shall be taken into consideration in awarding the *Gesellenbrief* (given to the apprentice at the end of his indentures). The class teachers shall take part in the examination.
6. These alterations shall come into force on the 1st April, 1908.

DÜSSELDORF.—APPENDIX D.

FINANCIAL STATEMENT OF THE COMMERCIAL CONTINUATION
SCHOOL FOR THE YEAR 1908-9.

<i>Receipts.</i>		<i>Marks.</i>	<i>Expenditure.</i>		<i>Marks.</i>
School fees	- - -	22,000	Salaries	- - -	36,570
Fines	- - -	70	Other personal payments	- - -	8,230
From Societies	- - -	7,500	School Appliances	- - -	1,700
From Town Funds	- - -	11,360	Rates and Taxes	- - -	120
From the Board of Trade and Commerce (State Contribution).	- - -	8,170	Heating and Lighting	- - -	2,400
Miscellaneous	- - -	2,000	Miscellaneous	- - -	2,080
Total		<u>51,100</u>	Total		<u>51,100</u>

FINANCIAL STATEMENT OF THE TECHNICAL CONTINUATION SCHOOL,
1908-9.

<i>Receipts.</i>		<i>Marks.</i>	<i>Expenditure.</i>		<i>Marks.</i>
School Fees	- - -	25,000	Salaries	- - -	65,550
Fines	- - -	2,000	Other personal payments	- - -	65,400
From Guilds	- - -	—	Books and apparatus	- - -	9,500
From Town Funds	- - -	100,700	Rates and Taxes	- - -	500
From the Board of Trade and Commerce (State Contribution).	- - -	30,000	Heating and Lighting	- - -	10,300
Miscellaneous	- - -	300	Miscellaneous	- - -	6,750
Total		<u>158,000</u>	Total		<u>158,000</u>

Each pupil is estimated to cost from 38 to 40 marks, or, deducting school fees, say 32 marks.

III.—GENERAL NOTES.

(1) THE SUPPLY OF TEACHERS.*

The question of supplying a sufficient number of well-equipped teachers for the trade classes is one of importance and some difficulty. Courses are held in most of the large towns to train elementary or higher grade schoolmasters in the theory and practice of particular trades, and they then make capable teachers of trade arithmetic, bookkeeping and correspondence. The manual and practical instruction must needs be given by expert workmen, and it is thought advisable in some places to give them an insight into proper methods of teaching. It is probable that skilled workmen will be more and more preferred to give the whole of the instruction.

* See also Appendix C, p. 73.

(2) THE IMPERIAL LABOUR LAW OF 1897.

As in the course of many conversations reference was made to the Imperial Labour Law (*Reichsgewerbeordnung*) of 1897, governing Trades and Industries and the relations between master and apprentice, it will be well to give an idea of its main provisions so far as they concern the latter.

Permission to the master to take apprentices may be withdrawn in case of his grossly neglecting his duties towards them or of moral delinquency. He may be required to give up some of his apprentices if he is employing too many for them to be properly trained; the number can be limited, either by the trade guild, or in special cases by legislation. He is regarded as having a certain parental duty as well as authority. The apprentice may not, unless he is lodging with his master, be put to any domestic occupation. The indentures must be drawn up in writing within four weeks of commencing the apprenticeship, but there may be a previous probationary period of from four weeks to three months, after which they can be cancelled only for special reasons, such as the desire of the apprentice to change his calling. The master may be required to produce the agreement to the police. He is under obligation to instruct the apprentice in the work of his business, either himself or through specially named representatives, and to see that he attends the Continuation School.

In the trades and handicrafts an employer may take apprentices if he has taken the *Meisterprüfung*, that is, has qualified as a master-workman. Otherwise he must be over 24, have completed the prescribed apprenticeship and have passed the *Gesellenprüfung* to qualify as an assistant, or have had his own business, or have been in charge of one for five years. The apprenticeship should be for three years or not more than four, and the length may be decided in special branches by the trade guild. Attendance at a technical school or school-workshop may be held as equivalent to an apprenticeship, but the school or institute must be approved by the trade guild.

If the employer belongs to a guild or corporation he must deliver to them a copy of the indentures within fourteen days, and it may be required by them that it be signed in their presence. The guild may decide as to the number or proportion of apprentices to be allowed to each master.

At the end of his time the apprentice must produce testimonials from his master and from the Continuation School, and must take the *Gesellenprüfung* or assistants' examination, conducted by a committee of the guild, or by the *Handwerkskammer* (Chamber of Trades). The latter body nominates the chief examiner or president; half the examiners belong to the guild, and half to the committee of assistants (*Gesellen*).

The object of the examination is to show that the apprentice has a sufficient knowledge and skill in the practice of his trade, is acquainted with the value, manufacture, storage and treatment

of the raw material, and is able to distinguish between good and inferior qualities. It may also be required that he be examined in accounts and book-keeping.

(3) INDENTURES OF AN APPRENTICE.

The following are some of the chief clauses in the agreement in force at the large ironworks of A. Borsig, near Berlin, and it may be taken as fairly representative:—

1. The firm shall cause the apprentice to be instructed in all the handwork belonging to his calling, and endeavour to make him into a capable workman (*Gesell*).

2. The firm requires no premium, but after the period of probation, undertakes to pay—

in the 1st year per hour	-	-	7 pf.
" 2nd " " "	-	-	10 "
" 3rd " " "	-	-	13 "
" 4th " " "	-	-	16 "

of these wages 50 pf. are retained by the firm every week, and are paid to the apprentice or his representative at the end of the period.

3. During the period of his indentures the apprentice is obliged to attend regularly at his own cost a trade continuation school.

4. At the end of his time each apprentice must execute a trial piece of work (*Probearbeit*) which is tested by a committee of the heads of the factory. A reward of 30 marks is given by the firm to each apprentice who has done the best work in his branch.

To the copy of the indentures are attached the general conditions laid down by the firm for their trade apprentices; some of these are:—

(a) On the signing of the agreement, and before the apprentice enters the workshops, he must bring an *Arbeitsbuch* or record book provided by the police. This book is required from every boy not yet 16 years of age from an Elementary School; it is kept by the employer for entries concerning the nature and length of employment; it may not contain remarks as to behaviour or efficiency.

(b) During his engagement he is under the parental care of his master for the time being; and he is bound to unconditional obedience to his superiors.

(c) He has always, even outside the works, to live respectably, to endeavour to win the esteem of his superiors, and to be on terms of good comradeship with his fellow apprentices, to do the work entrusted to him willingly, to be industrious, and to improve himself as much as he can in his handicraft.

(d) At the end of the engagement, on completing satisfactorily the test piece of work, the apprentice receives free of charge a testimonial (*Lehrbrief*).

It will have already been observed that the continuation schools of Germany are closely welded with the apprenticeship system. The two forces collaborate to train the vast armies of self-respecting, steady and skilled workmen, who are characteristic of modern German industry. The law on its part indicates clearly that the apprentice is to learn, that he is not there merely to perform cheap labour for his employer.

(4) ACCEPTANCE OF COMPULSION IN GERMANY.

The evidence of the foregoing pages appears to be overwhelmingly in favour of the obligatory continuation schools of Germany. The mass of opinion of the parents, employers, trade associations and guilds, no less than of the school authorities, has come to accept a system of compulsion. The practical nature of the further education is its credential to the boy and to his trade master, and this, together with the continued moral discipline which is provided during the critical period between the elementary school and military service, is held by the nation to justify the heavy financial sacrifice and to be indeed essential on grounds of industrial and also of social policy.

H. A. CLAY.

APPENDIX A.

LABOUR BUREAU FORMS.

(1) STRASSBURG MUNICIPAL LABOUR BUREAU.

(a) CARD TO BE FILLED IN BY THE INTENDING APPRENTICE.

Name _____ Elementary School _____
 Date and place of birth _____
 Religion _____ Address _____
 Name and occupation of father or guardian _____
 Occupation chosen by the apprentice _____
 Can the parents maintain ^{him}/_{her} during the apprenticeship? _____
 Can they pay a premium? _____
 May the apprentice take a place in the country? _____
 What employer (if any) has he chosen? _____
 His exact address _____

On the reverse side.

Medical Certificate.

1. Build _____
2. Height and weight _____
3. Appearance and condition _____
4. Chest measurement _____
5. Organs of the chest and abdomen _____
6. The senses _____
7. Remarks _____

Remarks of the School Staff.

School year _____ Ability _____
 Conduct _____ Industry _____

The apprentice was referred by the Labour Bureau :—

Date To:

--	--	--	--	--	--

Is he still in the place found for him? _____

If not, since when? _____

Conduct of the apprentice _____

Checked (date) _____

(b) CARD TO BE FILLED IN BY THE EMPLOYER.

Date _____ Group _____ Section _____
 Name of the employer or firm _____
 Trade _____
 Exact address _____
 Number of apprentices desired _____
 Length of apprenticeship _____
 What premium is asked for? _____
 What have the parents to provide? _____
 Is board and lodging given? _____
 Is the apprentice to receive pay? _____
 When is the apprenticeship to begin? _____
 How many assistants and apprentices do you employ? _____

(Stamp.)	Remarks.
----------	----------

On the reverse side.

Apprentice referred to _____ (date) _____
 Remarks _____

(c) CONTROL CARD.

1. Name of the Pupil _____
2. Date of first application at the Bureau _____
3. Dates of further applications _____

4. Case settled on the :—
 (date) _____ (by) _____

(Stamp.)

[The Control Card is to be shown by the children to the Elementary School Teacher, and a duplicate is sent by the Labour Bureau to the Chamber of Trades or of Commerce, according to the occupation of the employer, for approval or otherwise.]

(2) MUNICH MUNICIPAL LABOUR BUREAU.

(a) CARD TO BE FILLED IN BY THE INTENDING APPRENTICE.

School _____ Class _____

Christian and surname _____.

Parents _____.

1. Will the boy attend the 8th class the next year?
2. If not—
Has the boy already a definite place in view?
If so, with whom?
3. What occupation does the boy wish to take up?
4. If he wishes to be apprenticed—
(a) Can he pay a premium?
(b) Can he have his meals at home?
(c) Can he sleep at home?

Signature of Father (or Mother) _____.

N.B.—The town Labour Bureau undertakes to give information about all kinds of posts free of charge. The parents of the children, who apply to the Bureau, are absolutely free to make their choice of their future occupation. The Labour Bureau only attempts to bring the applicants into touch with the most suitable posts. The drawing up of any contract is left entirely to the two persons concerned.

(b) APPLICATION FOR POST AS APPRENTICE.

Christian and surname.

Address.

Age.

Height.

Name and trade of father or guardian.

Place of birth

Which school last attended?

Which class?

To what trade does he wish to be apprenticed?

Will a post outside the town be accepted?

Can the boy sleep and have his meals at home?

Can a premium be paid?

When can he begin?

Remarks.

Signature of the Applicant _____.

APPENDIX B.

APPENDIX SHOWING, IN THE CASE OF EACH TOWN,
THE HOURS AT WHICH THE CLASSES ARE HELD.

The continuation classes now tend in general more and more to be held during the whole of the day, from 7 o'clock in the morning onwards, while the classes for the different trades are held at such times as to disturb the employers least. Thus the midday hours are most suitable for boys from business houses, for they cannot be spared later at post time; for bakers, from 10 a.m., onwards; and for unskilled labour, generally the evening. As 1st, 2nd, and 3rd year boys attend different classes, and as there are generally parallel or alternative classes for boys in the same year, employers are not often inconvenienced by the absence of two or more boys at the same time.

A favourite arrangement is for boys to attend classes for one morning and for one afternoon a week, or for one long and one short period. For certain occupations, such as gardening and house painting, the instruction is minimised or dropped during their busy months, and intensified during their slack (the winter) months.

STRASSBURG.

Building Groups :—Hours of instruction { 7.30 to 11.30 a.m. *summer*.
8-12 a.m. *winter*.
2.15-6.15 p.m. *winter*.

No classes on Saturday and Sunday; each pupil has eight hours a week.

Eighteen classes meet for one whole day a week, which employers prefer and which improves the school discipline. The rest meet for two half days of four hours each.

Commercial Groups :—Three hours three times a week,

7-10 a.m. } Monday, Wednesday, Friday.
10-12.45 p.m. } or Tuesday, Thursday, Saturday.
1.30-4.30 p.m. }

Upper and lower divisions meet on different days and hours so that employers are not inconvenienced by absence of two or more boys at the same time. There are, therefore, parallel classes; most begin at Easter and two in the autumn.

Trade Groups :—*Morning lessons have increased.*

	a.m.
Grocers - - - - -	8-11
Shoemakers, druggists - - - - -	8-12
Errand boys - - - - -	10-12
Bakers - - - - -	10.30-1
	p.m.
Grocers - - - - -	1.30-4.30
Druggists - - - - -	1.30-5.30
Butchers - - - - -	2-4
Shoemakers - - - - -	3-7
Tailors - - - - -	3-5
Waiters, cooks - - - - -	3.30-6.30
Barbers - - - - -	4-7
Confectioners - - - - -	4.30-7
Printers, &c. - - - - -	5-7

Unskilled Labour :—Generally 6-8 p.m., as being most convenient to employers.

Some practical lessons are given from 8-10 p.m., because teachers in the trade are unable to come earlier.

MANNHEIM.

General Classes :—7–10 a.m. or 1–4 p.m. ; six hours a week.

Commercial Classes :—7.30–11.30 a.m. } Twice a week, two mornings, or
1.30–5 p.m. } or morning and afternoon
7.45–9.30 p.m. } evening.

Trade Classes :—6 or 8 hours a week.

Instruction in daytime from November to Easter.

8–12, 2–7 o'clock { (a) Monday, Thursday.
(2–6 in winter) } (b) Tuesday, Friday.
(c) Wednesday, Saturday.

MUNICH.

Commercial Classes :—7–9 and 2–4, summer and winter, each class two mornings and two afternoons.

(Shorthand on Sundays 8–10 or 10–12.)

Parents found 7 o'clock too early in winter; pupils complained that 7–8 a.m. was outside of their proper hours, and principals that four school attendances a week wasted too much time in coming and going.

Out of nearly 400 answers to an official enquiry, 326 employers were in favour of four hours' instruction at a time, on one morning and one afternoon. This will have been introduced by now.

General Continuation Classes :—8–11, and { 5–7 or 3–5, or 4–6 twice, }
(also Sunday 8–11). } or 2–6 once.

Held at 12 district continuation schools.

Technical or Trade Classes :—

At Liebherrstrasse School :—

Monday 1.30–7 or 3–7, and Wednesday 2–7	-	Turnery, &c.
Every day 7–12 or 1–5	-	Druggists.
Wednesday 3–7, Friday 2–7	-	Wood carvers. &c.
Saturday 3–6, Sunday 8–11	} - -	{ Stokers, chimney sweeps.
Wednesday 3–6, Sunday 8–11		
Wednesday 2–6, Friday 2–5			- -	Coachmen, drivers.
Wednesday 2–5, Friday 2–7, Sunday 7–11	-	Saddlers, glove- makers.
Wednesday 1–7 or 3–7, Friday 2–7 or 4–7	} - -	Vatters, coopers.
Monday 8–10.		
Monday, Wednesday, Thursday 7–12 and 1–7	} - -	Locksmiths.
Tuesday 7–12, Friday 1–7		
Wednesday 3–7, Friday 5–7, Sunday 8–11			- -	Smiths and car- riage builders.
Monday, Tuesday, Thursday 7–12 and 2–6	-	Carpenters and joiners.
(a) Winter: Thursday 1–7 and once between 7.30 a.m. and 12.	} - -	Upholsterers, decorators.
(b) Summer: Sunday 7–12, and one week-day 7–10 a.m.		
Wednesday and Saturday 2–7, and Sunday 8–11	-	Potters and stove makers.
Sunday 8–11, Tuesday 8–11 and 1–7	-	Watchmakers.

At Prankhstrasse School:—

Metalworkers	$\left\{ \begin{array}{l} 8-12 \text{ and } \\ \text{Do.} \\ \text{Do.} \\ \text{Do.} \end{array} \right.$	$\left\{ \begin{array}{l} 2-6 \\ 2-7 \end{array} \right.$	one morning and	-	Engineers.
			one afternoon	-	Mechanics.
			do.	-	Locksmiths.
			do.	-	Plumbers, fit- ters, &c.
Graphic trades.	$\left. \begin{array}{l} \text{gene-} \\ \text{rally} \end{array} \right\} \begin{array}{l} 8-12 \\ 7-12 \end{array}$	and 2-7	do.	-	$\left\{ \begin{array}{l} \text{Bookbinders,} \\ \text{printers, pho-} \\ \text{tographers,} \\ \text{lithographers,} \\ \text{\&c.} \end{array} \right.$
Monday, Tuesday, Thursday, Friday	$\left\{ \begin{array}{l} 2-3.30 \\ 4-7 \end{array} \right.$			-	Barbers.
Wednesday and Saturday	2-5 or 1-4			-	Bakers.
Monday and Wednesday	3-7			-	Confectioners.
In winter, in mornings	$\left. \begin{array}{l} \\ \end{array} \right\}$			-	$\left\{ \begin{array}{l} \text{House painters,} \\ \text{enamellers and} \\ \text{gilders.} \end{array} \right.$
In summer, only on Sunday				-	
Monday, Wednesday, Saturday	3-6			-	Innkeepers.
Tuesday and Thursday	2-6			-	Butchers.
$\left\{ \begin{array}{l} \text{Mondays and Thursday} \\ \text{\& Practical, in groups of 8, 8-12 and 2-6} \end{array} \right.$	2-6			-	Shoemakers.
8-12 and 3-7				-	Masons, &c.
9-12 and 7-9.				-	Jewellers and goldsmiths.
4-7 in summer, 2-7 in winter				-	Stucco and stone workers.
5-7 and 3-7				-	Dentists' assis- tants.
2-6, 5-7 (Sundays 8-10)				-	Glass and por- celain workers.

Each apprentice attends according to his class, 1st, 2nd, or 3rd year, for number of hours required, generally either on two or three half days per week.

LEIPZIG.

Four Municipal Continuation Schools:—

Lessons during the day to - Bakers, waiters, cooks, butchers, confectioners, barbers, clerks, errand boys, whose employers prefer afternoon instruction.

All the rest from 6-8 p.m.; or 10.30-12.30 on Sunday.

It is proposed to do away with the Sunday lessons for clerks, and instead to have two afternoons of 5-8 o'clock; and probably this arrangement will be extended to the other classes.

Trade School:—Can be attended by those liable to compulsory attendance at the above-named schools if they have already done one year of the latter and have good testimonials; four evenings a week 7-9; and Sundays 7-9 a.m. in summer, 10.30-12.30 in winter.

School for Printers:—Instruction from 4.30-8.30 p.m. every day, so that the apprentices only of one and the same year are away from business together.

Monday } Tuesday } Wednesday }
Thursday } Friday } Saturday } : Eight hours a week.

School for Publishers and Booksellers:—Two half-days' instruction: school open all day every day of the week.

Afternoon instruction is found necessary, partly for want of room for classes, partly because necessary to engage a permanent competent staff of teachers, apart from time wanted for subjects.

BERLIN.

Six hours a week, average for the year, but not under four per week—

4-6 and 4-8 or 5-8, and 4-7	} - - -	Building trades.
8-11 a.m.; 2-5 or 5-8 p.m.	- - -	Clerks.
4-7 or 5-8 twice, or 2-8 once	- - -	Metal workers.
8-12 a.m. and 6-8 p.m. or 4-6 p.m.	} - - -	Art crafts.
1-3 and 3-5 p.m., or 3-7 p.m.		
2-6 and 4-6	- - -	Provision dealers.
4-8	- - -	Potters.
4-8 and 6-8	- - -	Tailors.
4-7 and 5-8 or 2-5	- - -	Wood workers.
2-8 once	- - -	Leather workers.
4-7	- - -	Confectioners.
and so on.		

Generally, either one whole period of an afternoon (*e.g.*, 2-8 o'clock) or one long and one short period, making up six hours.

HAMBURG.

Optional attendance, and therefore necessarily in evening, as a rule.

Commercial Classes:—7-9 p.m.

And from Easter, 1909:—7-9 a.m. } Now a disused elementary school is
2-4 p.m. } available, and day lessons will be
8-10 p.m. } possible.

Chief Trade School:—

Mostly evenings and Sunday mornings (Carpenters' trade school is open during the day).

Lesser Trade Schools:—

Evening 7-9 p.m. and Sunday morning classes 8.30-12; the latter are preceded by a short service (Imperial Order).

The Locksmiths' trade school has eight hours a week; four on Sunday morning and two hours on two week-days from 6-8 p.m.

Similarly the Plumbers' trade school, but on one week-day from 3-7 p.m.

DÜSSELDORF.

Engineers:—

One morning 7-12, one evening 6-7 or 7-8 *in summer*.

One morning 8-12 and one evening 6-8, or two afternoons 5-8 *in winter*.

Electricians, Mechanics, and Watchmakers:—

In summer, 7-12 noon once, and 7-10 p.m. once.

In winter, two mornings from 8-12.

Plumbers and Fitters:—

In summer, 7-12 noon once, and 6-7 or 7-8 p.m. once.

In winter, 8-12 noon once, and 6-8 p.m. once.

Building Trades:—

In summer, one morning 7-12.

In winter, once 8-12 noon, and once 5-8 p.m.

Painters:—

In summer, once a week 7-12 o'clock.

In winter, one whole day 8-12 and 2-6, and one afternoon 2-7.

From 15 March to 15 June there are no classes.

Art Crafts:—

One morning 7-12, and one evening 7-10.

Printers :—

One morning 7-12, one afternoon 5-8.

Turners, &c. in factories :—

One morning 7-12, one evening 7-8 p.m.; or one afternoon 2-7, one evening 7-8; or two afternoons 5-8.

N.B.—7-8 p.m. does not affect the employer.

Gardeners :—

One whole day 8-12 and 2-7.

No classes from 15th March to 15th June.

Confectioners :—

Two afternoons 4-8.

No classes in December, nor on the days before the ten chief festivals.

Bakers :—

Two mornings from 10 to 1.

Shoemakers and Tailors :—

Eight hours, on the first two days of the week 8-12, or 2-6.

Upholsterers, Decorators :—

In summer : One morning 7-12.

In winter : One morning 8-12, or one afternoon 2-7; one afternoon 6-8.

Barbers and Hairdressers :—

Two afternoons 2-5.

Butchers :—

Two afternoons 5-8.

Errand Boys :—

In summer : Two mornings 7-9, or two afternoons 2-4.

In winter : " " 8-10 " " 2-4.

In Unskilled Employment :—

Two evenings 6-8 p.m.

APPENDIX C.

SUPPLY OF TEACHERS.

As the tendency is more and more in the direction of instruction in the daytime, and therefore of having separate school buildings, so, too, it becomes essential to have a staff of teachers appointed solely for continuation work. Accordingly the main body of them consists, at present, of elementary schoolmasters who have acquired by study and intercourse a knowledge of some special trade, so that they can teach in a practical manner the composition, book-keeping and drawing connected therewith, as supplementary to the manual or other processes taught by the expert or master workman. Much is done to increase the knowledge and insight of the elementary school teachers by means of special trade courses, and some of them go for short periods into workshops. In Hamburg and Düsseldorf courses are held, conversely, to give the practical workmen who teach, an insight into the principles and method of teaching and education, and this policy appears to be one that is full of promise.

STRASSBURG.

As there is a lack of special training, the teachers (from the elementary schools) have to master their subject independently, as, for instance, by study of the standard books, and by visiting workshops and businesses. They keep in touch, too, with the technical or practical teachers in order to secure

co-ordination of method. Conferences are also planned for discussion of the important questions arising from the continuation schools.

During 1907-8 there was one definitely appointed continuation school teacher, also 37 elementary school teachers and a master from a secondary school. The practical teaching or technical instruction was given by 15 master workmen. A second permanent teacher was considered necessary, not only with a view to transferring some of the teaching to earlier hours, but because it is important that the teacher himself should be fresh for work.

MANNHEIM.

In 1908 a preparatory course for teachers of commercial subjects was held, lasting three weeks, with about 40 hours' instruction per week. Much importance was attached to the criticism lessons which were given to various classes of the continuation school. The course was followed by an examination test.

Seventeen trade teachers were employed in the trade continuation school, with five master workmen and eight assistants.

MUNICH.

In 1907-8 there were employed in the *two* divisions of the trade or technical classes (for apprentices, and for assistants or masters), 8 directors, 11 *Oberlehrer*, 60 permanently engaged teachers (*hauptamtlich*), 209 elementary school teachers (*nebenamtlich*) and 188 expert teachers or master workmen. The latter are mainly permanently appointed, so far as the number of classes and hours requires it.

Teachers are encouraged and aided to make holiday journeys of observation (*Studienreisen*) to the industrial districts of Germany, and those who are from the elementary schools must acquire a special knowledge of the trade or craft in connection with which they teach German, arithmetic, and book-keeping.

LEIPZIG.

The teaching, even in the scientific subjects, is given almost entirely by elementary schoolmasters, while the drawing is taught both by qualified art masters and by practical workers in the trades, such as builders, painters, tailors, turners. This refers only to the four compulsory continuation schools, not, of course, to the trade schools and schools for publishers and for printers.

BERLIN.

The whole of the continuation schools in Berlin in 1907 employed close on 900 teachers. There was a sufficient supply of elementary school teachers, and technical and drawing masters; but as only few of the former had any technical knowledge, while the latter had little skill in teaching, it was necessary not only to increase the number of trade courses for teachers, but also the number of the permanent staff of continuation school teachers. Of the 894 employed 685 were from elementary schools and 111 were technical or practical men; nine were master workmen. The rest were mainly drawing masters or private teachers, *e.g.*, of commercial subjects.

Courses for teachers were held in the following subjects:—Upholstery, baking, hairdressing, book trades, modelling, metalwork, masonry and carpentering, house painting, pottery, also anatomy, hygiene and first aid. The courses included general instruction as to tools, machines, materials, practical exercises, and visits to workshops or factories.

HAMBURG.

Courses were held for teachers of drawing in the observation of plant forms and in practical perspective. There was also a course in the sketching of tools, &c., in connection with a previous course for metal workers. A useful course was held to give the trade teachers an insight into the methods

of pedagogy. In addition there was a six months' course for the teachers of plumbing.

For teachers of commercial subjects there is a permanent preparatory course of four hours a week, lasting for a year, and beginning each Michaelmas. The course just ending (1908-9) is attended by 30 pupils. One teacher added to his previous practical experience by serving for six months in a wholesale export house.

DÜSSELDORF.

A sum of 2,000 marks (£100) is included in the estimates for the training of continuation schoolmasters; the courses, however, have hitherto only been attended by the professional type of teacher. Now that practical men are also engaged to teach the drawing, trade knowledge (*Gewerbekunde*), German, and arithmetic of their trade, it is considered necessary to train them on the pedagogic side that they may be not only technical teachers but also educators of youth. Accordingly, a course of 10 to 12 lectures is to be held in education and method for such teachers as are appointed from the trades.

**The following Educational Pamphlets, issued by the
Board of Education, have been placed on Sale:—**

School Doctors in Germany.

By W. H. Dawson. (1908.) *Price 6d.*

The Problem of Rural Schools and Teachers in North America.

By Ethel H. Spalding. (1908.) *Price 6d.*

Report on Science Teaching in Public Schools represented on
the Association of Public School Science Masters.

By Oswald H. Latter. (1909.) *Price 4d.*

The Course System in Evening Schools.

By H. T. Holmes. (1910.) *Price 3d.*

These pamphlets can be obtained, either directly or through any Bookseller, from WYMAN & SONS, LTD., 109, FETTER LANE, E.C., and 32, ABINGDON STREET, WESTMINSTER, S.W.; or OLIVER AND BOYD, TWEEDDALE COURT, EDINBURGH; or E. PONSONBY, 116, GRAFTON STREET, DUBLIN.

BOARD OF EDUCATION,

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AND BELGIUM.

LONDON:

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PREFATORY NOTE.

The following report on Agricultural Instruction in France, Germany, and Belgium has been prepared by Mr. R. B. Greig, who was for a short time a Staff-Inspector under the Board of Education. It is thought that the efforts of those who are endeavouring to organize agricultural education in this country on a more effective basis will be furthered by this account of the manner in which similar problems are dealt with on the Continent.

The institutions which Mr. Greig visited in 1911 were the following: in France, the Farm School (*Ferme-École*) at Saut-Gautier, the Schools of Practical Agriculture (*Écoles Pratiques d'Agriculture*) at Chesnoy, Douai, and Le Paraclet, and the Agricultural School (*École Nationale d'Agriculture*) at Grignon. In Prussia, the Agricultural High School or College (*Landwirtschaftliche Hochschule*) in Berlin, the Farm and Garden School (*Ackerbauschule*) at Oranienburg, and the Agricultural School (*Landwirtschaftsschule*) at Hildesheim. In Bavaria, the Agricultural Department of the Technical High School at Munich, and the Agricultural Museum at Munich; in Wurtemberg, the Farm Schools (*Ackerbauschulen*) at Hohenheim and Ellwangen, and the Agricultural College (*Kgl. Landwirtschaftliche Akademie*) at Hohenheim. In Belgium, the Horticultural School (*École d'Horticulture de l'État*) at Vilevorde, the Schools of Housekeeping and Rural Economy (*Écoles Ménagères*) for girls at Bouchout and Berlaer; the School of Practical Agriculture for Boys (*École Moyenne Pratique d'Agriculture de l'État*) at Huy; the Agricultural Institute (*Institut Agricole de l'État*) at Gembloux, and the Agricultural Department of the University of Louvain.

The Board desire to acknowledge the courtesy which was extended to Mr. Greig by the authorities of these institutions.

It must be understood that the Board do not necessarily endorse all the opinions expressed in this pamphlet, for which the author is alone responsible.

Office of Special Inquiries and Reports,
November 1912.

REPORT ON FARM AND AGRICULTURAL SCHOOLS AND COLLEGES IN FRANCE, GERMANY, AND BELGIUM.

Introduction.

A report upon Foreign Agricultural Schools may describe them without comment or criticism, or it may be written from the standpoint which keeps always in view whether or not they are applicable to English conditions, and to what extent their imitation, in whole or in part, would fill up the gaps in English agricultural education. Several writers have fully described the systems of agricultural education in France and Germany without much comment, in particular, Mr. Austin Lee and Dr. Rose respectively, and the Belgian schemes have been outlined by Monsieur Paul de Vuyst and others. Moreover, it is matter of common knowledge to educationists, that those systems, in theory at least, provide a graduated and homogeneous programme of instruction in agriculture—in the wide sense—from the elementary school to the University.

Therefore I do not propose to traverse ground already covered, but to deal in detail only with those intermediate schools which exemplify distinct methods, and to examine them in the light of their possible adjustment to English conditions. Further, for the sake of comparison, I have included an account of a Swedish Agricultural School visited in 1909, and of an Australian Agricultural High School inspected in 1910. It is unnecessary to give a full account of all the institutions visited, and to describe them in the chronological order of their inspection or according to their nationality would be absurd outside of a diary of travel, I have therefore arranged those that are typical in six classes, more or less according to the grade of instruction and the length of the course.

Classification of Schools Visited.

- (a) Farm Schools situated on Farms.
- (b) Winter and Short Course Schools with no Farm.
- (c) Long Course Schools with no Farm.
- (d) Secondary Schools with an agricultural side, and a Farm.
- (e) Schools of Practical Agriculture with Farms.
- (f) Agricultural Colleges.
- (g) Itinerant Instruction and Womens' Institutes.

2 *Agricultural Schools in France, Germany, and Belgium.*

(a) FARM SCHOOLS SITUATED ON FARMS.

Ferme-École du Saut Gautier (France).

This school received from the Minister of Agriculture "la prime d'honneur des Fermes-Écoles," for general good management in 1911, so that it may be regarded as an excellent specimen. At one time there were over 70 of these schools in France, now there are only seven or eight and the number is decreasing. The object of the *Ferme-École* is to instruct the sons of farm labourers, chiefly in practical agriculture. It supplies the lowest grade of agricultural instruction in France, and can scarcely be dignified with the name of school, as it is a private venture on the part of the owner or tenant of the farm. In this case the farm of about 360 acres is mostly in grass to maintain a herd of milk cows of the Normandy breed, to raise a few horses, and to fatten some cattle. The management is of the kind usual in the neighbourhood and not remarkably good.

The institution is controlled by a committee of seven, including the Inspector-General of Agriculture, a Professor of Science, and two well-known local farmers. The staff, in addition to the Director, who is tenant of the farm, comprises a superintendent who is also book-keeper, a veterinary surgeon who gives occasional lessons, a gardener, a farm foreman, and a drainer.

The theoretical teaching, which occupies about one-third of the time, is very elementary, consisting of primary school subjects, a little science, some surveying and book-keeping, and a "complete" course in agriculture and horticulture. The pupils, who must be over 15, are admitted by competition after examination in reading, dictation, and arithmetic; the tuition and board and lodging are free, and the instruction extends over two years. The numbers vary from two or three to twelve, and a few young men are accepted on special terms at any season of the year.

The buildings and the accommodation for the pupils on this farm are of the most ordinary, even the roughest, description, and according to a student with whom I spent an hour, the out-door work is too long and too hard, teaching is only in vogue when no work can be found on the farm, and there is little to be learned which he did not know before. The opinion of a student cannot be taken very seriously, but certainly the general impression made by the whole institution is not favourable.

The *Ferme-École* may have served a useful purpose in the development of French agriculture, but its place is now taken to some extent by the Schools of Practical Agriculture (*see below*, p. 13), and it is more than hinted that the tenants of the Farm Schools have looked upon the pupils more as labourers than as subjects for instruction. The Farm School

on the above lines has no conceivable place in English education, for the reason that an English farm labourer's son can get practical instruction while working for wages, and as useful theoretical teaching as is given in the *Fermes-Écoles* by means of continuation classes and evening lectures. In some parts of Ireland where the art of agriculture is almost lost, it is possible that a Farm School might be a success under the strictest supervision.

Ackerbauschule, Ellwangen (Germany).

This school is one of four in the State of Wurtemberg, and each is situated so as to serve a particular area which differs in climate or soil from the others. The schools were founded to educate youths of the peasant class in theoretical and practical agriculture, and originally the course covered three years, though now it is reduced to two. The students must be 17 years of age, drawn from the farming class, strong, healthy, and of good character. They must pass a simple entrance examination, for which the elementary school can prepare them. Tuition, board and lodging, &c., are free, and at the end of the year, a small sum of money is apportioned to each youth according to his work and conduct. Six students are admitted every year, so that there are always twelve in residence. At Hohenheim there are twenty-four, and the number seems to vary between these limits.

The staff consists of a Director, who is also the tenant of the farm, which he cultivates and manages for his own profit and at his own risk at a nominal rent. There are also a science master, a veterinary surgeon, and a gardener and forester. The buildings are part of a magnificent old castle, with more than enough room for every possible purpose, and evidently too little money to equip them properly.

The course of study falls naturally into three parts, general, special, and practical:—

General Course. (700 to 720 hours per year):—

- (1) German language, including writing, spelling, composition, and business correspondence; (2) arithmetic, general and agricultural; (3) geometry, including surveying and levelling; (4) drawing of buildings, machinery, and plants; (5) chemistry, botany, physics, mineralogy.

Special Course. (460 to 470 hours per year):—

- (6) Soil and plant cultivation, cropping, &c.; (7) stock breeding, horses, cattle, sheep, pigs, and poultry; (8) agricultural industries, brewing, distilling, dairying; (9) land management, taxation, rural economics; (10) book-keeping and accounts; (11) veterinary science, anatomy, physiology and diseases of farm animals, horse-shoeing, &c.

4. *Agricultural Schools in France, Germany, and Belgium.*

Practical Course. (About one half of each day):—

Nearly all the work of the farm, garden, and experimental field is carried on by the students. They are also required to plan the work, to keep records of purchases and sales, and to assist in buying and selling. Numerous excursions are made to neighbouring farms, and once a year an extended tour of several days is made to inspect distant farms and estates.

The farm attached to this school extends to nearly 300 acres. It is managed according to the custom of the district, and maintains chiefly a herd of Simmenthaler cows for the sale of milk in the neighbourhood. The farm carries good clean crops, and there is an experiment field, somewhat unfortunately situated, where numerous variety, and some manurial experiments, are under way.

Theoretically, the scheme is excellent, and calculated to turn out well-trained and efficient young men, who will do much to improve the agriculture of their districts. But let us look at it from a practical standpoint.

In the first place, though the school was intended to train young peasant farmers and return them to the land, it is admitted that many become managers, inspectors, and officials, while some go on to higher agricultural institutions, and 7 or 8 per cent. follow non-agricultural pursuits. When one or two of the students were questioned, it was found that inspectorships were their ambition, and one at least intended to farm in the Argentine. It is further pointed out in the prospectus of the school that Winter Schools of Agriculture are now carrying out the functions of the Farm Schools, and, therefore, other students than the sons of peasants are now being accepted by the latter. The *Ackerbauschule* is thus a partial failure, and less a training ground for poor young farmers, than a stepping-stone to salaried positions.

Again, a large amount of time spent in acquiring manual dexterity may be necessary in Germany, but in England it would be wasteful of time and money. Another drawback to the school is the custom of requiring the Director to manage the farm at his own risk. This method has the one advantage of cheapness which is more than counterbalanced by the unavoidable tendency, for which one can scarcely blame the Director, to economise in certain directions. The point need not be laboured, but the livestock, cowsheds, stables, dairies, &c., on this and other farm schools under the same system, are sufficient evidence of how economy handicaps demonstration. The best use cannot be made of a farm as a demonstration area, and field experiments on a reasonable scale become impossible when the Director must first consider his own pocket. In some cases the cost of field demonstration is borne by the State or

other authority. In such cases there should be much more experimental work in evidence.

The lower standard of living in Germany disarms criticism of the students' accommodation, but there is only one classroom, with no modern fittings, and there is no work room or laboratory. On the other hand the German Farm Schools must not be confused with the much inferior French *Ferme-Ecole*, where the instruction of all kinds is on a lower grade. The teaching at Ellwangen is thorough and excellent, judging by the drawings of plants and machinery, the plans and sections, and the collections of herbs and insects made by the students. How far the excellence of the instruction is due to the lavish provision of models, diagrams and apparatus for the teaching of agriculture (as distinct from chemistry, botany, &c.), it would be hard to say, but in this respect such a low grade farm school as that of Ellwangen is better equipped than any English agricultural college.

The Hohenheim Farm School, except that it contains twice as many students, has a larger farm, and shares part of a group of buildings with the contiguous agricultural college, differs but little from that at Ellwangen.

École Ménagère (School of Housekeeping and Rural Economy), Bouchout (Belgium).

This school for girls at Bouchout between Antwerp and Brussels, is one of a number organised for the purpose of giving sound instruction in household management and rural domestic economy to the daughters of working farmers, with a view to creating in them a love of country life, an appreciation of their duties, and the possibilities of a woman's life on a farm. This type of school has been in operation for 20 years, and the results leave no room for doubt as to its utility and success. The full number of 18 girls live in the school and come for a year, though occasionally one or two remain longer. They are from 15 to 17 years old and all the daughters of farmers. No fees are charged, but they pay for their food and buy and cook it themselves. Each girl is supplied in turn with the week's housekeeping money, and must make the best of it for the whole party. The subjects taught are laundry work, dairying and poultry keeping. The headmaster and two women teachers comprise the staff. Most of the work is practical, but some theoretical instruction is given, along with lessons in French and Flemish composition. A small farm of 25 acres supplies food for nine cows and one horse, but the girls do no outside work beyond the confines of a small garden in which common vegetables are cultivated for the kitchen. The general management of this school is admirable, the equipment is good and the buildings are suitable, but the methods of instruction deserve most praise. Examples of these

methods are as follows :—A small quantity of milk of a known quality is separated on consecutive days by different separators and the results noted. The washing is done by hand one day and by machine the next, and the times and other data tabulated. Then different washing machines are used under the same conditions. A girl cuts bread by hand one day and by machine the next, and each operation is timed. One garment is sewn entirely by hand and another by machine, for the most part, and timed. The walls are decorated with photographs in pairs, each pair showing the right and wrong method of such operations as milking cows, paring potatoes, feeding poultry, washing dishes, arranging flowers on the table, &c.

Almost every duty which falls to the lot of the farmer's wife in Belgium is the subject of instruction and explanation, not only from the standpoint of economy of time, labour, and money, but with the object of showing that life on the farm can be made engrossingly interesting and full of pleasure. Many of the earlier pupils of this and other schools of the same type are now farmers' wives and active members of the Womens' Institutes which will be referred to below, and the best certificate of the utility of the instruction given in the Schools of Rural and Domestic Economy is the frequently expressed remark of the members of the Womens' Institutes, quoted by the Director of Agricultural Education, "We want to learn what those girls have learned."

Of a slightly different organisation is the girls' school at Berlaer in the same district. Here the school is managed by the Sisters of Saint Cœur de Marie and it receives a grant from the Government for instructing the older pupils in household and dairy management. The farm buildings are exceptionally good and the best use is made of them by an agricultural instructor and three instructresses. Again, we find it emphasised that the object of the instruction is to inspire the girls with a love of the country and its duties and pleasures, so that they may live useful lives for the good of others and the honour and prosperity of Belgium.

The Belgians appear to understand that "where there is no vision the people perish," and seem to find that visions are as good as profits for baiting the lines of technical instruction.

(b) WINTER AND SHORT COURSE SCHOOLS WITH NO FARM.

*Svalof High School and Winter School (Sweden).**

This school, which I visited in 1909, is interesting because it embodies part of the organisation of the proposed English

* For details in regard to this school I am indebted to Mr. C. C. James, C.M.G., Deputy Minister of Agriculture, Toronto, who accompanied me, and who had the prospectus translated from the Swedish.

Agricultural Institutes, viz., a winter course for young men and a summer course for young women. The buildings are near the little village of Svalof in Southern Sweden, and they include two large lecture halls with library and cloak rooms, and a large and fine gymnasium with modern equipment. In a separate building are the living rooms of the students, the masters' and matron's apartments, and the dining rooms. There are 20 bedrooms with accommodation for two students in each room.

The programme of the school includes:—

1. A winter term for young men from November to April, consisting of a High School and an Agricultural College Department.
2. A summer term for young women from May to July consisting of a High School and a Household Training Department.

High School Department. Winter Term, for men only:—

The object of this department is to give general instruction in ordinary school subjects somewhat on the lines of the Danish High Schools. Among other subjects, chemistry and natural history are taught as well as book-keeping and surveying and the students get daily practice in the gymnasium. There is no entrance or exit examination, but pupils must be at least 18 years old.

Agricultural Department. Winter Term, for men only:—

The object of this department is to give general agricultural knowledge, chiefly theoretical. Secondary instruction is given in grammar, history, geography, methods of local administration, arithmetic, and hygiene; but the principal training is in chemistry, botany, zoology, agriculture, veterinary hygiene, dairy work, forestry, gardening, farm management, surveying, and lastly riding. Milk testing for the training of milk control officers is dealt with fully. In addition, instruction is given daily, jointly with the High School, in singing and gymnastics.

There is no farm attached to the school, but those who finish the term and pass an examination, if they wish for practical training, are placed as paid assistants on a farm from April to October, and on this farm they receive instruction from the owner of the property who works in co-operation with the school. There are also one or two scholarships of about 25*l.* each which enable recipients to go elsewhere for further information or to increase their knowledge by travelling.

The students of the Agricultural Department must be 19 years of age, and need not undergo an entrance examination if they have passed out of a State supported High school,

8 *Agricultural Schools in France, Germany, and Belgium.*

or any similar institution. For those who have no such qualification, the chief subjects of the entrance examination are elementary geometry and surveying, elementary science, and the principles of book-keeping. The fees are small and in some cases are not exacted. Lodging seems to be free or included in the tuition fees, but a charge is made for board—about 1s. per day.

High School Department. Summer Term, for women only:—

The work of this department for girls in the summer is the same as for men in the winter, except that the term is shorter; the science teaching and book-keeping are modified towards household management, hygiene is prominent, and sewing is taught. There is no entrance or exit examination, but students must be over 16 and under 20 years of age.

Household Department. Summer Term, for women only:—

The object of this branch is to train girls to become careful and efficient home managers, and the scheme is worked on the same lines as that of the Winter Agricultural School for men. There is this important difference, however, that the girls taking the course of the Household Department must be at least 18 years of age, must have been employed in house work, and passed through the High School. The programme of instruction includes elementary chemistry and natural history, with special reference to the home; methods of food preparation, cooking, home hygiene, the purchase of household supplies and furniture, book-keeping, arithmetic, gardening, and poultry keeping. The term concludes with a public examination and the issuing of certificates to those students who satisfy the examiners. The State gives scholarships to those of small means, and, for the rest the fees are slightly less than those for the men.

This school is in the midst of an agricultural area which is as well farmed as any area in England or Scotland. It adjoins the world famous Swedish Seed Station, which is presided over by Dr. Nilsson, and it is within a mile of what is probably the best managed farm in Sweden, so that it has almost every external advantage. But it would have succeeded without these advantages, and in England a similar school forming part of an Agricultural Institute would be equally successful.

(c) LONG COURSE SCHOOLS WITH NO FARM.

Landwirtschaftsschule, Hildesheim (Germany).

On the outskirts of Hildesheim, a city of 56,000 inhabitants, in the Province of Hanover, is an agricultural school of

exceptional interest. It combines four functions. In the first place it is a high class agricultural school (*Landwirtschaftsschule*) with a three years course, at the end of which a student who passes a certain examination is exempted from one year's military service. In the second place, it is a lower grade agricultural school (*Ackerbauschule*) with a course varying from a year to two and a half years, according to the previous training of the entrant. In the third place, it provides a course of two half years for the sons of farmers who have left school and wish for some agricultural knowledge. It is therefore a Winter School of Agriculture (*Landwirtschaftliche Winterschule*). Lastly—it is the Institute for the Chamber of Agriculture for the Province of Hanover. For two other reasons it is of peculiar interest—it is extremely successful (over 90 per cent. of its pupils take to farming or agricultural pursuits), and it has no farm. At one time a farm was attached to the school, but it was given up because it interfered with the work of the students and entailed unnecessary expense. The Director considers, however, that a farm would be a useful adjunct, provided it was used for demonstration purposes, and did not involve manual work on the part of the students. To overcome the want of a farm the students make numerous excursions in the neighbourhood, and once a year a prolonged tour of several days. Hildesheim is in the middle of a fertile plain, intensively cultivated in holdings of all sizes, and there are several agricultural factories in the town or near at hand, so that the situation is exceptionally favourable.

A feature of this school is the minute classification of the students on entry. Age is not considered, only the previous training which fits them best for any particular class. For example, there are five classes in the *Landwirtschaftsschule*, and entrance to the two lower is obtained by passing an examination in reading, writing, and arithmetic, but for the class above German and French are required in addition. Then for the third class a leaving certificate from the third class of a gymnasium, realgymnasium, or other "privileged" institution is necessary. For entrance to the two highest classes, a certificate from a similar agricultural school, or a correspondingly difficult examination is a necessary qualification.

The same principle is carried out in the *Ackerbauschule*, in which there are four classes, but entrance to the lowest is gained by a certificate from an elementary school. The Winter School students must be 20 years of age, or possess the certificate of exemption from one year's military service. Thus each class is fairly uniform in attainments, and moves into the higher one with few stragglers or failures.

10 *Agricultural Schools in France, Germany, and Belgium.*

In these two schools the fees average about 8*l.* per year. None of the pupils are in residence, all board and lodge in the town at an estimated cost of 35*l.* a year.

The instruction is of a general character to the extent of about half the time table, while the remaining half in each school is given to the ordinary science subjects and to agriculture. In the Winter School the first winter is devoted to elementary science and the second to agriculture.

In all departments the teaching of agriculture is on very sensible lines. No attempt is made to teach the technicalities of farming, only the underlying principles are dealt with, as it is recognised that the schoolboys have not enough, and the winter pupils have already enough, practical knowledge, and therefore technicalities would be mischievous in one case, and unnecessary in the other. For instance, the details of stock management are not entered into, but the principles of feeding are discussed; the boys of the chemistry class are not taught to analyse soils, manures, and feeding stuffs, but to understand and appreciate the analysis; the botanical students learn their botany largely from agricultural types, do not become expert microscopists, but can recognise and identify by external signs the common fungoid and insect diseases of plants. The Director believes that a farmer who analyses his own manures and feeding stuffs, or investigates potato disease with a microscope, is wasting time which should be employed in managing his farm, and is doing work which is better and more cheaply done by an expert, therefore, he argues, why teach the boys what they cannot afterwards make use of?

Two other aspects of the work of this school are worthy of mention, the school garden and the old students' club. The school buildings stand in a fair-sized garden which is laid out in small experimental plots and much used for demonstration and the supply of specimens, but in which the students do no work. There is also a small orchard, and much of the fruit is preserved, again as a demonstration to the students. The garden is evidently a very useful adjunct. The old students' association has a membership of 1,600 and meets every year at the school. It is evidently regarded as an admirable organisation for maintaining interest in the school and its work. As the Institute of the Chamber of Agriculture for Hanover, the school is apparently the chief meeting place and general office of the farmers of the Province.

Though the Hildesheim school is largely engaged in ordinary school work, possesses no farm, and makes no attempt to teach practical farming, it has been very successful. It is reasonable to assume that part of its success is due to the fact that all the pupils are intended for an agricultural career. As a means of carrying on the boy who intends to farm, without the hiatus

of a year or more on a farm at home, it is excellent, and inspires the hope that schools on similar lines collecting their pupils from a wide enough area, would be equally successful in England, when farming opinion has been educated up to them.

(d) SECONDARY SCHOOLS WITH AN AGRICULTURAL SIDE
AND WITH A FARM.

I visited one or two schools of the above description in Victoria, Australia, in December 1910, and I propose to refer briefly to them, and especially to one at Ballarat, a district once famous for the production of gold, now almost equally famous in Australia for high-class farming.

Ballarat Agricultural High School.

This school is one of a number which have been organised in Victoria since 1906, for the further education of boys and girls on the assumption that the majority of the boys would become farmers, and the majority of the girls would proceed to higher institutions for training as teachers. The direct aims of the Agricultural High Schools, so far as the boys are concerned, have been described as follows:—

1. To give boys such education as will direct their interest specially towards the land as an excellent means of gaining a livelihood, and, further, to afford the practical experience and scientific training necessary for success.
2. To magnify agriculture as an occupation and a profession, so that the boy may leave the school as an interested labourer, or for further study and practice on an experimental farm, in an agricultural college, or at the University.
3. To provide a central institution for the dissemination of agricultural information by evening lectures, conferences, or literature.
4. To superintend the government experimental plots and to record and interpret the results.
5. To provide a summer school in agriculture for primary school teachers.

The following are some of the conditions under which the Minister of Public Instruction established the schools:—

- (a) At least one half of the cost of the necessary buildings and equipment was contributed by local subscription.
- (b) An area of ground of not less than 20 acres was provided in a position convenient to the High School, and vested in the Minister.
- (c) At least 50 students paying prescribed fees were guaranteed before a proposal to establish a High School was entertained.

12 *Agricultural Schools in France, Germany, and Belgium.*

- (d) Agricultural High Schools were to be under the control of the Minister, who would be assisted in the questions affecting the course of study and general policy by a committee consisting of the Minister of Agriculture, the Director of Education, and the Director of Agriculture.
- (e) A local council, consisting of not less than five members, to be appointed by the Governor in Council, was to be established for each High School district. Its duty was to exercise a general oversight in matters affecting their school, to expend the maintenance allowance allotted to each school, to exercise such supervision as the Minister may authorise over the farm operations, and to advise the Minister in all matters specially pertaining to the school.

The pupils must be 14 years of age and show satisfactory evidence that they are qualified to profit by the course of study in each school. The local council has the power to nominate a certain number of students for free instruction, the number not to exceed 10 per cent. of the total number of paying students. None of the pupils are resident; all are boarded in the neighbourhood under careful supervision. The fees are about 8*l.* to 10*l.* per annum.

The syllabus of instruction includes the ordinary school subjects to the extent to which they are carried in the ordinary grammar school, although the contents of the subjects are varied, and one-third of the pupils' time is given to agriculture. Sloyd, farm handicraft, and drawing are prominent in the curriculum. The science subjects are chemistry, physical geography, and climatology; the agricultural science in the syllabus is elementary botany and zoology, and from my observation the methods, which are chiefly experimental and with a strong agricultural basis, are very efficient. The "principles of agriculture" deal with soils, particularly Victorian soils, rotations and cultivation of crops, irrigation, feeding and general management of farm livestock, ensilage, first aid to animals, and the general principles of the valuation of fertilisers, milk and cream, farm crops and animal products.

The farm attached to the school is worked in such a way as to illustrate the principles laid down in each section of the syllabus, it is used as a centre of experimental work, and where it adjoins the school, as at Ballarat, the boys are constantly at work on it. When it is at a distance, the pupils spend a certain number of hours there each week, and sleeping accommodation is provided, so that a limited number may, in turn, see and take part in the whole round of farm work. As none of the farms are more than five years old, much of the preliminary work of building, clearing, draining, road making, &c., has been done by the pupils, and at Ballarat the grounds

surrounding the school have been laid out, planted, and kept in order by them. The High Schools exhibit produce, experimental material, and students' work at the show of the Royal Agricultural Society at Melbourne; the competition is very keen, and no doubt is one of the factors in stimulating the remarkable interest the boys take in the farm.

I have dwelt upon the agricultural side of the school, but it must be kept in mind that most of the girls and some of the boys are hoping to be teachers, or to follow pursuits other than agricultural, and their education is therefore on more general lines, and includes languages, and, in the case of the girls, domestic economy. Mr. Frank Tate, the Director of Education for Victoria, and the chief promoter of these schools, says that the reacting effect of the agricultural side upon the ordinary traditional subjects is great and satisfactory, and encouraged by these results the Department intends to develop High Schools with a commercial and an industrial side on precisely similar lines. Certainly I have never seen more energy and interest than was displayed by those boys and girls when observed at work. Mr. Tate says, further, that the fault of the vocational school in the past has been to make it narrowly technical, a pregnant opinion. In considering these schools it must be admitted that Victoria is a better field for them than England. In Victoria farming is simpler and rougher than in England; the farmers in the former country are less prejudiced and more willing to be instructed, and to have their sons instructed, and it is much easier to teach a boy of 16 what is obviously useful and what his father can appreciate. Nevertheless, similar schools would probably succeed in England if (a) a local interest could be aroused in them; (b) the majority of the boys were intended for farming; (c) the science masters were as well trained as the Victorian teachers; and (d) the land attached were used as a glorified school garden, and not as a means of learning farming.

(e) SCHOOLS OF PRACTICAL AGRICULTURE WITH FARMS.

I visited three of these schools in France, but a description of one near Amiens will be sufficient.

École Pratique d'Agriculture du Paraquet.

The Practical Agricultural Schools of France are over 40 in number, and they were founded to fill up the gap between the *Ferme École*, which is for the sons of labourers, and the National Agricultural Schools (*Écoles Nationales d'Agriculture*) which are for the sons of large farmers and proprietors. There was no institution suitable for the sons of small farmers and peasant proprietors, hence the establishment of the *Écoles*

Pratiques d'Agriculture. These schools have been defined as "farms of the better class, carried on with a view to profit, "taking paying pupils who are taught the theory and practice "of the type of agriculture peculiar to the district in which "each school is situated." But at Le Paraclet, as elsewhere, we find the tendency, apparently unavoidable, to develop the school into the college; for the prospectus invites the sons of proprietors and farmers to acquire professional instruction in agriculture, and young men of good family who, though not wishing to farm themselves, may desire to find occupation in the supervision of their estates, or to become agricultural experts, or to go on to a higher institution. There is no word here of the peasant farmer.

It is generally allowed that these schools have been successful, but it is also admitted that they turn out an altogether disproportionate number of young men who have no intention of cultivating the soil. An examination of the programme and the management of the school may throw some light on this phenomenon, and it is worth while to make a close inspection, for this is a type of school which has been suggested as worthy of imitation in England.

The school buildings at Le Paraclet comprise chemical, botanical, and agricultural laboratories; all old, small, inadequate and badly furnished. The sleeping rooms are wanting in privacy and neglected looking, but as some of the students were on holiday this may be a temporary condition. The farm buildings are large enough, but old, and not fitted for modern farming; there is a fine garden and orchard. The farm extends to about 250 acres and seems to be very well managed, but the best feature of the practical side of the school is the collection of implements and machinery, which include steam, gas, and alcohol engines, and food preparing rooms, which are models of arrangement and efficiency.

The course of instruction covers three years, and as twenty students enter every year there are generally sixty in residence. They must be over 13 and under 18, and they are drawn from primary and secondary schools and colleges. The requirements for entrance are proficiency in French, writing and composition, arithmetic, history and geography. A knowledge of agriculture, geometry and elementary science is counted to the credit of the students. The fees are about 20*l.* per annum, and there are twenty bursaries.

The syllabus of theoretical instruction is as follows:—

First year.—(1) French grammar and composition, arithmetic, geometry, surveying and levelling; (2) moral and civic instruction, of which some of the sub-headings are:—the rights of the family and society, sobriety, temperance, economy, ignorance, avarice and vanity, the government, the department, the commune, &c; (3)

general agriculture, soils, cultivation and improvement, laying out of farms, farm buildings; (4) physics, chemistry, zoology, botany; (5) horticulture.

Second year.—(1) Geometry and mensuration, surveying and levelling; (2) crops, seed selection, cultivation and harvesting, implements and machines; (3) physics, chemistry, zoology and geology; (4) book-keeping and accounts; (5) economics, production, circulation and distribution of wealth; (6) horticulture and arboriculture.

Third year.—(1) Algebra, geometry, surveying and levelling; (2) rural legislation, agricultural associations, co-operation; (3) chemistry, analytical and agricultural; (4) entomology, vegetable pathology, apiculture, pisciculture, arboriculture; (5) special agriculture, special crops, farm motors, technical agriculture, sugar manufacture, distilling, brewing, &c.; (6) zoo-technique, study of the anatomy, physiology and pathology of farm animals.

Practical instruction includes the farm operations, all of which are conducted by the students. When the farm was visited, wheat was being threshed from the stook and nearly all the labourers were students. The third year students plan and direct the work of the farm, make excursions to neighbouring farms, and attend markets. They also make numerous botanical and geological excursions and visits to factories and breweries, on the whole spending about half the time in the class-room and half in the field and on excursions.

The staff comprises 11 teachers, from the Director at the head to an instructor in handicraft. Some of them are former students of the National Agricultural Schools (which are a grade above the school under discussion), and generally speaking they are all well qualified.

Other Schools of Practical Agriculture.

The other schools of Practical Agriculture which I inspected were similar in character, but at one of them at Le Chesnoy, near Montargis, the course covers only two years, and the instruction is less ambitious. At Douai the buildings are modern and excellent, and the museum and collections of teaching materials are on the German scale and exceptionally good.

There are several schools of practical agriculture in Belgium giving instruction in the class room and on the farm. They are of three grades, the course varying from one to three years. One of the lower grade was inspected at Huy near Namur, but nothing was found, worthy of remark.

The fact that these schools are increasing in number, and that they are popular and well filled, is evidence that they are supplying a certain demand, but that they are reaching the class for which they are intended is doubtful. They provide an excellent education—of that there can be no question—and

they make a convenient stepping-stone to higher agricultural colleges, and ultimately to the government appointments which seem to be the ambition of so many young Frenchmen. It seems fairly clear that many of the parents and students regard the school as a means to a salaried position and not to efficiency in farming, for the elaborate and overloaded programme of theoretical instruction is unsuitable for a prospective small farmer. In England there are at least two institutions, at Holmes Chapel and Newport, which are, in almost all essentials, schools of practical agriculture in the French sense, but it cannot be asserted that the majority of their students are the sons of small farmers; therefore to adopt the French school in England is to multiply the Holmes Chapel type, possibly with excellent results, but certainly without providing for the poorer and smaller class of farmer.

One gets the impression that while the pupils of French agricultural schools and colleges are learning the ordinary good practice of the district, they are not learning improved methods, or if they are, the practice of the district is at a low ebb. Directors of schools and colleges say that they would farm differently if they were allowed, but they are required to comply with the custom of the neighbourhood. The criticism made so long ago by Lawrence Sterne that "the French conceive better than they execute" recurs to the observer.

École d'Horticulture de l'État, Vilevorde (Belgium).

This is a fine institution near Brussels for the training of boys of 15 to 17, chiefly in gardening and forestry. There are about a hundred students, nearly all the sons of farmers and gardeners, and only 10 per cent. of them do not become gardeners. They live out and pay no fees, and some of them come from a distance daily. In addition to the regular pupils who take the three years' course there are a few "*auditeurs libres*" who come for a limited time and attend only the theoretical instruction. Occasionally one or two women or girls attend this school, and these have included an American, but no one from England or Scotland. The buildings are large and well equipped and the gardens in perfect order and condition. The programme of class room instruction is elaborate and far beyond any horticultural instruction given in this country. Three hours per day are spent in the class rooms and three in the garden every day, except Saturday, when the whole day is spent outside. The outside work is organised in five departments over each of which is a Professor or Director extremely well qualified. The departments are:—

1. Houses (greenhouses).
2. Vegetables.
3. Orchards.
4. Flowers.
5. Forestry.

There is a colonial section for instruction in tropical culture, and a Sunday course of lectures for gardeners in employment, most of whom come from some distance.

The remarkable feature of this institution apart from its great efficiency, is the fact that the Belgian Government considers it profitable to give the best possible horticultural education free of charge to young gardeners.

(f) AGRICULTURAL COLLEGES.

It would add little to the usefulness of this report to describe the agricultural colleges which I inspected in France, Germany, and Belgium. They have been dealt with by several writers, and they do not come within the scope of intermediate agricultural education. It may however be worth while to refer to the outstanding impressions made by those colleges on one who has seen some 30 or 40 similar institutions in nine or ten different countries.

It is generally known that the staffs of continental colleges are much larger and on the whole better qualified (scientifically) than ours, but that is a result of time and money, and doubtless we shall soon reach the same level. It is not so generally recognised that the teaching equipment is far ahead of ours, especially in regard to museum specimens and models. Such colleges as those of Hohenheim or Berlin, or the Agricultural Department of the Technical High School at Munich, have collections with which we have nothing whatever to compare. For example, the Berlin Museum has 344 model ploughs, perfect in every detail, in addition to 20 or 30 full-sized ploughs of the most recent construction. This museum is probably the best in the world, but if we inspect a less famous centre such as the Agricultural Department in Munich, we find five or six rooms filled with teaching material of the most valuable description, not one-tenth of which would be found in a similar department in this country. It is true that this visual method of education is carried in Germany to the verge of absurdity. In the *Deutsches Museum* in Munich, for example, much space is given to model fields of grass and stubble which are being turned over by model ploughs of various eras, drawn by model oxen or horses, and held by model labourers, four inches tall, dressed in the costume of the period. Again, two steam engines about eighteen inches in length and apparently perfect in every detail are shown in the act of hauling a model steam plough across a model field covered with model dung. Several rooms are given up to these and similar toys, such as working models of self-binders, &c. Without going to such lengths it is evident that we have much to learn from Germany in the provision of teaching material, on the value of which all the professors and lecturers are most emphatic. On the other hand, Germany has much to learn

from us in the use of machinery, and one is inclined to assume that the Germans keep their best machinery in their museums while we keep ours in the fields, for a journey of a thousand miles during harvest showed only three self-binders at work, the rest of the crops being cut with hook and scythe chiefly, however, upon small farms. Even in the lower grade schools the collections are more complete and much better classified than in our highest types of agricultural colleges, and in France also, though the collections are not generally so good as the German ones, they are better than ours. Indifference to this kind of equipment seems to be an Anglo-Saxon characteristic, for even the rich and lavishly appointed Canadian, Australian, and American colleges are deficient in this respect.

In some cases the buildings are superior; at the French National Agricultural School at Grignon the new buildings, which are nearly completed, are almost perfect for their purpose and would be well worth a visit by any English authority contemplating the erection of College buildings. On the other hand, the buildings of farm schools and schools of practical agriculture are often old and out of date.

In the facilities for research, and in the volume of work turned out, the continental colleges are at present vastly superior. For example, at Louvain, in Belgium, the Professor of Zootechnique has at his command large and well-equipped stables, cowsheds, piggeries, and poultry yards, in which are various breeds and races of domestic animals used entirely for purposes of research. At the Berlin College is to be found the most up-to-date apparatus for ascertaining the alimentary income and expenditure of a horse, ox, or sheep with absolute accuracy. This respiration chamber costs from 2*l.* to 5*l.* per day when occupied by one animal.

At Gembloux, in addition to the fine physical, chemical, and biological laboratories in which much research is carried on, the farm is used to provide data for costs. The time and labour required for various operations are made the subject of exact inquiry, and crop and stock balance sheets are compiled.

(g) ITINERANT INSTRUCTORS AND WOMENS' INSTITUTES IN BELGIUM.

In discussing any complete scheme of agricultural education, reference should be made to the means of instructing the present generation of farmers and their wives. The most powerful levers for their economic and social elevation are the itinerant instructors and the Womens' Institutes, and both are best represented in Belgium.

The Itinerant Instructor.

The State Agronomist or itinerant agricultural instructor is generally admitted to be the chief cause of the wonderful

improvement which has taken place in Belgian agriculture during the last quarter of a century. The results of his instruction can be measured in various ways, and quite definitely by the agricultural statistics, which show that Belgian farms produce 10,000,000*l.* more annually than they did twenty-five years ago at a cost for every kind of agricultural education of not more than 40,000*l.* a year. What is now the densest population in Europe is almost supported by the product of its own farms, which yield an average of 20*l.* per annum per acre as compared with less than half from British land.

The State Agronomists, who are stationed, one or more, in every Commune, met at first with some opposition and much apathy. For the first few years they delivered single lectures at any centre likely to produce an audience, but as interest increased they developed their lectures into courses, and now they base their instruction on ten groups of subjects from which a course of fifteen lectures extending over the winter months is selected.

The groups are :—

1. General conceptions of agriculture.
2. The rational feeding of cattle.
3. Zoo-technique and farm hygiene.
4. The rational treatment of milk, butter, and cheese.
5. Agricultural book-keeping and accounts.
6. The raising of poultry.
7. Rural law.
8. Elementary ideas of rural economy.
9. Co-operation and insurance.
10. Agricultural hydraulics.

A village selects a course from these groups and the State Agronomist arranges for the instruction, much of which must be supplied by specialists. As a rule a number of farmers, chemists, managers of creameries, and accountants, who are qualified by education and experience to instruct in their own specialities, are employed for part of the course and paid a fee for each lecture. A State Agronomist may thus have ten or fifteen colleagues under his direction and supervision. A somewhat similar procedure has been tried successfully in Canada. The lines indicated are those on which some English counties are now working, with this important difference, that, as a rule, there is no continuous course of instruction in any one village throughout the winter. The result of all this mental activity in Belgium is a rapid increase in rural prosperity, shown not only by the growth of the national agricultural income, but by the numerous co-operative societies (some of which contain 50,000 members), stock insurance associations, credit banks, and farmers' creameries.

Womens' Institutes.

The success which has followed the formation of Women's Institutes in Poland, the United States, and Canada incited some social and agricultural reformers in Belgium to organise similar means of education. It was recognised that the rôle of the farmer's wife had not been considered of sufficient importance in the national economy, and it was shown that the net value of the produce of the dairy and poultry yard (over which, in Belgium, the women exercise complete control), was of such dimensions that if, for no other reason, the farmer's wife required professional instruction. But the Womens' Institutes do not confine themselves to such a narrow sphere. They have for their objects the social and moral improvement of country life, as well as the increase of farm knowledge, and in all ways they are a success. In 1906 there were two Womens' Institutes, in 1910 there were 74, and shortly there will be one or more in every Commune.

The Womens' Institute is an association of farmers' wives, daughters, and sisters who meet periodically for the following among other purposes: to hear lectures, read papers, and study books on professional subjects, *i.e.*, on dairying, poultry keeping, gardening, and all the minor rural industries; on cooking, laundry work, and dressmaking; on household sanitation, home hygiene, and ambulance methods; on the choice and care of furniture and pictures; on the rearing and education of children, and on any other means for the improvement of country life. The institutes have also a recreative side, and attention is given to music and literary subjects.

The women work in association with the State Agronomist, the peripatetic classes, and the local schools of rural and domestic economy. Assistance is given by the Government under certain regulations and the members pay a small subscription, but as the conferences and discussions are chiefly addressed by members, by teachers in State Institutions, and by others who give their services free, the expenses are not great.

A National Committee co-ordinates all the Institutes, and one or two periodicals, notably *La Fermière*, have been created for, and are entirely devoted to, the service of the Institutes. There can be no doubt that these Institutes will exert an incalculable influence upon the social life of rural Belgium.

General Conclusions.

After inspecting the institutions mentioned above, and weighing what I have seen of many agricultural colleges and schools in other countries, the following observations occur to me in connection with the provision of lower and intermediate agricultural education in England,

No system known to me is suitable for adoption in England *en bloc*, but much that I have seen is worthy of imitation and trial.

Most of the systems of intermediate agricultural education on the continent and in our Oversea Dominions include a protracted period of manual work on the school farm. This is unnecessary in Great Britain, for the general farm practice of England and Scotland is superior to that of any other country, with the possible exceptions of Denmark and Belgium, and therefore our agricultural education should be directed mainly towards change of methods and systems in farming, and to inculcate an appreciation of the possibilities of improvement of land, crops, and live stock. A school of practical agriculture, where half, or more than half the time, is spent in acquiring manual dexterity and familiarity with such operations as ploughing, stacking, and threshing, is out of place in England.

When we consider the different farming classes which must be educated, and begin with the labourer's son, there is no foreign system better than nature study and school gardening, followed by continuation classes, lectures, and short courses, along with training in such arts as stacking, hedging, &c., where the practice of the district is markedly inferior. The farm school of France is not worth discussion, as the English boy can learn his practice when working for wages, and get his theory from short courses and evening classes.

The sons of small farmers have the same requirements, and will have the same opportunities as the sons of labourers, and for each there is the Winter School, the county instructor, and home reading as further means of education. Schools of the type of the Schools of Practical Agriculture in France are not for such boys unless they obtain scholarships, nor is the German Farm School adapted to our conditions, from either the farming or the national standpoint, for the two summers spent at the school are so much lost labour to the small farmer without much gain to the boy, and all such elaborated schools have a tendency to wean the students from the land to become minor officials or functionaries.

Secondary schools with an agricultural side or bias, and agricultural schools pure and simple, will succeed, apparently, if a large proportion of the pupils intend to follow agriculture; if the masters are properly qualified; if the science teaching is sufficiently generalised; and if no attempt is made to teach practical farming. In a long course school, purely agricultural, it seems essential that the cultural subjects should not be neglected, nor the agriculture made too technical. All secondary schools of agricultural types succeed best when some land is attached for demonstration purposes.

Judging from Canadian experience, it is a great advantage to combine as many as possible of these institutions at one

centre. Starting with a Winter School as the nucleus, it is used for young men in winter and young women in summer; it should also be the headquarters of the county staff; the school for vacation and other courses for rural teachers; the demonstration centre, and to some extent the experimental area. Along with it should be grouped an agricultural school or a secondary school with an agricultural side, and under ideal conditions an agricultural college should also form part of the whole, but as the Winter Schools should be more numerous than the Colleges, this will not often occur. No one familiar with the group of institutions known as the Macdonald College in the Province of Quebec, or the Ontario group at Guelph, can doubt the advantage of such centralisation.

American experience shows that the functions of a Winter School or Farm Institute should be interpreted in the widest sense. They should not only include courses extending over the winter, but numerous short courses of five or ten days' duration on such subjects as seed selection and crop improvement, on stock judging, on the handling of farm engines and machinery, on poultry and bee keeping, &c. It takes time to create an interest in such courses, but eventually they become popular, especially where the holdings are smallest and the farming most backward.

Above all, a Farm Institute, School, or College, should never lose touch with a student who has once attended it, even if for only five days. All should be united in an association for experimentation, for home reading, for mutual help and competition, and for advice by correspondence. In time, such associations will stand alone, but at first they need assistance, both personal and pecuniary, from headquarters. In Canada and the United States they have become a powerful lever in the improvement of agriculture, and where they have been tried in Great Britain the results have been hopeful. The North of Scotland Agricultural College Old Students' Association carries on valuable experiments, publishes authoritative papers, and holds an annual excursion of several days to noted farms and experiment stations. Its last excursion included over forty members who paid their own expenses. The great majority of its members are short course students who have attended the College for one month only.

Foreign evidence is in favour of co-operative travel as a means of education, and it should be the function of a group of Institutes or Farm Schools to provide one or more prizes in each year in each institution, of such value as will pay the expenses of a fortnight's tour at home or abroad. The group of prizemen could travel under the leadership of a suitable guide, and their eyes would be opened under the best auspices. In England it used to be, in Scotland it is still, the custom for the sons of well-to-do farmers to travel for information, and in

France and Germany much is made of such means of enlightenment.

Some parts of the curriculum of foreign agricultural schools might be incorporated in ours with advantage, the moral and civic teaching of the French schools for example. Apart from the moral, the civic teaching at least could scarcely fail to be useful if it dealt with the rights and duties of citizenship, the duties of parish and county councils, the action and reaction on the life of the country of the Board of Education, the Board of Agriculture, &c. Agricultural economics is included in the teaching programme of some of our Colleges but it might well form part of the instruction in Winter and Secondary Schools. A knowledge of the rudiments of economics as applied to land, labour, and capital, to rent and interest, to the cost of production and the law of diminishing returns, has a remarkable educational effect upon agricultural students, and is no more difficult to understand than elementary botany.

If there is one feature more than another in the scheme of Canadian and Australian schools which deserves imitation, it is the prominence which is given to the business side of farming. Book-keeping is taught, but the accurate record of the few cash transactions of even a large farmer is less important than the estimates of costs, the profit or loss of each department, the debt and credit of a field, the food cost of a gallon of milk or a stone of beef, the manure cost of a quarter of wheat, or the labour cost of a ton of potatoes. These are calculations to which the farmer of the future, if he is to be successful, must devote much of his time, therefore book-keeping in the fullest meaning of the word should be included invariably in every long course.

When the potentialities of English agriculture are contrasted with the actual production there can be little doubt that many of the English farmers are not "up to their work," and, as we cannot assume that they are less intelligent than the Danish or Belgian farmer, it follows that they will benefit equally from education. The method of technical education which has been most successful in Belgium is that of itinerant instruction, and, though the prevalence of small holdings in Belgium has favoured the Instructor, good results have been, and better results will be, obtained here by the same means. The small holder and the large farmer are the first to take advantage of technical instruction and scientific knowledge, and it has been unfortunate for English agriculture that the majority of English cultivators are medium or working farmers (sometimes erroneously called "practical" men), for these are the most difficult to convince. But even the "practical" man was found in large numbers in Belgium at one time, and he has been reformed by the State Agronomist. The "practical" man of this country can also be moved by the County Instructor,

if the Instructor is well educated in science and practice, if he has an intimate knowledge of his district and of the chief farmers in it, and if he is able to select his lectures to suit his audience and to apply to the locality.

Those qualifications are not always found together in an English County Instructor.

Perhaps the most profitable outlet for the expenditure of energy and public money in the improvement of agriculture will be found in widening the mental horizon of the farmer's wife, and especially the wife of the labourer, small holder, and working farmer. It is certain that if farmers' wives believed in agricultural education our schools and colleges would be full. Other wives are concerned professionally only with the care of a house and children, but the farmer's wife is a partner in his business. On her good management of the dairy, poultry yard, and piggery much of his profit depends, and she almost alone is responsible for the health of the household and most of its comfort. Here is an opportunity for women to organise Institutes for instruction dealing with improvement of country life, an opportunity to increase the comfort and prosperity of the home, to stem the tide of rural depopulation, and heal a national canker. The women of other countries have accepted the opportunity and risen to the occasion, and the Governments of other countries have assisted them liberally with grants.

It is in accordance with the genius and temperament of the English to build on existing foundations rather than to clean the slate and begin anew, and there is nothing to show in any case that the latter would be the better course. With the existing machinery directing the symmetrical growth of the organisation, stimulating the backward, developing the embryonic, occupying the vacancies and lopping off excrescences, a system of agricultural education equal or superior to any other can be evolved. No country offers a better opportunity. Its climates, soils, and markets are second to none of the European countries. England can be made a profitable garden by intelligent effort, and the revival of British agriculture depends largely, in my view mainly, on the energy, enthusiasm, and especially on the bold optimism of the exponents of agricultural education and research.

I desire to express my gratitude for the conscientiousness displayed by Directors of Agricultural Schools and Colleges in carrying out the instructions of their Departments to give me every facility for obtaining information, and I wish also to record my appreciation of the cordiality with which I was received.

R. B. GREIG.

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PREFATORY NOTE.

The accompanying paper by Miss Edith Edlmann describes the attempts of various German governments to develop, by education and co-operation, certain peasant industries. It is based on actual observation of the work and on a careful study of the available literature. Miss Edlmann began her investigations with the advantage of a considerable knowledge of the social conditions of the people both in this country and in Germany.

The experiments here described show how, by careful organisation and by the provision of good patterns, excellent results can be obtained so long as direct competition with factory work is avoided. How far such a scheme could be successfully launched in this country where the factory system is more fully established and where the standard of comfort is considerably higher, can only be determined by actual experiment.

The Board must not necessarily be held to endorse all the opinions expressed in this pamphlet, for which the author is alone responsible.

Office of Special Inquiries and Reports,
December, 1912.

EDUCATION AND PEASANT INDUSTRY.

SOME STATE AND STATE-AIDED TRADE SCHOOLS IN GERMANY.

TABLE OF CONTENTS.

	Page
INTRODUCTION	1
BAVARIA :—	
Schools for Woodwork and Basket-Weaving :—	
Berchtesgaden	4
Partenkirchen	4
Oberammergau	4
Zwiesel	5
Bischofsheim	5
Neuhammer	5
Fürth	5
Lichtenfels	5
Schools for Women's Handicrafts :—	
The Embroidery School at Enchenreuth	6
The United Pillow Lace Schools of Oberpfalz :—	
Stadlern	8
Schönsee	9
Tiefenbach	9
The State Higher Weaving Schools :—	
Münchberg	12
Lambrecht	13
Schools for Ceramics and Glass :—	
The Royal Bavarian Trade School for Ceramics at Landshut	13
Bavarian Society for Folk Art and Folk Lore	18
Trade Training for Women in Munich	19
WURTEMBERG :—	
The State Embroidery School at Wolfschlugen	23
The Lace Industry	25
Weaving Schools for Men :—	
Reutlingen	25
Sindelfingen	25
Laichingen	25
Sontheim	25
BADEN	25
SAXONY :—	
The Royal Technical Pillow Lace School at Schneeberg	26
HESSE-NASSAU :—	
The Royal Trade School at Schmalkalden for Small Iron and Steel Ware	27
ALSACE-LORRAINE :—	
The Pottery Trade	35
Lace-making	36
TRADE UNION OF THE WOMEN HOME WORKERS OF GERMANY IN THE READY-MADE CLOTHING, UNDERWEAR AND ALLIED INDUSTRIES	37
CO-OPERATIVE PRODUCTION IN SCHWARZBURG-SONDERSHAUSEN	43
THE VERLAGSSYSTEM	44
CONCLUSION	45

APPENDICES :—

I. Summarised details of some of the Schools described :—

Bavaria :—

The Wood-Carving School at Berchtesgaden - - 50

The Embroidery School at Enchenreuth - - 51

The Pillow Lace Schools of Oberpfalz - - 51

The Royal Bavarian Trade School for Ceramics at
Landshut - - - - 51

Wurtemberg :—

The State Embroidery School at Wolfschlügen - 53

The Weaving School for Men at Sindelfingen - 53

Saxony :—

The Royal Technical Pillow Lace School at Schneeberg 54

Hesse-Nassau :—

The Royal Trade School at Schmalkalden for Small
Iron and Steel Ware - - - - 54

II. Classes for Outworkers held at the principal branches of the
Trade Union of the Women Home Workers of Germany
in the Ready-made Clothing, Underwear and Allied
Industries - - - - 57

BIBLIOGRAPHY - - - - 59

EDUCATION AND PEASANT INDUSTRY.

SOME STATE AND STATE-AIDED TRADE SCHOOLS IN GERMANY.

INTRODUCTION.

The following particulars, relating mainly to a small number of schools connected with peasant industries, were collected during a visit to Germany in the autumn of 1910. As much less is known in England concerning the progress and development of this special section of the trade school group than of more general types, the following notes may prove of interest, not only to students of educational organisation, but also to those who are concerned with the development of rural industries. The information obtained has only recently been readily accessible to Germans themselves, and in some cases only since the writer's return to England. Several of the schools are still very young and in the making rather than already made, consequently official reports are only just being published. The schools are the outcome of recent careful investigation into the social and economic conditions of particular districts, and represent gradual developments and cautious experiments which are seeking to adapt and train local capacity to meet local need. Sensitive and tentative, they are moulding the people and are being moulded by them. In these early stages it is felt that success will be all the surer if they are not too minutely classified at the outset as belonging to any set type. Their characteristic is that they are being allowed a generous measure of elasticity to expand according to the special requirements of special localities, thus helping to restore the equilibrium of those portions of the national life, the balance of which has been upset by the industrial revolution of modern days. The aim of most of these schools is to bring the produce of poor and secluded districts to the knowledge of and up to the requirements of the open market, and thereby to assist in raising the united family earnings—usually accruing in small sums from several sources—up to the standard of a living wage.

The following pages are largely based on personal visits to directors of schools, to exhibitions, and to sale depôts, also on publications and reports kindly supplied by these directors, by editors of leading papers, magazines, and technical hand-books, who have freely and generously put the material at the writer's disposal. For those who wish for a fuller account than is here possible, a list of reports and articles is given in the Bibliography (*see* p. 59-61 below). To several of these publications the

writer is very largely indebted for any interest which the present account may possess.

The schools described are State and State-aided schools for woodwork, basket-weaving, embroidery, lace, ceramics, and glass in Bavaria; for weaving and white embroidery in Wurtemberg; for lace in Saxony; and for small iron and steel ware in Hesse-Nassau. The State-aided instruction given in the pottery-making districts of Elsass-Lothringen is also mentioned, and a slight sketch is added of one or two other methods which came under the writer's notice for encouraging and supporting home workers and for raising their efficiency. Among these latter descriptions is the support given to small independent craftsmen by the State and by charitable endowment in Wurtemberg, and by the Society for Folk Art and Folk Lore in Bavaria, also the endeavours of the Trade Union of the Women Home-Workers of Germany to improve the efficiency of its members in the ready-made clothing trades.

BAVARIA.

The State and State-aided trade schools in Bavaria are all under the Ministry of the Interior for Church and School Affairs (*Ministerium des Innern für Kirchen-und Schul-angelegenheiten*). They have been either founded or re-founded of late years with the special view of fostering home industries, by means of awakening and training the artistic instinct dormant in the peasantry. They lie scattered all over Bavaria, and are to be found for the most part where the industry—now State-nurtured with such success and discrimination—has existed for ages. For the most part, though making some long-established peasant industry their starting point and striving to bring that industry to all possible perfection, no tradition is preserved merely because it is tradition, the dead-hand is nowhere visible. Everywhere the aim is to allow play to independence and originality if it be the outcome of intelligence and taste. New lines of development are carefully encouraged if showing compatibility with the labour and material at hand. In fact, “wherever an ancient home industry existed in any secluded village, the State has stepped in to lessen the penury of the peasants by promoting that home industry and the sale of the produce. Five of these State ventures are devoted to purely women's work.”* Generally speaking, the schools are independent units. Some, however, are more or less attached to some intermediate technical school (*technische Mittelschule*). The School for Ceramics at Landshut, for instance, is independent, and not affiliated to the *Realschule* in that town. “Some rejoice in having a home of their own, perhaps even luxurious new buildings like the Wood-carving Schools at Partenkirchen and Oberammergau; others again, like the Embroidery

* *Unsere Frauen*. Article by Toni Ruth. Gutenberg's *Illustrierte Sonntagsblatt*, 1912, p. 666.

“ School at Enchenreuth content themselves with meeting in “ the large room of the village inn. Each is housed according “ to the existing means and requirements.”* The selected trades are taught on the highest utilitarian and artistic lines possible. The aim, as already said, is to educate the people of each district in the love and knowledge of the inheritance of art bequeathed to them by their forefathers, and in the love and knowledge of good craftsmanship, good design, and good quality of material. To test the efficiency of the teaching and the saleableness of the work produced, the State itself sells the produce of the schools and pays the pupils for work done. It feels this admissible as it always expressly avoids all competition with existing local industries, and aims at creating its own market by the education of public taste, striving to prove that beauty and suitability can be combined and placed within the reach of the slenderest purse. Nothing obsolete is made and modern exaggerations are carefully excluded. There is no production of trash. Exhibitions, for sale and order and to bring the work to public notice, are therefore a very definite part of the system. The State has a permanent depôt for this purpose in Munich, under the direction of Frau Mia Cornelius. The schools also exhibit in other towns whenever opportunity offers. As an educational process exhibition is felt to possess great value. The interest awakening all over Germany in home industry brings the work of many districts and many schools together on these occasions and all learn much, both from their own successes and failures and from those of others.

The Schools described † fall naturally into three groups :—

- I. Schools for Woodwork (7) and Basket-weaving (1);
- II. Schools for Women’s Handicrafts (1 embroidery and 3 lace schools);
- III. Schools for Ceramics (2) and Glass-making (1).

When the writer was in Munich, the State Information Bureau, together with the Sales Depôt and Permanent Exhibition in connection with these Schools, were in offices in the Damenstiftstrasse. These offices have now been given up. The Information Bureau is at present amalgamated with the *Bayerischer Hausindustrieverband* (Union of Bavarian Home Industries) in the Ottostrasse. The Exhibition is to be found

* K. Lory, *Bayerns kunstgewerbliche Fachschulen* (*Das Bayerland*, 22. Jahrgang, 1911, No. 27, p. 407).

† *Bayerische Landes-Gewerbezeitung*, 3. Jahrgang, 1911, Heft No. 1, p. 5, gives a short description of the produce of all these schools as shown at the United Xmas Exhibition in Munich (1910). (See Bibliography, p. 59). *Das Bayerland*, 22. Jahrgang, 1911, No. 27, p. 407, also gives a short general description of the work of these schools from the able pen of Dr. K. Lory, of Munich (illustrated). (See Bibliography, p. 60). For fully illustrated accounts of the work done in these schools see the expert and interesting articles by Dr. K. Lory in *Kunst- und Handwerk*, Jahrgang 1910, Heft 3, and Jahrgang 1911, Heft 3. (See Bibliography, p. 60.)

in a room in the Domfreiheit where the collective produce of the various Bavarian Trade Schools is permanently on view and sale.

Besides the schools enumerated above, there are two State Higher Weaving Schools about which a few words may be said, although they do not come under any of the groups just mentioned.

Schools for Woodwork and Basket Weaving.

The Schools for Woodwork are situated at Berchtesgaden, Partenkirchen, and Oberammergau, all in Upper Bavaria; at Zwiesel in the Bayerischer Wald; Bischofsheim a. d. Rhön; Neuhammer in Spessart; and at Fürth near Nuremberg. In many of these places the industry has existed for hundreds of years.

Berchtesgaden is on the Austrian frontier near Salzburg. The drawing school was founded in 1840; carving was added in 1859, and the study-plan was revised in 1883 and 1910. "This school perhaps more than any other expresses the characteristic taste of the Bavarian peasantry most definitely. Its speciality is very brightly painted wood-ware, such as ornamental boxes, cradles, sleighs, go-carts, and toys of all kinds, especially animals."* The school strives to fulfil the double task of improving the output and obtaining a market, laying particular stress on quality of material, utility, and beauty of form. The articles made are readily bought by the summer visitors. "In deference to the cosmopolitan tastes of the purchasers and also on account of the many-sided training given to the pupils, the school does not attempt to insist on any one particular style."† It has a four years' course and gives a thorough training to art-cabinet-makers and figure carvers. It produces furniture, and instructs in house decoration and also has courses for joiners and a school for elementary school children, apprentices, and assistants. The leaving certificate is granted jointly by the two Departments of State approximating respectively to the English Board of Education and Board of Trade. The school is under the Chamber of the Interior of Upper Bavaria and directly under the State District Office of Berchtesgaden.‡

Partenkirchen.—This school, founded in 1869, produces simple and ornate furniture of all descriptions, as well as carved frames, mirrors, clocks, and animals from life in all sizes. It also manufactures violins.

Oberammergau.—This school was founded for drawing in 1810, and as a school for modelling in 1856. The carving section was added in 1878. There is a preparatory drawing course, to which boys and girls are admitted at the age of ten. The

* K. Lory, *Bayerns kunstgewerbliche Fachschulen (Das Bayerland, 22. Jahrgang, 1911, No. 27, p. 408).*

† *Bayerische Landesgewerbezeitung, 3. Jahrgang, Heft No. 5, p. 75.*

‡ See Appendix I., p. 50.

village is known all over the world as a centre of religious art, and "this aspect is particularly accentuated in the schools. "Pure and noble conception is fostered and feelingless and "stereotyped representation is discouraged. On leaving the "elementary school talented boys generally join the carving "class. Those that cannot afford to enter for this regular "training, apprentice themselves to carvers of religious subjects "*(Christus-Schnitzler)* or to some other industry. All appren- "tices, however, attend the drawing and modelling instruction "given at the school, and many continue to do so after having "finished their apprenticeship. The length of training for "those attending the carving course is four years, but specially "talented figure carvers can remain longer if they wish. "Competitions in design are part of the school training. The "school, as yet, has no organised sales department, though "small articles made at home by the pupils have been shown "at the Munich depôt. Special attention is being directed to "this point at the present time."* The school also produces artistic furniture.

Zwiesel.—The school at Zwiesel in the Bayerischer Wald combines woodwork with glass manufacture. The original carving school was established over one hundred years ago, but was re-founded and the glass school added in 1904. It is fast coming to the front in both trades. It works more especially in rare woods, such as ebony and sandal-wood and only uses its own designs. The glasswork shows signs of originality and individuality. The trade tuition is united with a general education (*Realienunterricht*) and the pupils begin practical work at the age of seventeen or eighteen. There is a preparatory course for elementary school children.

Bischofsheim and Neuhammer.—These schools mostly turn their attention to small articles, some simply and others elaborately carved, such as chessmen and boards, napkin rings, &c. Bishofsheim has of late been particularly successful in small original figures of all kinds and in coloured bas-reliefs.

Fürth.—This school was founded in 1900 for the production of furniture, its speciality being mosaic and marquetry (*intarsia*) and the surface treatment of woods. No industry of the kind existed previously.

Lichtenfels.—Founded in 1904 the Basket Weaving School is doing excellent work in training its pupils in accuracy, good taste and in variety of manufacture, and in waging war against the bad taste shown in much local work. The industry is of ancient date—whole parishes, including children of all ages, work at it, a circumstance which leads to unevenness in the quality of the output and forms one of the difficulties which the school endeavours to overcome. The examples seen by the writer were of real beauty and delicacy, and consisted of

* *Bayerische Landesgewerbezeitung*, 3. Jahrgang, Heft No. 5, p. 76.

baskets of all kinds, with and without handles, with and without lids, work baskets, flower baskets, bread baskets, paper baskets, &c. Tables, easy chairs, stands, &c. are also made. Japanese influence can be traced, but no slavish imitation.

Schools for Women's Handicrafts.

*The Embroidery School at Enchenreuth.**—The economic conditions of the district which have led to the foundation of this school may be briefly summed up as follows:—"Amid the green uplands and wooded valleys of Upper Franconia—where agriculture offers little else to the peasantry beyond potato growing, embroidery imported from Plauen, in Saxony, has provided the essential *Nebenberuf* or subsidiary calling so imperative in such districts. In winter the snow lies deep and long, confining the inhabitants indoors, and the women work hard and skilfully at white embroidery which finds a market all over Germany and in far-off lands."† The winter's production is collected by agents of various business houses, called *Factoren*, a word applied in Scotland to land-agents and bailiffs. In 1900 the Government decided to start trade tuition in the district in the form of summer classes, and Frau Professor Mia Cornelius, who had received her own art education in the *Kunstgewerbeschule* (Industrial Art School), in Munich, was invited to draw up a report and suggestions. These were accepted, and in 1903 she became the director and organizer of the experiment. Apart from the local industry in white embroidery, she also found that the women, in their spare moments, worked natural flowers in coloured silks on very fine white linen. From an artistic point of view this work was atrocious and not in demand by the factors. The girls, working in the fields all day, had the roughened hands of those engaged habitually in manual labour. Only fine hands, she said to herself, should attempt fine work, and only one girl here and there possesses this necessary qualification. It was to this coloured work, however, that Frau Cornelius turned for inspiration, setting about to devise some more suitable style and medium, whereby to render it both educative and marketable. She decided on coarse strong linen or woollen material and bold simple design as best suited to the character of a peasant industry. As has been already stated, a very special point in the institution of the Bavarian State Trade Schools is that they shall in no way injure private enterprise, and by the adoption of this plan she avoided any possibility of competition with local employers. She felt also that she would be providing a good training ground for girls, who would

* See Appendix I., p. 51, and Bibliography, pp. 60-61, articles in *Kunst- und Handwerk* and *Stickereizeitung*, X. Jahrgang, Heft 10, Juli 1910.

† *Stickereizeitung*, X. Jahrgang, Heft 10, p. 1.

many of them pass on later to the white embroidery work. Furthermore she realised that should her plan succeed, as has been the case, the district would be provided with an additional trade; should it fail, the old industry would still remain undisturbed to which her pupils could return.

The school as it exists to-day consists of classes held during the summer months; in the spring all are helping in the fields to prepare the land for sowing, in the autumn all are busy potato digging. The girls are taken on leaving the elementary school and forty to fifty are trained annually. The courses are very popular, the same girls coming again and again. Many have been through three or four courses, and as many as one hundred are sometimes attending at one time. The aim of the school is to train workers not only to meet the demands of the local industry, but to enable them to undertake a higher class of independent work than is at present usually obtainable in the district. It also strives to bring its teaching into the closest relationship with peasant art and peasant home industry, and to produce saleable goods of high artistic excellence. The pupils are paid for work done. In design and colouring the work is strong, bold, and simple; the garments and household articles made are all simple and practical. The girls are taught from the start to produce marketable goods, and the school has discarded the usual *Mustertuch* or sampler method of instruction. The study of good foreign design is not neglected. Russian influence can be felt in some instances, and where introduced is successful. Local tradition, when good, is preserved, as in the fine *Alte Egerländer* pattern, seen on many articles. The work mostly consists of house and garden cushions, coverlets, curtains, tea and table cloths, ladies' blouses, and children's caps, bonnets, frocks, satchets &c., in great variety. The articles are ornamented with embroidery, appliqué, and fancy stitching. To protect its design the school has adopted a special trade-mark or *Ortsstempelschutz*. This consists of the initial letters of the words *Enchenreuth Haus Industrie* enclosed within a plain bordering [E H I].

The school has exhibited successfully at the Hague, Heidelberg, Zurich, Stuttgart, Leipzig, Darmstadt, Berlin, and at the Brussels Exhibition, and large orders have often resulted.

In October 1910 thirty girls had already been trained who were competent to be employed on commission work during the winter months, and to this number about ten are added yearly. The girls are very keen and are paid at the rate of 20 pf. an hour. This payment is equivalent to 2½d. of English money, and is interesting as being identical with the minimum wage lately fixed for the Cradley Heath chain makers under the Trades Boards Act, and as closely approximating to the 2¼d., rising to 3d. in 1912, recently arranged for the Nottingham machine lace finishers. The designs for this winter commission work are made, the colour scheme selected, and the work begun in Munich. It is then sent down to Enchenreuth, and from this

point the girls entirely finish and make up each article. All were very busy during the winter of 1910-11, as a large number of orders were received, amongst them one from the writer for a blouse which has been most effectively embroidered.

*The United Pillow Lace Schools of Oberpfalz.**—These schools exist at Stadlern, Schönsee, and Tiefenbach, three typical mountain villages lying at a high altitude on the Bohemian frontier, and situated on or near the now deserted mediæval trade route between Nuremberg and Prague. Stadlern, with its pilgrimage church, has been called the Bethlehem of Oberpfalz. Schönsee is an ancient little border town possessing market rights dating from 1354. The land is one of ravine, of wood and trout stream and of towering crags crowned with the ruined strongholds of old robber-knights. Without the help of some subsidiary calling the soil has ever proved insufficient to support its peasant population. Small grain and sawmills and glass-works are numerous, and electric light is abundant in all the larger villages, owing to the water power everywhere obtainable. Until the devastation caused by the Black Death and the Thirty Years War a trade in salt flourished, and many smithies and smelting furnaces were to be found. Later on, an equally successful weaving trade arose with its markets at Nuremberg and Ravensberg, and the peasantry—who were in possession of fishing rights—developed a widespread and lucrative fish-breeding industry. Both these forms of livelihood have however vanished, the former having been completely wiped out by the advent of machinery and the factory system. Thousands of peasants migrated during the last century and the flight from the land still continues. In this deplorable state of things those remaining sought, yet again, for some new form of supplementary earning, and found it in the making of pillow lace, an industry which had for some time past been gradually making its way over the frontier from Bohemia. In 1849 a lady of the district imported a trained instructress from Brussels and tried to start the work as a definite *Nebenberuf*, and in 1899 the Bavarian Government—following the example of Bohemia, which already had its flourishing system of State Lace Trade Schools—took the matter up for the first time with the definite aim of establishing a profitable and much-needed industry and of stemming the rush to industrial centres.

The new venture was started at *Stadlern* in 1901. This school was followed by a second at Schönsee in 1906, and a third at Tiefenbach in 1907. In all these cases the call for the school came from the district itself, the first person in each instance to work up local interest was the village priest, who enlisted the sympathy of the local government official (*Kgl. Bezirksamtman*), both working whole-heartedly for the furtherance of the scheme before the Government moved in the matter. Evidently also the peasant women themselves were keen. In the case of

* See Appendix I., p. 51.

Schönsee the local Loan Society has stood by the effort; in the case of Tiefenbach the elementary village schoolmistress has given indefatigable help. It was in these similar and several ways that the beginnings were made. The opening of each school was made the occasion of a village celebration and of considerable enthusiasm and rejoicing. The village priest in each case has since been made the District Government Inspector of the now flourishing schools. In 1905 the school at Stadlern moved into school buildings of its own, the pupils numbering forty-five. The instructress is from Vienna. The school has a Sales Association of forty members, who sell the work, making sometimes as much as 8,000 marks, with a net surplus of 300 marks in the course of a year. These associations have been formed in connection with several schools of this type, both in Bavaria and Austria, and consist of persons in various parts of the country who form themselves into voluntary associations with the object of making the work of such districts better known.

The school at *Schönsee* opened in 1906 with one hundred pupils, the instructress being a certificated teacher from the Central Imperial Lace Training Course in Vienna. The little town provides the building, the teacher's residence, and also heating and light, while the Government meets this local effort by appointing, paying, and pensioning the teacher. Between four and five hundred marks weekly are paid out during the winter months to the pupils of this school for work done. "Much arduous work fell to the promoters during the inauguration of the scheme. First and foremost there was the haunting possibility of failure in securing a market, but this fear was soon dissipated. From the first orders were plentiful, one firm alone ordering thousands of yards of lace edging for trimmings. A new era set in for the industry, interest was aroused on all sides, so that many who had put aside their pillows for many a long day resumed work with renewed energy and interest. Prices improved owing to the attention of the local dealers being attracted by the beauty and the higher standard in design and execution that at once became manifest and which was set by the work produced in the school. Exhibitions have since demonstrated the wonderful progress made in the district during the last four years, due to the able tuition of the talented school instructress."*

The school at *Tiefenbach* was opened in 1907 with sixty-seven pupils and a teacher from the district. There is a Sales Association of nineteen members. While keeping in the main to the accepted styles in the patterns executed, this, the youngest of the schools, has made some bold and striking departures in design and treatment, showing very modern art tendencies in some of its production. In addition to a large collection of ancient and modern designs of its own, the Tiefenbach school is the home of a very fine collection of antique lace presented to

* Franz Lehner, *Vereinigte Klöppelschulen der Oberpfalz*, p. 22. (See Bibliography, p. 60.)

the allied schools by the Bavarian National Museum. The pupils have already outgrown the accommodation provided for them, and are obliged to receive their instruction in relays.

The United Schools provide a thorough instruction in all branches of pillow-made lace. They are free to all girls between the ages of seven and sixteen in the respective communes (*Gemeinden*) in which they are situated. The pupils attending each school are divided into three classes. Class I. comprises beginners and workers of normal intelligence, Class II. comprises pupils of somewhat higher capacity, and Class III. pupils distinguished by skill and industry. The girls attend for four hours daily, and the schools close during the months of August and September. The standard aimed at is so to train each pupil that on leaving she is able to execute any given pattern with taste, cleanliness, and delicacy. The habits of attention, application, order, cleanliness, and good behaviour inculcated are considered by the authorities to be a valuable factor for future efficiency in the home. The schools are under the local school authority, and are subject to State inspection. The regulations framed for elementary public schools are applicable to these schools, subject to such modifications as may be necessary.

A continuation and improvement school for older workers, where quicker methods and better designs are taught than those found existing in the neighbourhood is also part of the scheme, as well as a savings bank to encourage thrift.

As stated above, all the schools manufacture the same wide range of laces, but different patterns are used in each. In the simple work cleanliness, accuracy, and effect is the aim. The elaborate work is of exquisite delicacy, and whether following ancient or modern designs, is of high excellence. Duchesse, guipure, Brussels, baroque, and many other kinds are made on the pillow, the material used being linen thread. Silk lace and gold and silver lace are also made. As in the Embroidery School at Enchenreuth, so here, also, everything produced is for current market demand, and consists of beautiful altar lace, vestments, surplices; of ladies' blouses, fichus, fans, collars, scarves, parasol covers; of children's dresses, hats and bonnets; of many household articles, such as table covers, tea cloths, bed spreads, and of quantities of lace for trimming, edging, and insertion.

The art supervision of these schools is also assigned to Frau Mia Cornelius. To obtain fresh designs she has adopted one of the two following methods. Should she, for instance, be in need of a new design for a lace collar, she either gives the order to some well-known Munich lady artist or she announces an open competition among the women students of the Munich Industrial Art School. By this means she gets twenty to thirty good drawings, from which she selects as many as she needs. The State pays for all it takes. This method benefits both the lace industry and the Industrial Art School. Formerly she generally employed the first plan, but latterly she has found the second method the more successful. The influence of fine old

church lace designs can also be traced in the work of these schools.

The opinion of the Vicar of Schönsee—who is also the Local Government Inspector of the lace school in his parish, and of whose graphic and valuable little treatise on the subject this entire description is practically a summary—is that the results of the training given in the schools have thoroughly proved the wisdom of their institution. He considers their educational value high as checking truancy, as awakening a feeling for artistic form, as inculcating punctuality, love of order, carefulness, and attention, and as supplying the inestimable blessing of providing an early insight into the meaning of regular work, and of a definite profession in life. Improved instruction has brought better orders from large firms into the district. He also considers the Sales Associations important factors and says that they have materially helped in the successful advance which is so happily characterising the industry. The schools work in hearty support of the Children's Protection Act (*Kinderschutzgesetz*)—"the first act to regulate industry, which steps over the threshold of the home"*—impressing on parents and guardians the advisability of not laying too much stress on an immediate money return for their children's work. Parents are encouraged to spend their children's lace school earnings on better food and clothing for the child itself. Earning by children still of school age, other than at the lace school, is generally discouraged. The magnificent mountain air and the sanitary, well-ventilated schoolrooms prevent all ill effects of extra school hours. Particular attention, Herr Lehner assures us, is always paid to securing a good steady natural or artificial light so that the children's eyes may not be strained. The lessons are always interspersed with physical drill with songs and the recitation of poetry and prose learnt in the elementary school. Children with weak eyes or unsuitable constitutional defects are discouraged from joining the school, or taking up the work as a profession. The children come willingly to the well-warmed, comfortable rooms and are readily sent by their parents, who know that they will be well looked after. The schools, the Vicar further states, have not only lived down, but in some cases have reversed, the adverse arguments and opinions that existed concerning them in some quarters at the start. In reply to the objection that the movement would still further drain available labour from the land, it is being demonstrated that a successful *Nebenberuf* is tending to keep the girls at home. They are all still to be found in the fields at the busy time, the school attendance rate falls rapidly at this season, and the bye-laws are framed with special regard to this agricultural demand. Another objection advanced was that the standard of the elementary school would

* Karl Bittmann, *Hausindustrie und Heimarbeit im Grossherzogtum Baden*, p. 1083. (See Bibliography, p. 61.)

fall if the children worked extra hours, but this has also been disproved. Examination results show that the girls working in the lace school hold their own with those who do not, or with those who only work intermittently; they also do not compare badly with the results from the boys' side. The school attendance is very good, as might be expected from children showing the zeal, quickness, and intelligence which characterises the inhabitants of a healthy district. The third objection—that women would spend the money earned on finery and not on improving their economic condition—has also proved groundless, for the economic condition has distinctly improved. It is true, says the Vicar, that the girls spend a little more on dress and adornment, and that occasionally a father drinks his child's earnings, but to counterbalance this state of things, which is not peculiar to Oberpfalz, not only has a subsidiary calling been given to the neighbourhood, but, in the case of the poorer inhabitants, a trade has been provided which pays better than the weaving industry which it has replaced, though still leaving something to be desired in this respect. The simplest form of lace-making is very easy to learn, the better class needs high qualifications. An expert worker can earn two shillings a day. Families, the Vicar considers, are better fed and clothed, it is oftener possible to call in the doctor when needed, taxes are more easily met, and there is more in the savings bank. The girls meet together to work during the winter months, and in neighbourly fashion chat and sing and recount the legends of the neighbourhood. Hundreds of little hands, no longer idle, put their mites into the savings bank, or earn a new Easter frock.*

The fourth lace school exists at Nordhalben in Upper Franconia; about this school, however, the writer gained no special information.

The State Higher Weaving Schools.

The State Higher Weaving Schools are at Münchberg in Upper Franconia and at Lambrecht in Rheinpfalz.† The former gives a thorough theoretical and practical training in all the many local branches of hand and machine weaving and embroidery. The instruction includes pattern drawing and repairing of machinery. The appliances are all of the newest kind. German subjects pay 100 marks yearly, and 25 marks extra for each additional kind of embroidery course taken. Foreigners pay 600 marks. Considerable money grants are made to poor students, who can furthermore obtain reasonable board and lodging at the school hostel. The chief manufactures are coloured cotton material, plush, woollen dress

* Franz Lehner, *Vereinigte Klüppelschulen der Oberpfalz.*

† *Bayerische Landesgewerbezeitung*, Jan. 1911, Heft I., p. 7, and *March* 1911, Heft V., p. 74, and *Die Fachschulen für Textilindustrie.* (*Deutsches Fachschulwesen*, herausgegeben von C. Malcomes, Heft II., pp. 45, 48.) (See Bibliography, pp. 59–61.)

material, towels, sheets, shawls, mercerised cottons, blouse materials, carpets, &c. The goods are slowly but surely winning their way into public favour.

The School at Lambrecht, founded in 1850, was a municipal school until January 1911, when it was taken over by the State. It is especially for woollen and half woollen materials. The course for the training of manufacturers lasts for one year, that for training students as master-craftsmen and salesmen lasts for six months.

Schools for Ceramics and Glass.

*The Royal Bavarian Trade School for Ceramics at Landshut on the Isar, Lower Bavaria.**—The old Pottery School at Landshut—the oldest Trade School of its kind in Germany—was founded in 1873 by the Government of Lower Bavaria, aided by a grant from the Ministry of the Interior for Church and School Affairs. The school was very much extended in scope and converted into the existing institution for ceramics in 1903, very special attention being directed to instruction in art pottery and stove-tile manufacture. The Director of the *Kgl. Realschule* at Landshut was made the head of the Pottery School, which was transferred to the buildings of the *Realschule*, although it remains a separate institution. Following the tradition of the school that it has absorbed, the new institution aims at reviving the once flourishing but now decayed pottery trade by bringing instruction especially to bear on pottery as a home industry. It is hoped by the creation of a body of thoroughly trained youthful recruits to re-establish the ancient reputation of the neighbouring commune of Kröning, which possesses an indigenous refractory clay of a very high order of excellence and beauty—the place being known, in olden time, as a famous *Hafnerstadt*, or potter's town. The new pottery is designed to serve as an object lesson, proving that cheapness need not necessarily mean ugliness, vulgarity, and meaningless misplaced ornament, but that usefulness, beauty of form, and suitability of decoration can be combined and offered at a price that can compete with the inertistic and often less suitable goods which flood the modern market. The two words "practical" and "artistic" sum up the aim of all the work.

The School—which is State inspected and which works in connection with an expert Local Advisory Committee—comprises (a) the Preparatory School for Apprentices; (b) the Ceramic School proper for students who have had previous practical experience; (c) Continuation Classes for Journeymen and Master-Craftsmen enabling them to perfect themselves in modern progressive methods; (d) an Information Bureau and Experimental Laboratory, where elaborated recipes for bodies and glazes (*Massen-und Glazur-rezepte*) are placed at the service of the craft, as well as the collection of sketches, models, and moulds possessed by the school.

* See Appendix I., pp. 51-53, and Bibliography, p 60.

The Information Bureau and the Experimental Laboratory are in much demand both by public bodies and private persons. Consultations are free except as regards postage, and can be made either personally or in writing. Experiments are charged for at low rates. The course in the Preparatory School lasts for two years. The entrance qualifications are, that the student must have passed through the highest class of the elementary school or have attended some school of higher grade, on leaving which he must have received a good character. The teaching consists of practical work in connection with the kilns and workshops, in modelling and drawing, and in instruction in trade subjects. Those attending the Journey-men's Course, which lasts a year, must already have passed the final examination in a recognised trade school for ceramics, and be possessed of good testimonials, and of the requisite preliminary practical knowledge. The courses for master-potters are held as required. In the Trade School itself the teaching consists of two courses, each of a year's duration. Pupils are expected to take both courses, occasional exceptions being permitted in regard to special pupils desiring to undergo instruction in some particular branch. The entrance qualifications are successful attendance at the Preparatory School or two years' apprenticeship under a master-craftsman combined with good testimonials. Special notice is taken by the committee of those students who have served a three years' apprenticeship and who enter for the journeyman's examination; this previous experience is very strongly recommended. The school year begins on September 1st and ends on July 31st. The hours of attendance per week are forty-eight. During the Xmas and Easter vacations at the *Realschule*, and from the 14th-31st July the theoretical teaching is discontinued and the time thus set free is devoted to practical instruction. The moral and religious conduct of the school is in the hands of the management, and follows the general lines of the regulations laid down for municipal schools (*Mittelschulen*).

A thorough practical workshop training is given, combined with sound art teaching, and instruction in the geology, mineralogy, chemistry, and physics necessary for a right understanding of the scientific basis on which the industry rests. Health lectures and lessons in German, arithmetic, and industrial law also find their place in the time-table. An examination is held in all branches of the work, both practical and theoretical, at the close of the second year's course. Successful students may return under certain conditions for further instruction. Pupils who have passed through the school are fitted to take posts as master-craftsmen, modellers, draughtsmen, &c. The demand for workmen trained at the school from German States other than Bavaria and from abroad can only occasionally be supplied, as the majority of students attending are sons of Bavarian master-potters and on leaving the school resume work with their fathers. The fees for

German subjects are 20 marks (£1) a year, while foreigners pay 40 marks. The journeymen's class is free for Bavarians. Industrious and well-conducted German students of insufficient means are admitted free or at reduced rates. Necessitous Bavarian subjects can, if the available funds of the school permit, receive an allowance towards expenses in addition to remission of fees. Between the years 1903-1910 one hundred and twenty-nine pupils passed through the school, which year by year is showing a steady increase in point of numbers. In the report for 1910-1911 the number of pupils was 34, the highest yet reached. Nineteen of these were in the Preparatory School, twelve in the Trade School, and three in the Journeymen's Course. Of this total three were admitted at reduced fees, and twenty-one were admitted free. Nine of these latter received additional money grants, which in the case of the two Bavarian journeymen amounted to 1s. a day, and in the other cases to 6*l.* for the session.

For practical work the school possesses a large amount of hand-apparatus, such as a filter-press for making stove-bodies, &c., and various machines, including cylinder-mills for glazes and bodies, clay-pugs, glaze mills, &c. In the turning shop are seven potters' wheels and a number of smaller appliances. The machinery is driven by a six horse-power gas motor. There are also various kilns, such as a quick-fire muffle kiln, a large half-muffle kiln of seven cubic metres with two fire mouths, a fritt-kiln, and a large muffle for gold smelting, also some kilns for experiments in the chemical laboratory, including a Deville-kiln and a Seger-Heinecke gas-kiln.

Workshops exist for stove manufacture, glaze-making, moulding, turning, and plaster-casting. There is also a technical library and a collection of pottery examples. The pupils (under supervision) do the necessary kiln repairing, &c. They also have to furnish an exact calculation of cost with every article they make, a most instructive plan, which is also adopted by a few other schools. Nothing brings home the relative value of different articles in a clearer manner, though they may apparently resemble one another very closely to the superficial observer. The pottery made by the students at Landshut—like the produce of the other Bavarian trade schools—is exhibited and sold. It consists principally of plates, bowls, vases, jugs, kitchen crocks of all kinds, stove-tiles, complete stoves, &c. in glazed ware. The principal colours in which these are made are black, white, green, red, cream, brown, and violet. The ornamentation is bold, simple, sometimes intentionally primitive and naïve, and is executed in dots, lines, and dashes of full strong colour; animals full of character, birds, and conventionally treated flowers are also used. The application of underglaze is executed with a little vessel called a *Malhörnehen* or *Giessbüchsen*—this is generally of stone-ware with a quill or straw inserted at one side. The vessel is filled with "slip" or underglaze, and the potter uses it in the same free-hand manner

as a confectioner when he ices cakes, &c. Each separate article, therefore, which is turned out of the school bears the delightful impress of original hand work. The comb-cut (*Kammschnitts*) ornament, borrowed from the bookbinding trade and executed with a hog's bristle brush, is used with excellent effect, as are also many other old and half-forgotten methods of decoration. The school is proud of a luminous underglaze red, which is one of its specialities. During 1910 a large number of excavated pre-historic vases belonging to the Historical Association of Lower Bavaria have been restored at the school. Among the larger pieces of work executed have been some fine stoves, made to order, in black, violet, and blue tiles respectively. In the opinion of the art critic, Dr. Lory, this tiled stove work is of particular value as a corrective to the generally debased taste shown in the modern stove industry. No class of wholesale production "gets more on the nerves," he declares, than this. In England we have no stoves, but such an attack of nerves is quite intelligible when we contemplate our own cheap fire-place tiles and ornamental gas-stoves. Landshut also makes beautiful fireproof ware, in the shape of tea and coffee services, in various shades of red, brown, and chocolate, without any ornament except that of their own perfect form. The work is a high achievement, and one is reminded at once of the ancient vases of Rome and Greece. The exquisite bloom and warm glow of the material is delicious. Dr. Lory considers that it very closely resembles the lost secret of the "terra sigillata," and mentions that the Romans themselves prized the Bavarian clays from the southern slopes of the Danube. The later Roman "terra sigillata" was made at Westerdorf in Bavaria.

The school is proving a very great success. Men of all ages attend, and some quite elderly craftsmasters have passed through its classes. Pupils migrate and set up for themselves elsewhere and so are spreading the teaching of the school. One man in particular has founded a flourishing business in Augsburg and has many pupils.

As regards the vexed question of lead glaze, the report for 1909-10 states:—"Since April 1910 the use of raw lead glazes has been abolished in the school, owing to danger to health. Only fritted-lead glazes are used, and these are entirely supplied in the most satisfactory manner by the new fritt-kiln in the school. Various experiments to produce leadless glaze have been conducted during the past year (1909-10), and the same fritt-kiln, with but small alteration, will lend itself very readily to such production, in spite of the peculiar difficulties which leadless glaze presents owing to its lack of fluidity. It is hoped, however, that by alteration of the component materials this disagreeable quality may be obviated and a more fluid product attained. As soon as sufficient quantities of leadless glaze are procurable, nothing of much importance will stand in the way of carrying out the experiment. But, as regards experimenting with and introducing

“leadless glaze, there was, and is, the very great difficulty of obtaining one of the necessary raw materials, *i.e.*, calcium borate (*Borkalk*), since the sale of this material is apparently so restricted on the part of either the producer or the importer that only small quantities at high prices are obtainable in the market.” This is an interesting statement. The experience, however, in our own pottery district seems to be that even with an unlimited supply of easily obtainable borax, which our manufacturers consider to be more suitable to the purpose than calcium borate, a really satisfactory leadless glaze has not yet been discovered.

The writer is much indebted to the Director, Herr Wilhelm Rudolph, for permission to make free use of the reports of this school, which can be obtained free on application.

*The State Porcelain School at Selb in Upper Franconia.**—The town of Selb is situated near the Bohemian frontier in the extreme N.E. of Bavaria. The school was instituted to train skilled art workers and thereby to influence and raise the standard of surrounding factory output. To this end it produces ornamental porcelain rather than articles essentially for everyday use such as are produced at Landshut. Although of only recent foundation, it is considered by critics to exhibit distinct individuality. Form and decoration are special features. Much attention is paid to colour schemes and to under and upper glaze painting. Animals modelled from life, ornamented partly in white and gold and partly with underglaze colour, form a speciality. Vases in white and gold are among some recent good exhibits. No home industry of the kind existed in the place previously.

The State School for Glass-making and Wood-carving at Zwiesel in the Bayerischer Wald.†—The school at Zwiesel is in two sections. The one for wood-carving has already been mentioned, the glass section is of recent date and was founded in 1904. The school is a municipal institution and receives support from the State, from the District of Lower Bavaria, and from other sources. Like the porcelain school at Selb, it seeks to train skilled artisans and designers for the industry, and to elevate the standard of local factory produce. Keeping to the local tradition of the *Bayerischer Wald* gold is largely used in decoration. The school teaches glass painting, staining, etching, engraving, and cutting. It has invented an inexpensive method of etching, which is excellent and effective. The designs are often highly conventional, at other times they are directly taken from nature. A large variety of vases, jugs, decanters, bowls, goblets, bonbon dishes, fruit stands, wine glasses, tumblers, &c., are made in white and coloured glass. Its amber glass and blue glass are specially noticeable.

* *Bayerische Landesgewerbezeitung*, Jan. 1911. Heft I., p. 5. (See Bibliography, pp. 59–60.)

† Articles by Dr. Lory in *Kunst und Handwerk*, and in *Das Bayerland*. (See Bibliography, p. 60.)

Bavarian Society for Folk Art and Folk Lore.

Turning from State to philanthropic effort as an agent for the furtherance of home industry, we find that private initiative and interest have taken active shape in the formation of the Bavarian Society for Folk Art and Folk Lore (*Bayerischer Verein für Volkskunst und Volkskunde*) which was founded in 1902. The Society, of which the headquarters are in Munich, publishes its own monthly magazine, and has a membership of 3,000. It comprises many well-known men and eminent artists who place their services at the disposal of the society, is recognised by the Minister of the Interior, and has—as one of its principal aims—the improvement of home industries. To this end it holds numberless small exhibitions of ancient and modern masterpieces to act as an incentive to endeavour, and to educate public taste against acquiescence in *Dutzenware* (warehouse art). “We want the people to discover themselves, their own originality, creative capacity, past achievements, and future possibilities . . . We will give practical help, support, and advertisement to the work of all craft-masters working in the sense of our programme.”* The society gives advice, takes great pains to get into touch with isolated workers, and gives opportunities for sale on business lines. One of its many-sided activities is the maintenance of a small shop for the sale of peasant work with a permanent exhibition attached, situated in the Prannerstrasse, one of the chief streets in Munich. Here the writer saw pottery, baskets, lace, embroidery, woven and stencilled linen, painted boxes, dolls in peasant costume, apostle spoons, tin lanterns, knitted stockings, and much else. One skilled worker—a gold embroideress of the now extinct peasant women’s headdresses and the last of her trade—had adapted her skill at the advice of the society, and exhibited theatre scarves and medallions for ladies’ belts and girdles worked in gold and silver.

Taking these exhibits, however, as a whole, one realised that in many instances the influence and training of such trade schools as the writer is describing is just what is most needed, coupled with help in the initial outlay as regards better material, to bring the work up to marketable requirements.

Munich has been the scene of a large Exhibition of Bavarian Industries (*Gewerbeschau*) this year. In accordance with the insistence everywhere laid by the authorities on “quality”—“quality” in design, in material, and in execution—production on art lines was the leading characteristic demanded of all exhibits. Both factory and craft were represented as were also the home industries. All that was considered to fall short of the canons of true art was excluded.†

* *Bayerischer Verein für Volkskunst und Volkskunde*, p 5. (See Bibliography, p. 60.)

† The Bavarian Schools here mentioned all exhibited. Each article from Enchenreuth and from the Lace Schools had a card attached stating the age of the worker, the time taken, and the wage given.

Trade Training for Women in Munich.

In regard to trade teaching for women in the city of Munich, the writer found that such provision distinctly lagged behind state effort in rural districts. Six of the newly-founded Bavarian provincial State Trade Schools described in this pamphlet are exclusively for women, but in 1910 the writer found no trade school for girls existed in the capital itself. Munich, like the rest of Germany, has hitherto concentrated its attention almost entirely on boys. The Continuation School for Girls, however, is being reorganised. After the year 1914 it will become a trade school, consisting of three divisions: (a) the domestic; (b) the industrial; (c) the commercial sections respectively. Excellent training in domestic subjects was, however, being given, at the time of the writer's visit, to girls of the eighth class in the elementary schools; this class is at present voluntary, but becomes obligatory in 1913. Six hours a week were being devoted to the same object in the above-mentioned Continuation School, which also gave instruction of a simple kind in domestic, industrial, and commercial book-keeping; while an attempt to start domestic subjects in the Municipal High School for Girls (*Städtische Höhere Töchter Schule*) was likewise being made. It therefore seemed evident that the municipal authorities considered that domestic training should find a place in the time table of girls' schools of all grades.

Apart from domestic training, the facilities offered to women to specialise consisted, as far as the writer learnt, in their being admitted to the courses at the Industrial Art School (*Kunstgewerbeschule*), and in the fact that the *Handelskammer* and *Gewerbekammer* were both beginning to turn their attention to the training of women in the tailoring trade. A few girls, who had received their instruction apart from the boys, were being allowed to participate informally as skilled apprentices in the journeyman's examination (*Gesellenprüfung*) at the Tailoring Trade School in the Elisabethplatz. Since 1910 considerable strides have been made. At present (1912) there is a recognised journeyman's examination for women in millinery, in ladies' tailoring and dressmaking (*Damenschneiderei*) and the Trade School for Hairdressers has also started an affiliated course for women. According to the regulations laid down in the latest Imperial Industrial Code (*Reichsgewerbeordnung*), after the year 1913 all girls, who intend to enter either of the two first-named trades, will be obliged to go in for this *Gesellenprüfung*. Only those who pass—having previously fully completed an indentured apprenticeship term of two years—will be permitted to enter for the further examination for Mastercraftsman (*Meisterprüfung*), and only those who have passed the *Meisterprüfung* will have the right to train apprentices (*see p. 42 below*). As yet only one tailoress-journeyman exists in Germany. A girl apprentice of

seventeen, after the obligatory two years' training, has been the first to pass the *Gesellenprüfung* under the new rules (Sept. 1912), and obtained the distinction of "good" from the Examining Board of the Master Tailors' Guild (*Innung*) at Göttingen.* To meet these new conditions the Association for the Domestic Training of Women (*Verein für hauswirtschaftliche Frauenbildung*) in Munich has recently admitted indentured apprentices to its classes for ladies' tailoring and white-work, and these classes were turned into a recognised trade school in 1911 (*see* p. 22 below). Seventeen apprentices are at present (1912) preparing for their *Gesellenprüfung*. This Association, which till lately was a sub-committee of a union of women of the upper classes known as the *Frauenverein*, has been instrumental in calling several important social activities into existence, all of which originated in the Home for Working Women belonging to the Union, known as the *Frauenverein-Arbeiterinnenheim*. The sub-committee above mentioned, which more particularly dealt with the training of women workers, has recently completed its first year of independent existence, and issued its first annual report. So rapid has been the growth of numbers applying for admission to the schools of the newly-constituted association, that the creation of some such centre as the *Lette-Haus* in Berlin is under consideration. The organisation at present consists of the following departments:—(1) a Seminary for Training Teachers in Housewifery (founded in 1907); (2) a Housewifery school for girls of the educated classes (founded in 1907); (3) a School for training professional Cooks (founded 1904); (4) combined Household Courses for training domestic servants of all kinds (founded 1907); (5) a Trade School for mending, whitework, and tailoring (founded 1903); (6) the Committee for the Training of Domestic Servants (Domestic Apprenticeship) founded 1901. With the exceptions of Nos. 1 and 2, all these departments come legitimately within the scope of any description of trade teaching for women of the industrial classes. The developments in department 5 are of special interest.

*School for Training Professional Cooks (Berufskochschule).—*This school aims at training young girls as cooks, thereby providing them with an assured means of livelihood. The subjects taught are good middle class cookery (*bürgerlichfeine Küche*) in relation to health, new technical culinary methods, and modern marketing possibilities. The course lasts either three or four months, the longer period being strongly recommended. Seventy-three students attended last year, including one scholarship holder and three free students. A restaurant, open daily from 12.30 to 2 o'clock, is carried on in connection with this school and provides midday dinners at M. 1 per head. The pupils do all the cooking and serving. The number of meals served in 1911 was 18,794. The writer, who went over

* *Die Heimarbeiterin*, Jahrgang 12 No. 10, p. 3.

the six departments organised by the Association, visited the kitchen and restaurant both here and at a similar school at Karlsruhe owned by the Association of the Women of Baden. In both places the restaurants appeared very popular. In Karlsruhe the full number of possible customers came regularly, and any vacancies occurring were at once filled up. These regular customers consisted of ladies in professions, civil servants (*Beamten*), &c. For servants producing their "Service Book" (*Dienstbuch*) and wishing to perfect themselves at the School, the cost of a three months' training is M. 75, and if they stay on for the fourth month the extra fee is M. 20. Girls just out of their Domestic Apprenticeship (*see* Department 6) only pay M. 45 for a three months' course. Higher charges are made for pupils not training professionally. On the expiration of the course the girls are found suitable situations free of charge. Courses are also given in invalid and special dietary cookery. At a course of the former kind held during the year, twelve Sisters of Mercy from the Municipal Hospitals attended. For the special dietary courses the advice of a well known specialist in digestive disorders at the University Hospital Clinic is freely asked and given. Regimental cookery classes are held, and during 1911, 157 soldiers from the Royal Infantry Bodyguard and the First Regiment of the Line attended and received instruction in the preparation of food suitable for both the privates' mess and that of the non-commissioned officers. In conjunction with the Society for Attracting Tourists to Munich and the Bavarian Highlands (*Verein für Fremdenverkehr*), the Association instituted a cookery class for the first time last year to train the wives and daughters of innkeepers and boarding-house owners. A charge of M. 20 per pupil was made. The institution of such a course seemed so desirable and so helpful in popularising country districts by adding to the comfort of visitors that the Ministry for Foreign Affairs (*Kgl. Staatsministerium des Aeussern*) voted the new venture the sum of M. 140. A large number of special courses are also held in advanced cookery, or in the preparation of some particular fruit or vegetable. Evening classes for beginners and for students wishing to return for additional instruction are also held. Particulars of the income of the school for the last year are not available, but in 1909 over 398*l.* was received in fees in the day school and about 112*l.* from extra courses. Money received for boarding the resident staff amounted to over 188*l.*, and the restaurant brought in a little more than 900*l.*

Combined Household Courses for Training Domestic Servants.—These courses are of three months' duration for girls who have been out to service before, and of four months' duration for those who have not. Domestic servants of all kinds are trained. In spite of the shortness of the training very satisfactory results are obtained and the girls are in great request, especially by mistresses who have had previous experience of girls trained at

the school. The subjects taught are housecleaning, table laying and serving, household washing, &c. Trade teachers give instruction in machining, mending, cutting-out, and making underlinen and in hairdressing. The courses begin in September, January, and April respectively. Forty-three students attended in 1911; of these, thirty-nine obtained situations free of charge through the Association. The remainder returned to live at home. The girls come for the entire day and have their mid-day meal at the school, for which they pay M. 12 per month extra. The amount taken in fees for this course in 1911 is not available. Students' payments in 1909 amounted to 125*l.* and the cost of a three months' training was M. 45, and of a four months' training M. 55, and for girls just out of the domestic apprenticeship M. 30.

The Trade School for Mending, Whitework, and Tailoring. (*Fachschule für Ausbessern, Wäschenähen und Schneidern*).—This school was very full during the past year. To meet the outside demand for skilled workers, the Association opened an Apprenticeship workshop for tailoring and whitework. This was done with the permission of the Ministry for Foreign Affairs (*Kgl. Ministerium des Aeussern*) and in conjunction with the Chamber of Mastercraftsmen (*Handwerkskammer*) for Upper Bavaria. The apprentices bind themselves to a two years' course, which terminates in the journeyman's examination. The *Handwerkskammer* carries out the indentures. Instruction is given by teachers possessing the confidence of the mastercraftsmen and by skilled teachers trained by the Association. The response on the part of girls desiring apprenticeship has been much greater than was anticipated and has caused much satisfaction. Seventeen apprentices joined during the first year; twelve of these were admitted at reduced fees and three were granted free places. The number of students in 1911 was 362 (mending 83, whitework 140, tailoring 122, apprentices 17). The pupils' fees amounted to 227*l.* 5*s.* in 1909.

Committee for the Training of Domestic Servants (Domestic Apprenticeship).—In 1911, 241 girls of school leaving age and 142 mistresses applied to this department; 120 apprenticeships have been entered into, while twenty-six apprentices have left their situations for various reasons during the past year.

Since the foundation of the various activities now working unitedly for the first time as an independent Association the attendance has been as follows:—

1. *Seminary for Training Teachers in Housewifery* (founded 1907): 32 students have gained the state teaching certificate and 22 are at present in training.
2. *Housewifery School for girls of the educated classes* (founded 1907): 576 students have attended various courses.
3. *School for Training Professional Cooks* (founded 1904): 653 pupils have attended the day school and 1,516 evening and special classes.

4. *Combined Household Courses for Training Domestic Servants* (founded 1907): 204 pupils have attended.
5. *Trade School for Mending, Whitework, and Tailoring* (classes started in 1903; recognised as a trade school in 1911): 5,609 pupils have attended courses and 17 apprentices have joined the apprenticeship workshops.
6. *Committee for Training of Domestic Servants (Domestic Apprenticeship)*, (founded 1901): 1,668 girls of school leaving age from the elementary schools have been apprenticed, and visited during their term of apprenticeship.

The Maria-Martha Stift (Evangelical) also trains young girls (boarders) for domestic service at a yearly cost of 6*l.* (120 mks.). The training consists of a two years' course—though a three years' residence at the school is advised if the accommodation permits. About 40 girls can be housed and trained at the school, which comprises a home for old servants, and also a hostel where visitors can be received and where the writer stayed for a night.

WURTEMBERG.

Wurtemberg, like Bavaria, is thoroughly convinced of the soundness of the policy of educating independent craftsmen and aiding its home industries. It, too, has its State-aided trade schools for this purpose, and it is interesting to note the differences of method existing in the two kingdoms. As in Bavaria so here these schools are under the Ministry of the Interior; they are not, however, as in Bavaria, under the Department for Church and School Affairs, but under that for Commerce and Trade, a department of the interior peculiar to Wurtemberg. The principle on which the Government works is, that, before State aid is given, the commune (*Gemeinde*) must have proved the necessity for such a school by having started it; and after aid is given, the *Gemeinde* must continue in active co-operation. For girls, a State embroidery school exists at Wolfschlugen; for men, there are a very large number of weaving schools for training home-workers and small craftsmen.

The State Embroidery School at Wolfschlugen.—This school* is situated in a small commune containing about 300 women engaged in white embroidery, and the industry consists mainly in working monograms and initials on house and body linen. The work is distributed and collected by women agents who have either a private connection or are in the employment of shops or wholesale houses. The school was originally started and supported by the communal district with State aid; the process is now reversed, and the Government has recently taken over the school and works it with financial aid from the

* See Appendix I., p. 53.

commune. The aim is to improve local work, so that better-class orders may be given and higher wages may result. The instruction consists of a two years' course of seven hours a day. The fees for the first year's course are eight marks, for the second five marks. A special mistress instructs in embroidery, drawing, and design; a master from the elementary school teaches arithmetic, book-keeping, and commercial correspondence. During each course the members of the class all work collectively at the production of a single embroidered *Tuch*, that of the first course being simple, while that of the second course is elaborate. These *Mustertücher*,* as they are called, resemble very large glorified samplers of fine white batiste, and are covered with initials and monograms. As soon as the girls are sufficiently advanced, they are allowed to work for orders while at the school. The materials are supplied to the girls by the women agents of the different shops and depôts; the girls receive direct payment for work done from the agent. Teachers recommend girls to employers, but concern themselves in no way with any money transactions, which are arranged entirely by the girls and the agents. Sometimes the agents supply the designs with the materials, at other times the girls submit designs to the employer for selection. The method of the school for obtaining designs is somewhat similar to that adopted by Frau Cornelius in connection with the Bavarian lace schools. Selection is made once a year by Government from designs drawn in the *Frauenarbeitschulen* (schools for women's work) at Ulm, Heilbron, Reutlingen, and Stuttgart, and a small sum is paid for all patterns taken. There are thirty-six *Frauenarbeitschulen* in Wurtemberg, of which these are the most important. All these schools are owned by the respective municipalities (*Stadtgemeinden*) in which they are located with the exception of the one at Stuttgart, which belongs to the Association of the Women of Swabia (*Schwäbischer Frauenverein*). This school has recently been recognised (*bestätigt*) by the State, which pays the teachers' salaries, thereby making them eligible for a Government pension. The teachers of the Embroidery School at Wolfschlügen are summoned once a year by the State to Stuttgart, interviewed and provided with new designs. Once a year a committee of three (composed of a Government inspector, some head official, and one of the directors of the Stuttgart (*Frauenarbeitschule*) visit the school, which is fulfilling its mission. The Government spares no pains, bears all cost, and is succeeding in teaching an industry and teaching it well. More girls are working for orders, a better class of order is being executed, and more money made. Nearly all the young women of the commune who contemplate this form of making a living are passing through the school, which is very successful from this point of view.

* The Bavarian Embroidery School at Enchenreuth' has deliberately discarded the system of working, "Mustertücher."

Lace industry only exists to a very small extent in Wurtemberg, and is found mostly in the Swabian Alps, where pillow-lace, similar to that made in Saxony, is found, but of simpler design. One lace school exists at a village in the neighbourhood at Esslingen. It is managed by private philanthropic effort and the State assists in the payment of the teacher.

Weaving Schools for Men.

As regards Weaving Schools for Men, a very large and important Textile school (*Technicum*) for training all classes of textile workers exists at Reutlingen. Apart from this, however, there are also the numerous small schools which we have already mentioned, of which the following examples are typical. The school at Sindelfingen* is a State-aided, State-inspected communal school. It teaches the theory and practice of various technical methods of weaving in special relation to the many-sided textile industry of the district (*Bezirk*). The fee for training is 30 marks. A similar school exists at Laichingen, started with the object of instructing the many small independent linenweavers (*Unternehmer*) and workmen of the district. At Sontheim the school was started and is owned entirely by the State; in this respect it is apparently an exception to the general rule.

Besides the direct method of education, the Government also employs other means of assisting small independent workers. The capital sum collected for the twenty-fifth jubilee of the late King Charles has been formed into an open *Stiftung* (endowment), and partly devoted to this object. Should the income of the *Stiftung* be exhausted, as sometimes occurs, the Government makes further grants when advisable. These are paid through, and often at the request of, some local authority, clergyman, or responsible crafts-master. It is not required that they should be refunded; they are given as business capital, to be expended on such plant (machinery, tools, materials, &c.) as may be needed to give the applicant a fair start or advisable extension in business. The industries thus supported are:—the making of metal purses, brushes, mousetraps, and egg-whisks, baskets, corsets, paper flowers, weaving implements, and millstones; also white hand and machine embroidery, lace, shirt-making, knitting, slipper-making from remnants (*Entschuhmacherei*), weaving of stockings and packing-cloth, and sorting of ornamental feathers. Returns of all these grants are kept by the Government.

BADEN.

Baden supports the spinning industry in much the same way as is described above in Wurtemberg. Classes are

* See Appendix J., p. 53.

organised among girls who have left school by the Association of the Women of Baden. Twenty such classes were held in 1909. Their Royal Highnesses the Grand Duchess, the Grand Duchess Luise, and the Princess Max of Baden encourage the work by presenting prizes in the shape of spinning-wheels and apparatus. The State (through the Association) gives grants, which amounted in all to the sum of 310 marks in 1910, principally for providing poorer girls with hemp. The opinion of the Association is that money is still to be made by this form of industry in spite of all that has been said against it.*

SAXONY.

Saxony, like Bavaria, spares no pains and expense to develop its peasant lace industry. In the Christmas Exhibition (1910) of Folk Art at Wertheim's, in Berlin, these two States had a very beautiful and wide range of exhibit. The Saxon lace schools number twenty-eight, and are supported some by the town, others by the village, or the commune in which they are situated. They are State-aided to the extent of the teacher and the room being provided. The children enter the school, as a rule, at six or eight years old; one girl to whom the writer spoke had a younger sister who began the work at four years old, while she herself (an exhibition worker) began at twelve years of age. Lace-making, she said, could not be begun too young, if the fingers are to be really supple. In the elementary stages she, like the Oberpfalz authorities, said that the trade was very easy to learn. The pick of the children from these twenty-eight schools—numbering in all about six yearly—pass on to the Royal Technical Pillow Lace School (*Königliche Spitzenklöppel-Musterschule*) at Schneeberg, in the Erzgebirge.† The remaining children who are not selected find employment in working for agents. The aim of the school at Schönsee is the training of teachers for other lace schools and of competent workers for the industry. Instruction is given in all branches of the trade, and is most thorough and up-to-date in every respect; nothing is omitted that can improve either design or method. Every description of lace is made on the pillow, this school and the school at Vienna being the only two places in which one special variety is at present produced. The school is divided into two sections, one for pupils training as teachers, the other for lace-makers attending for improvement. Division I. is again subdivided into three classes; the division consists of nineteen pupils, the average being six in each class. Six pupils leave, and six are added yearly.

* It may be noted that spinning wheels were seen by the writer in other German States at schools for women's work, also in Austria at the Agricultural School at Klagenfurt and on a Carinthian farm, where the women farm hands spin during the winter months.

† See Appendix I., p. 54.

Pupils are paid for work done, and are trained to the highest point of perfection possible. The tuition in Division I. is free, while in Division II. the fees are five shillings for a course of one hour weekly. At the conclusion of the full three years' course in Division I., and after passing the leaving examination, the pupil is given a certificate entitling her to teach.

HESSE-NASSAU (PRUSSIA).

*The Royal Trade School at Schmalkalden for Small Iron and Steel Ware.** Under the Royal Prussian Ministry for Trade and Commerce (*Ministerium für Handel und Gewerbe*).—The Schmalkalden school is situated in one of the valleys of the Thuringian Forest and lies far removed from the stir of big cities and the rush of modern life. The trade of the town and district has centred for a thousand years in metal-work. In all probability, as far as Germany is concerned, the industry first arose at Schmalkalden. The surrounding mountains yielded rich ferruginous earth, the forests provided charcoal, and the brooks supplied water power. Smithies and furnaces existed everywhere. Excellent charcoal-smelted raw iron and forgable refined iron were made. Skilled workers manufactured armour, weapons, and all the metal ware most highly prized in olden days. During the sixteenth and seventeenth centuries the industry thrived. In a writ of outlawry by the Emperor Ruprecht, mention is made as early as A.D. 1400–10 of the Schmalkalden steel, sword, bell, sickle, and knife makers. Decline, however, set in with the pillage and devastation of the Thirty Years' and Seven Years' Wars. Later came the depressing influences of interrupted land and sea commerce during the French Revolutionary Wars. Finally, the industrial revolution all but extinguished the last remaining spark of the once famous industry. By it the entire methods of the trade were changed, and the seat of the production of raw material was transferred to the Rhenish Westphalian provinces. These provinces and the United States of America are at the present time the two great rivals of Schmalkalden trade.

To-day the industry is once more reviving, and gives employment to both factory workers and outworkers. It forms the chief calling of the latter, most of whom combine the trade with a little agriculture, which occupation falls mainly on the women of the family. This combination of industrial and agricultural activities is recognised locally to have both its advantages and disadvantages. The advantages are that in times when trade is bad families are protected from acute want by being able to produce the chief necessities of life for

* The following account is mainly abridged from reports and articles written by Herr Beil, the Director of the School, and most kindly placed at the writer's disposal. (See also Appendix I., pp. 54–56, and Bibliography, pp. 60–61). (*Deutsches Fachschulwesen*, herausgegeben von C. Malcomes, Heft I. p. 59).

themselves. The disadvantages are that the workers fail to estimate the exact cost of production. By placing this too low they undercut the manufacturers, who have calculated the price more exactly, and who are already in keen competition among themselves. Women sometimes work at the trade, but only undertake such light portions as cleaning, packing, or working the fly-press.*

The larger factories are founded on up-to-date lines, and are successful both as regards excellence of output and commercial success. The chief articles manufactured are spoons, curry-combs, various drills, awls, and a large variety of other small tools.

Many of the smaller industries, however, still keep far too closely to the old traditional methods of hand-work. The people are deeply attached to the soil, are strongly conservative in methods, and until recently have looked on modern inventions with mistrust and even with defiance. "Few go out into the larger world. For generations son has succeeded father and grandfather at the same workshop bench and continued to work on exactly the same lines as his predecessors. If any ventured afield he found the world had no room for himself and his limited knowledge, and he soon returned to swell the number of muscle-machines, and to eat the lifelong bread of penury."†

The manual dexterity of olden time has all but vanished, and in these small workshops the goods produced are of poor quality, are made by an unnecessarily large expenditure of physical strength, and have to be thrown on the market in considerable quantities if they are in any way to pay the maker. One result of modern conditions is to be seen everywhere, and that is the endless subdivision of labour. This, as in England, is on the increase. "The manufacture of each article is now a separate trade. These articles are again subdivided into special patterns of that one article. There are awl-smiths and awl-polishers, and the same subdivisions apply to the makers of pincers, pliers, drills, corkscrews and much else. Year in and year out the workers busy themselves with a small portion of a small whole in endless monotony. That such work can only lead to a hopeless arrest of intelligence and to further industrial crises is but too clear. Body and mind are alike stunted and nothing can be accomplished in these go-ahead days with stunted intelligence."‡

In 1848 the Hessian Parliament (*Kurhessische Regierung*) ordered a commission of investigation into the question, and in 1849 the District Government voted 2,000 thalers (£300) for

* Nippers, pincers, pliers, tongs of all kinds, nails, spanners, hammers, wood-drills, screw-drivers, and all the tools used in saddlery and boot-making, are amongst those made in the district.

† Dr. Beil's article in *Zeitschrift für gewerblichen Unterricht*, XXVI. Jahrgang, 1912, Nos. 19 and 20. (See Bibliography, p. 60.)

‡ *Ibid.*

the erection of a model forge and grinding works. The people objected to the innovation and petitioned against it.

Such was the condition of affairs when the Prussian Government in 1902 founded the present school. It is, therefore, in its tenth year, and, like the Bavarian schools, is still in the making. The same authority has instituted similar schools at Iserlohn, Remscheid, and Siegen.* Each school is being developed to meet the special needs of the district in which it is placed. As in 1849 so in 1902, the new venture at Schmalkalden was at first mistrusted by the people, who fancied that the State was intending to enter the arena of industrial competition. At the present time, however, they recognise more and more widely that the school stands in their midst to counsel, teach and co-operate, and to further their interests in every possible way.

Signs of awakening from the dead past are all around. Conservative prejudices are being overcome. Labour-saving and time-saving appliances are gradually making their appearance. Machinery driven by electricity now often replaces brute force, and the influence of the school is telling on the economic condition of the workers. In the last ten years the tax returns have increased 80 per cent., and the savings bank deposits have doubled. Much still remains to be done, and the school is facing the task, in spite of the many difficulties yet ahead, with keenness, hope, and courage, inspired by the success it has already achieved.

The school buildings, which cover 860 square metres, were erected by the town at the cost of 130,000 marks (6,500*l.*). The school trains both for factory and home work. The Prussian Minister for Trade and Commerce and the Governor at Cassel are the central authorities. The management is vested in a Board of ten Governors. The teaching staff numbers seven, inclusive of the district medical officer, who lectures on health and first aid. The building contains:—a power station, the factory workshop, the locksmiths' shop, and departments for forging, grinding, buffing, polishing, tempering, and electroplating. Only model appliances and tools are used, the special aim being to surround the pupils with the best examples only, in order to imbue them with a love for good workmanship, order, and suitability of appliance. During 1910 new plant was installed, for which a Government grant of 14,700 marks (735*l.*) was obtained. The additions include a forge for drop-hammer dies (*Gesenkschmiede für Fallhammergesenken*) and a model grinding workshop.

The yearly instruction given at the school consists of:—

1. A course of a year's duration for young men and boys.
(Two to three years are necessary to fully complete the training.)

* Die deutschen technischen Fachschulen. (*Deutsches Fachschulwesen*, herausgegeben von C. Malcoms, Heft I., pp. 44, 57, 59. See Bibliography, pp. 60-61.)

2. Evening and Sunday classes for older workmen.
3. A short course for teachers in Trade Continuation Schools. (This last course is arranged by order of the Prussian Minister for Trade and Commerce.)

The School Course for Young Men and Boys.—The helping hand was first stretched out where it was most needed, in the building up of a body of skilled young workers. The course for young men and boys was therefore the earliest to be started. Within well-defined limits it gives a careful and varied training in the local industry. This training is imparted either by the factory teacher or the master-craftsman according as to whether factory work or handicraft is to be the future occupation of the pupil. Trade drawing and business methods as applied to industry are also taught. The school, in addition, offers a good practical and theoretical grounding to those who, later on, wish to turn their attention to mechanical construction. The course is conducted in two divisions—a higher and a lower. Students are admitted yearly at Easter. The school year averages 41 weeks, each comprising 27 hours of practical work and 24 hours of theory and drawing.*

(a) Boys enter as soon as they leave the elementary school and are taken without previous experience, the school workshop course being recognised as equivalent to serving an apprenticeship under a master-craftsman or to factory experience.

(b) Young men are also eligible who have had some years' experience under a master-craftsman in the locksmiths' and tool-making trades. Entrance qualifications further consist in the successful completion of the elementary school course, the possession of a good leaving certificate or its equivalent, and a good health certificate. Applicants must likewise show suitability for the work. The Director decides in doubtful cases. Pupils who have received a more extended education are excused from those subjects in which they have already attained the standard required by the school. The fees for the course amount to 60 marks in the case of Prussian subjects, to 160 marks for non-Prussian German subjects, and to 300 marks for foreigners. Cheap railway tickets and lodgings are obtainable. The cost of the necessary outfit (books, clothes, mathematical instruments, &c.) amounts to about 60 marks, and the half-yearly payment for appliances averages 10 marks.

As poverty reigns in all these Thuringian valleys, by far the larger number of boys have to be assisted by money grants, and by remission of fees in whole or part. The grants come from various sources, such as a State fund, endowments, private donations, and local funds. The school also devotes 10 per cent. of the payments in fees to this purpose. An endowment of 14,000 marks was given by a local nail manufacturer lately deceased, the interest arising from the fund being specially

* See Appendix I., p. 55.

devoted to the training of the sons of workers from his own district. In 1911 thirteen pupils received grants varying respectively from 5*l.* to 21*l.* The half year's fees also were remitted or reduced in nine cases.

These grants and remissions are at present available for two years only. But it is felt that the training to be really satisfactory should last for three years. This lengthened period, however, presents many difficulties, the chief of which is the poverty of the pupils. If it were possible for students to earn something for work done during a third year of tuition the financial difficulty, it is stated, might be largely met. Also by so doing the problem of the relation of work to wages would be introduced into the School workshops in a very instructive form, and one which would add further reality and incentive to the pupils' efforts.

The total number attending the school during the year ending Easter 1911 was forty-nine. Seventeen of these were in the upper and thirty-two in the lower division. An analysis of the previous schooling of the students in the second division yields the following result:—Twenty-nine came from elementary schools, one from a *Gymnasium*, one from an *Oberrealschule*, and one from a *Gewerbeschule*. Four students had attended continuation schools. All these pupils were training for craft or factory work with the exception of one, who intended to become a teacher. The ages of pupils in the class were as follows:—Six were 14 years of age, eleven were 15, ten were 16, four were 17, and one was 25.

The course closes with an examination held by special order of the Royal Examinations Commission, for which successful pupils of the first division are eligible. Successful candidates are exempted from the journeyman's examination, and may also be exempted from any further technical examination during the period of military training. The examination is both oral and written and includes a drawing test. Each candidate has also to manufacture some complete article (entirely without assistance) from his own detail-drawings.

At the end of the course the boys go into the world to seek their fortune. Some find places in big factories, but it is becoming apparent, as time goes on, that the majority do not remain long away from their native place. Their homing instincts are too strong and they soon return to the old fireside. It is through such returning workers that it is hoped the lump will eventually be leavened, and the fame of olden days once more return to Schmalkalden. The school keeps in touch with its old pupils, asking for news of each on the anniversary of the day they leave.

It is not the intention of the school to fit its students for the office stool. All its aims are concentrated on awakening love and respect for the blue apron and the workman's bench. To this end practical instruction is given in the latest methods of skilled craft, the pupil is not only taught to make tools, but

taught to make, use, and repair all the best special modern labour-saving appliances that he himself needs to produce articles of good quality (*Qualitätswaren*).^{*} Such tools and appliances are alone selected as are especially instructive and employed in the best methods obtaining in the industry. It is realized that good articles sold at a relatively low price are the only ones, which at the present time, can secure a satisfactory market. The only means by which this combination can be achieved is by insistence on skill in the worker combined with a wise use of time and labour-saving tools. These united factors are also felt to be the best weapons wherewith to combat the soul-deadening monotony of specialisation in detail and the consequent limited efficiency of so many present day workers.

The subjects taught are locksmiths' work and forgework, tempering, hardening, electro-plating, and the manufacture of such tools and machines as lathes, planes, milling and grinding machines, &c. Older pupils can learn something of the working of the engine, dynamo, and switchboard.

The work is carefully graded in an ascending scale, and has to be thoroughly mastered step by step. Each pupil's individual powers are developed as thoroughly as possible. The practical work is at first done from models; after about nine months' training the pupils are advanced enough to work from their own detail-drawings. No one is ever merely trained to make *special parts* of any one article only. Each pupil makes the tool or appliance *throughout*. The teacher supervises the handling of tools and machinery. A thorough and critical discussion based on the theoretic teaching takes place between master and pupil as the practical work progresses. The teaching given to those possessing previous experience is regulated as far as possible to meet special requirements and existing knowledge.†

The drawing instruction, also, is none of it useless. It all has a definite workshop bearing, and is done entirely from models. The branches taught are technical freehand drawing, projection and isometric drawing, and workshop sketching. As the drawings have to stand the test of articles subsequently being made from them, any error and lack of clearness shows up inevitably. The connection between the workshop and the drawing lesson is very fruitful. The Director feels that the extraordinary value of drawings produced by the pupils as a basis for their own practical work is only just receiving the true amount of special recognition which it deserves. With the model drawing made at his leaving examination, for the tool which he makes (entirely without assistance) at the same examination, the pupil attains to his high-water mark.

* Dr. Beil's article in *Zeitschrift für gewerblichen Unterricht*, XXVI Jahrgang, 1912, Nos. 19 and 20.

† For excellence of work done, see illustrations to Dr. Beil's article in *Zeitschrift für gewerblichen Unterricht*.

The teaching of mechanics is on the same principle. Beginning with the workshop as the object lesson, the pupils are encouraged to use their eyes in regard to the surrounding machinery. They are invited to strive to realise its methods and uses, and to enter into a critical inspection of its construction. As far as the principal parts are concerned, the pupils take the machines to pieces and put them together again. This enables them to see their construction and working at close quarters. It also sharpens their perception of the best machines to employ, and trains them in the more important processes of the manipulation of mechanism. The theory lesson is only intended to supply what cannot be taught in the workshop.

In all things the pupils are trained to use their minds, to observe carefully, to draw sound conclusions, to master the work thoroughly, and to leave no points hazy and undefined.

Excursions are made during the course to large factories in Schmalkalden and other towns such as Erfurt, Leipzig, Gotha, &c., under the leadership of the Director or a member of the teaching staff.

The Evening and Sunday Classes for Older Workmen.—This course, to which small-iron workers, tool makers, mechanics, journeymen, and master-craftsmen are admitted, is held during the winter months from October to March. It is always well attended and successful. Forty members joined the course which ended in March 1911. Fifteen of these came from Schmalkalden and the remainder from the neighbourhood. The analysis of the status of these students is as follows:—Independent craftsmen, 3; sons working with their fathers, 5; men engaged in workshops, 11; men working in factories, 20; salesmen, 1. The ages of the men in this class varied from 18 to 38 years.

The practical workshop instruction is given three times weekly from 7.30—10 p.m. As much regard as possible is paid to individual wishes. The students are grouped according to their previous experience and the subjects which they wish to study. The training given in a recent course consisted of:—1. Lathe work for beginners and improvers; 2. Milling and grinding; 3. Precision filing; 4. General locksmith's tool-making; 5. Manufacture of cutting-tools; 6. Steel graving in relation to drop-hammer dies (*Fallhammergesenken*).

The drawing classes are held on Sunday morning from 8–12, with an hour's interval for divine service. The demand for projection drawing last year was particularly great. Twelve out of the forty students took drawing only, eight took workshop instruction only, and twenty took both.

The tempering school and experimental die-sinking (*Gesenkschmiede*) are of the greatest importance as regards the direct furtherance of home-industry and were specially founded to meet a pressing need. They were imperative if the old-fashioned handwork of the district was to hold its own against the universal employment of highly developed machinery in use

in the Rhenish Westphalian Provinces and in America. Men studying in this course who wish to make special tools for their own use may do so if they are sufficiently advanced, but must pay for the material. The teacher in such cases instructs, advises and lends a helping hand, if need be, in the manufacture.

The students work with zeal and industry. The results give every cause for satisfaction. The economic significance of the work is great ; not only does it exert a direct influence on the men who attend, but they carry away with them the knowledge of sound modern methods and spread it over the countryside. The school is thus becoming widely known and appreciated. The same students return (in spite of the heavy sacrifices entailed) for as many as three or four half-yearly courses of this continued evening instruction.

The Technical Advisory and Inquiry Bureau is also doing good work, and proves how widely the school influence is penetrating. The Bureau was originally started because it was observed that important questions of technique raised by local workers often went unanswered, there being no expert councillor at hand to give the necessary advice or information. The result was that money was often sadly wasted and a mistaken choice of appliances and technical aids made. All inquiries are warmly welcomed at the Bureau, information being given to all, employer and employed alike, free of charge. The Director is the advisor. Many questions are asked regarding new developments, special tools, varying methods, means of construction, or where to obtain desired plant. Should the question concern some special tool or appliance likely to prove of general interest, and with which the school is unacquainted, the teachers themselves, if possible, work out the design. This is given to the head boys of the day school, who manufacture the object and put it to practical test. If satisfactory, the inquirer is allowed the model as a pattern should he wish it. Many such original experiments can be seen in the school collection. Much technical experience has been collected in the various departments in the course of practical work ; this has been especially the case in the experimental laboratory, in the building of the school, and in the installation of the existing plant. Knowledge, which has not as yet found its way into existing text-books, of which even skilled workmen have had little or no experience, and which is not likely to be found elsewhere than at the school, is being accumulated, and all this practical experience stands at the service of inquirers.

The school possesses a good collection of instruments, and appliances relating to physics, mathematics, chemistry and electro-plating. A large number of models have been bought or presented to the School. Materials, and articles in various states of manufacture are shown. There is also a large lantern and a fine collection of slides.

Both day and evening pupils give a combined annual exhibition of work. This excites much interest, and town

and country people attend in large numbers. Prizegivings take place in connection with both classes.

The Yearly Course for Teachers in Trade Continuation Schools.—A course of this kind has been held at the School for the last four years by direction of the Prussian Minister for Trade and Commerce. The course for 1910 lasted from July 25th to August 13th. It was attended by 18 teachers drawn from the provinces of Hesse-Nassau, Saxony, and Brandenburg. The instruction was in the hands of the Director, and concentrated on the expert production of sketches, and detail-drawings of simple and typical objects connected with locksmiths' work in relation to building, machinery, and tool-making. A thorough preliminary explanation was given regarding the use of the objects sketched, the material of which they were made, and the method of carrying out the manufacture.

In the second and third week of the course, an hour daily was spent in watching the pupils of the first division in the Day School give a practical workshop demonstration bearing on the expert theory that had just been the subject of study by the teachers in class.

During 1910 a Conference was held at the school. Experts attended from Cassel, Erfurt, and Münster; the Chairman, from Berlin, being a Member of the State Office for Provincial Industries. The teachers' training class, its range and method, formed the subject of discussion.

ALSACE-LORRAINE.

The home industries of these provinces suffered severely at the time of the Franco-German War, those which owed their existence to the French market being driven over the frontier by the tariffs imposed after the annexation. The principal trades affected were straw plaiting (chiefly the plaiting of palm and panama hats), and the pottery industry.

The Pottery Trade.

The pottery trade, however, under the influence of the Strassburg Industrial Art School, is showing signs of reviving prosperity. In the immense forest district of Hagenau, potteries have existed since Roman times, continuing throughout the Middle Ages. It is essentially a family industry, and men, women and children have all worked together at it from time immemorial. At present there are about one hundred and fifty small businesses, employing about two hundred people. Attention has lately been turned to the produce and perfecting of architectural ornament (*Architectur-Keramic*) and the industry shows signs of developing on these lines. Two state-aided industries exist: one for painted pottery at Suffelnheim, the other for stone-ware at Betschdorf. Jugs, tankards, pots, &c., coloured and ornamented with beadings and bosses and

somewhat resembling Doulton ware, are the chief produce of the former district. The *Giessbüchsen* as described in the account of the Pottery School at Landshut (*see above*, p. 15) are also used by these potters. There is no teaching course or school of any kind. When instruction is desired, application is made by the potters to the Municipal Industrial Art School (*Kunstgewerbeschule*) at Strassburg and a teacher is sent to the locality. One or another of the teachers goes every week or two and the State pays them for all such extra work. The instruction consists largely in explanation, demonstration, thorough investigation into the nature of the local clays, and into the suitability of various glazes, plant and firing methods, also in advice as regards the newest type of kilns, &c. The teaching is free. Designs are provided by the school, which is having a great educational influence in the two provinces.

Lace-making.

The making of Venetian needle-lace (as taught in the lace school at Burano *) has lately been introduced into Selz and the Weilertal (Val de Ville) by the interest, energy, and influence of the Baroness Zorn von Bulach.

Finding the peasantry poor, the holdings small, and the factories few and far between, the Baroness decided upon introducing a home industry among the women to improve the economic condition of the inhabitants. After much thought and investigation she engaged a teacher trained at the School for Women's Work (*Frauenindustrieschule*) in Strassburg and installed her for some months in the Val de Ville, the girls from the surrounding villages coming to her for instruction. The type of lace selected for manufacture was intentionally one that was entirely new to Alsace, and furthermore was one that was made nowhere else in Germany. The first course of instruction was started in October 1909. After some months of careful training the girls gradually learnt the new industry and were able to work at it by themselves, only coming to the teacher for a weekly lesson and for fresh designs. The Government of Alsace-Lorraine granted the Baroness a subvention to cover the expenses of this preliminary course. At the present time the Baroness meets the current expenses by retaining for this purpose 10 per cent. of the money made by the sale of the work. The girls live and work at home, which makes this

* This school was founded with funds collected to relieve the acute industrial distress prevailing in 1872 among the fishing population of the island. It has most successfully revived an ancient industry of which the only exponent—an old woman of over seventy—at that time survived. Not only Burano point, but “laces of almost any other design or model are now undertaken.” (*See “A History of Lace,”* by Mrs. Bury Palliser, entirely revised, re-written and enlarged under the editorship of M. Jourdain and Alice Dryden. With 266 illustrations. London: Sampson Low, Marston & Co., 1902, pp. 59-62; also “*Technical History of Venetian Laces,*” by Urbani de Gheltot, translated by Lady Layard. Venice, 1882.)

possible, and the arrangement was made with their consent. The money thus set aside covers the expense of continued tuition, fresh designs, and the travelling expenses of the teacher. The scheme is still in its infancy and experimental. To find an assured sale for the goods produced is the chief problem at present confronting the venture. So far, the Baroness considers that she has been very fortunate, the lace having found appreciative and ready purchasers. She is encouraged, therefore, to hope that an enterprise started in the first instance as a charity will continue to flourish in the future purely on the strength of its own merits. In time, lessons in drawing will be added if possible, thereby giving the workers a more comprehensive training. The lace produced is suitable for trimming blouses and church and table linen, &c.*

Other home industries of the provinces are:—Linen and cotton weaving, coarse wood-ware (such as shoes, shingles, &c., made in the Vosges and Dragsburg), white embroidery, clothing and whitework for export, and saddlery. During the winter months 20,000 women and girls, earning 1,000,000 marks, work at hair-net weaving here and in Switzerland, the export market of the world being Strassburg. Funeral bead wreaths—always most inartistic productions—are made at two or three centres, the coarse beads coming from Bohemia and the fine from Italy. The writer being in Strassburg on All Souls' Day, saw shop windows full of them, the price in some cases being as high as 18 marks.

TRADE UNION OF THE WOMEN HOME WORKERS OF GERMANY IN THE READY-MADE CLOTHING, UNDERWEAR, AND ALLIED INDUSTRIES.

The preceding pages have dealt with industries carried on as subsidiary or principal callings, and worked in many cases in conjunction with small holdings in rural districts. It may now prove of interest to turn to a class of industry which for the most part receives no aid from agriculture, and to give a short account of the efforts of the "Trade Union of the Women Home Workers of Germany in the Ready-Made Clothing, Underwear, and Allied Industries" (*Gewerkverein der Heimarbeiterinnen Deutschlands für Kleider und Wäschekonfektion und verwandte Berufe*), to improve the condition of town out-workers. Even the Social Democrat sees the value of home industry when coupled with peasant proprietorship, but in the case of the landless home worker he sees no single point to redeem it, or to induce him to countenance its continuance. The cry, therefore, of the powerful Social Democratic Unions to-day is, "Away with home industry, with its impossible conditions and its methods of undercutting other wage-earners." In some of these trades, trade con-

* Further information concerning the industry can be obtained by those visiting Strassburg, from Fräulein E. Retting, Fitzgasse 11, and samples of work can be seen.

ditions have been steadily going from bad to worse, notwithstanding philanthropic effort and public interest and inquiry. In the important Berlin blouse industry, for example, wages have sunk continuously since 1896, and the trade has lately been in the throes of a crisis which employers, middlemen, and workers alike deplore, and which threatens its very existence. In spite, however, of the bad conditions so widely obtaining, women like Fräulein Behm and Fräulein Dyhrenfurth, who know their subject thoroughly, and may be compared to Miss McArthur, Miss Tuckwell, or Miss Black in England, maintain that there is still room in the world of industry for these women workers, if education, legislation, and organisation be brought to bear on the problem.

The Union here mentioned is one of the *Christliche Gewerkschaften Deutschlands* (Christian Trades Unions). These *Christliche Gewerkschaften* are one of the three great divisions of German trade unionism, the other two being the Social Democratic and the Hirsch-Dunckler Unions. As an organisation the *Gewerkverein der Heimarbeiterinnen Deutschlands* is in its twelfth year. It numbers 60 groups and over 8,000 members, considerable advance in centres and memberships having been made during the last year. Some of its most interesting developments are scarcely two years old. Women of the more educated classes join its ranks and assist their less leisured sisters in organising groups and initiating developments. If contrasted with the other great organised bodies it is of small numerical strength, and some may say without much weight when compared with the enormous mass of unorganised home industry existing. Its leaders, however, feel, considering what has already been done, that they are on a path which may lead to big possibilities and eventual success, in spite of the many difficulties and disillusionments which they feel still lie ahead.

The main object of the Union is to fight unfair contracts and unskilled labour, *i.e.*, to raise wages and increase efficiency. The chief difficulty in connection with the latter aim is that there is little room for skill when speed is the great requisite. Endeavours are made in the slack season of seasonal trades to teach a second branch of the same trade, so that the new work may dovetail with the learners' own occupation.

From the very beginning of the movement it was a constant experience that bad wages were the result of bad work, and that the bad terms accepted by the indifferent workers forced down the wages of the better workers of the Union. "Often the small earning capacity of the indifferent home-worker stands in direct relationship to her insufficient training, a thing for which she herself is not responsible."* The gist of the report of more than one group-secretary is to the effect that it is only by the sacrifice of time and money, of which the worker has little

* *Die Heimarbeiterin*, October 1911, Jg. 10, p. 3. (See Bibliography, p. 61.)

or none to spare, that the necessary training can be acquired, and it is only when such training is acquired that she can demand higher wages and secure economic betterment. Education is therefore one of the leading aims of the Union. The first attempt in this direction was to instruct individual workers of the indifferent type, and so enable them to attain to the higher rate of pay and to become satisfactory members of the Union. Other workers, to whose health the treadle machine was injurious, were also instructed in some more suitable branch of industry, such as cravat sewing or in the preparation of incandescent gas mantles. It was felt, however, that such isolated instruction far from covered the necessary field, and in 1908 the Berlin branch started regular classes with financial help from *Frauenhilfe*, a society for assisting poor women. Each class comprised twenty-four women, under the supervision of two skilled forewomen. "The experiment was attended with the best results. From that time forward the question of raising wages by increasing efficiency could not be allowed to rest."* The Union declared that the success of the attempt justified their assertion that home industries of this kind had an economic right to exist. In 1910 the Berlin Central Office opened a workshop of its own, not as relief work for the unemployed, but as a training school for the technical education of workers, and for the execution of higher middle-class orders. The Union group at Stolp, in Pomerania, next started a similar training workshop and sale room for the white embroidered edging (known as "Swiss work") which is the speciality of that place. Halle, Hanover, Frankfurt-am-Main, Posen, Königsberg, Elbing, and other groups opened similar departments in quick succession. In more than one town the municipal authorities, realising that the raising of the efficiency of badly paid workers meant the lessening of poor relief, have provided free accommodation and given grants in aid, to facilitate the Union in starting training depôts. In several instances private persons have come forward in like manner.

The classes for instruction, which appear to be extremely successful everywhere, consist of tuition in tailoring, in children's clothes, and in blouse making, in the manufacture of household and body linen, in white embroidery, expert repairing, cutting-out, pattern drawing, millinery, and lace making, according to the special industry of each locality (see Appendix II., pp. 57-59).

The towns of Halle and Posen have opened the doors of their *Gewerbeschulen* (technical schools) to members of the Union, recognising that such an extension falls within the sphere of activity for which these schools were intended.

At Halle the Union conducts its own classes at the school, the municipality contributing 200 marks towards expenses. This grant has enabled the size of the classes to be reduced and more

* *Die Heimarbeiterin*, Jg. 10, November 1911, No. 11, p. 3.

individual attention given. The tailoring and whitework classes comprise as many as 50 members. A class for the cutting-out of whitework has also been started, in response to considerable demand on the part of the members who wished to add this branch of the trade to their stock of knowledge, thereby qualifying themselves to take in private work. As regards payment for this private work, the advice of the Union is to charge for it at the rate of 20-25 pf. an hour. The classes for the session of 1911-12 in tailoring, whitework, millinery, and pattern drawing already had their full complement of intending students in July 1911. A sales workshop is also a feature of this group. "The difference in quality existing between the work of different members, and the constant reproof that has to be administered to the less efficient workers in the workshops, proves how necessary our training courses are. Women coming to us soon see that the 'quick and bad' methods will not suit the class of work we undertake. Such women soon join the work class and train for private work or for the better shop work. Our own workshop thus often loses its best workers, but we rejoice at the development."* The University Hospital placed a contract in 1911 for 850 shirts and 385 sheets with the Union, and was well satisfied with the result. This work was completed in April 1911, and further orders ensued. Sufficient orders to occupy the workshop for twelve months ahead were recorded in February 1911.

At Posen the *Königliche Handels- und Gewerbe-Schule* (Royal Commercial and Technical School) has recently admitted members of the Union to its classes, and many have availed themselves of the instruction given in tailoring and whitework. An instance of what can be achieved by energy and determination, and what the classes at the above school can accomplish for an out-worker, is proved by the report of the Posen branch. The present forewoman in the Union workshop is herself one of the Union's members, who by energy and ability has fully qualified herself for the post after the relatively short period of a six months' strenuous course. Under her able management the output is excellent, the business extending, and the circle of skilled workers growing. The workshop pays its members as much as, but no more, than is given by good houses of business in the district.

At Breslau, two rooms (inclusive of light, tables, and machines) have been placed at the service of the Union in the domestic science department of one of the elementary schools. A certificated teacher in housewifery gives her services. The group has obtained the contract for making the Corporation clothing, the Corporation being the first employer in the town to offer the Union the rate of wages which it considers adequate. This group has a special committee, which examines the work stitch by stitch before delivery. All the members

* *Die Heimarbeiterin*, Jg. 10, October 1911, No. 10, p. 7.

wishing to partake in the orders sent to the Union must first make a sample garment in the workshop.

Other municipalities subsidise the new effort in various ways. The expert repairing classes are found to meet a distinct need, expert menders being rare, and in demand. Several groups of the Union have successfully started such courses.

Many of the groups have lately turned their attention to buying wholesale and selling to members at cost price. Many a pfennig is thus saved to the great satisfaction of members, as prices are rising. This co-operation is everywhere informal; no definite Supply Association or Corporation has been founded. Starting tentatively in quite small ways, one item after another is being bought by respective groups, and sold at the weekly meeting, or during the daily consultation hours. The principal articles purchased are:—Coffee, tea, cocoa, potatoes, soap, coal, coke, briquettes, malt coffee, oat cocoa, machine oil, needles, shirting, worsted, binding, and buttons. In some instances tenders are received from local coal merchants, prices and discounts rates discussed, and contracts agreed upon. Local sewing machine and knitting machine depôts also very generally give 25 per cent. discount to members of the Union. Country holidays are arranged, vicarages and country houses readily receiving members. An Old Age Home—to which the Empress has accorded her patronage, and to which she has contributed 1,000 marks—has recently been founded. Employment Bureaux for placing the skilled workers trained by the Union exist at most centres, and are very successful. Sick and burial insurance also forms part of the Union's activity. On the social side lectures and concerts are given. Several groups possess a debating society and a choir, Posen having a good three-part choir of women's voices. Social evenings are also given in some places for the young daughters of members, with the primary idea of inculcating the ideals of the Union. The weekly subscription to the Union varies from 10 to 40 pfennige. The writer visited the Frankfurt group and the Central Office at Berlin. The Frankfurt group had 200 members in 1910, and weekly gatherings were held on Monday evenings, when a trained teacher gave instruction in cutting-out, machining, and the repairing of any work which had been damaged by mishap. The women bring the articles on which they are at work for the trade. If such work should be behindhand as regards delivery, help can often be got during the evening to enable them to finish up to time. Instruction is free, being included in the member's subscription. The Berlin Central Office also had its permanent trained teacher. Orders are taken on which out-of-work members are employed. Fees for instruction, as is the case at Frankfurt, are included in the member's subscription. Lessons are given for a few days, or even for half-a-day if occasion arises, the aim, in these cases, being not to teach a new trade, but to promote efficiency. The writer saw a tailoress-machinist being given a lesson on a button-holing machine, in order to add a wider range to her technical knowledge and earning capacity.

The Union, like all other organisations especially interested in promoting the efficiency of women workers, such as, for instance, the Association for the Training of Women in Craft and Industry (*Verband für handwerksmässige und fachgewerbliche Ausbildung der Frau*), is keenly promoting opportunities to enable women to take advantage of the regulations in the new Imperial Industrial Code (*Reichsgewerbeordnung*) whereby they can qualify as journeymen in various specified trades (*see* p. 19 above). In Berlin, where from 35,000 to 40,000 persons are employed in the manufacture of ladies' ready-made clothing (*Damenkonfektion*), three-fourths of whom are women, and the overwhelming majority home workers, trade classes for the training of women are everywhere wanting, as are also girls' trade schools for higher industrial instruction.* "The want of skilled workers in the wholesale clothing and bespoke tailoring (*Massschneiderei*) trades is well known; such women have to be imported from Paris or Vienna, where tailoring trade schools for women have long existed. Similar schools have been recently started in London, but, as yet, none exist in Berlin."† To remedy these defects the association has approached the Berlin Chamber of Handicrafts (*Handwerkskammer*) with the request that it should institute courses to prepare women for the journeyman's examination in the tailoring and hairdressing trades. The *Handwerkskammer* has replied by permitting "all such craftswomen to enter for the master-craftsman's examination as can prove that for five years prior to October, 1913, they have worked as independent workwomen, or have held a leading position in the trade for a like period." Opportunity is also given to younger women (who cannot fulfil these requirements) to qualify for the journeyman's examination before that date, by attendance at classes where practical and theoretical instruction will be given to all who can prove that they have had three years' practical experience in the profession. Those who pass their *Gesellenprüfung* before October 1st, 1913, will be qualified to enter, later on, for the master-craftsman's examination.‡ In this connection the new development at München-Gladbach may also be mentioned. A special department for ready-made clothing (*Konfektionsabteilung*) at the Higher Trade School for Textile Industry is under consideration. The department will train for the whole district, and the town of Rheydt has already decided to bear its share in the expense. At present very little higher middle-class or middle-class work is done in the place, which is almost entirely given up to "slop" clothing for working men. The suggested department, therefore, points to a local desire to improve both local technique and local output.

The year 1911 was a memorable one in the annals of home-workers, as it saw the commencement of definite legislation on their behalf. Firstly, the *Reichsversicherungsordnung* (National

* *Die Heimarbeiterin*, Jahrgang 11, No. 5, p. 6.

† *Ibid.*, Jahrgang 11, No. 12, p. 4.

‡ *Ibid.*, Jahrgang 12, No. 9, p. 6.

Insurance Ordinance) was re-cast, and while still excluding home-workers from Invalidity Insurance Benefit (*Invalidenversicherung*), admitted them to that of Sick Insurance (*Krankenversicherung*). Secondly, the *Hausarbeitgesetz* was passed in December 1911, and came into force in April 1912. The efforts of the Trade Union of Women Home Workers were acknowledged in the Reichstag as having been definitely instrumental in promoting the Bill. "The Union is both proud and thankful to think that five of the cardinal points of its propaganda are " amongst those embodied in the Act."* These five points are:—1. The introduction of wages-books, these books to be provided by the employer. 2. The keeping of lists of out-workers by employers, such lists to be accessible to police authorities and factory inspectors. 3. The inspection of dwellings. This is not definitely stated in the Bill, but the elements of the reform are implied in point 2, which also is felt to provide a basis for the later regulation of workshops and home-industry. 4. The prohibition of employers from giving factory hands work to finish at home. 5. (last and most important of all). The encouragement given to arrange price-lists, *i.e.*, contract prices for definite patterns of definite articles. This last work is to be the duty of *Fachausschüsse* or trades' boards. Permission to form these boards is given in connection with certain trades. The great disappointment connected with the Act, from the women home-workers' point of view, is that it entirely excludes *Lohnämter* (trades' boards with the power to fix minimum wages as in England). The Government absolutely refused to touch the question of the State regulation of wages in any form. Among the parties in the Reichstag, the Centre and the Social Democrats agreed to the principle of a minimum wage. The Conservatives, Free Conservatives, and National Liberals were entirely against it.

CO-OPERATIVE PRODUCTION IN SCHWARZBURG-SONDERSHAUSEN.

In the foregoing account of the Trade Union of Women Home Workers the recent tentative development of co-operative consumption among the members of the various groups of the Union has been described.

Another and yet more enterprising example of co-operation, and one which it may be of interest to mention, has recently made its appearance among the peasant home-workers of Geschwenda, a place situated in the Thuringian Forest, in the little principality of Schwarzburg-Sondershausen. The venture is one of co-operative production. The district possesses a considerable seed industry, conducted by large growers. It is also a "*verlegt*" industry (*see below*, p. 44) carried on by peasant proprietors, who sell seed grown on their own land to the agents of big firms. The large growers employ both day labourers without holdings and peasant proprietors, who carry on their own small industry concurrently. As each man returns from

* *Die Heimarbeiterin*, Jg. 12, January 1912, No. 1, pp. 1 and 2.

his daily work he brings home an armful of sticks gathered from the common forest land through which he passes. During the busy season these are just thrown down and left. When winter sets in and all outside work is at an end, men, women, and children alike set to work to peel and prepare this collected wood, turning it into carnation-sticks of various lengths, and seed labels of various sizes, all neatly cut, sized, bundled, and ready for the market. Until lately the ubiquitous factor has collected this produce, which passed through a surprising number of hands before reaching the final purchaser. Quite recently these workers have formed themselves into a Co-operative Supply Association, and deal with the factors as a corporation. They are also directly approaching the English dealers, ignoring all the middlemen who previously intervened, and are employing their own transport agent in Gotha (about 25 miles distant) to deliver the goods.

THE VERLAGSSYSTEM.

No description of German home industries or German out-workers would in any way be adequate if mention were not made of the *Verlagssystem*. In modern industrial undertakings the larger employers of labour are of two types. There is the employer who centralises his labour power in a factory and the man who decentralises it by employing out-workers. Some employers combine both methods. The decentralised form of labour is called the "*Verlagssystem*." The name, has arisen from the fact that employers of this kind generally advance either cash, material, or implements. The provision of these *Vorschüsse* or *Vorlage* has led to such a master being described as the "*Verleger*," to the trade being styled "*verlegt*," and to the method being known as the "*Verlagssystem*." The words are used in this sense in no other connection.

In its English form the system is generally associated in our minds with the employment of large masses of low-paid workers in the "sweated" industries, but in reality it also covers a quantity of "small" masters, and, in some cases, many genuine craftsmen. In decentralised labour we find the town out-worker in Germany, as with us, spending all his or her time at one particular trade. This is not, however, the case with the country worker, who is often engaged in exactly the same industry, and may even be working for the same employer as the town out-worker. The countryman is generally a peasant proprietor. Agriculture proves insufficient to produce his whole living. He and his family have spare hours, in the winter often spare months, and to make both ends meet they, and often he, turn to some supplementary industry. During the busy agricultural season the whole family drop the *Nebenberuf* altogether. The secondary calling chosen may be some new industry which is gradually creeping out of some manufacturing town near, as at Pforzheim, or it may be some still marketable but ancient

local industry, as at Enchenreuth. Most of these old home-industries have been gradually, for some time past, falling into the hands of the *Verleger*, whose agents have already been mentioned as active among the peasants of Enchenreuth and Wolfschlügen and in the villages of Oberpfalz. Sometimes the produce of the entire winter's work is collected in the spring, sometimes the workers themselves, or the firm's agents, go to and fro; at München-Gladbach—the system is different and unique—the factory owner works with no middleman, but sends round collecting carts from house to house. The work in this district consists of workmen's cheap clothing (*Blaudruck*). In the town of München-Gladbach the industry is a *Hauptberuf* (exclusive calling), in the country districts it is a *Nebenberuf*. From the town out-worker's point of view these *Nebenberufe*, when entering into competition with his own production, can only be regarded as parasitic. Their existence is only rendered possible by their being subsidised by another industry. They undoubtedly depress the wages of the town worker. From the country worker's point of view, his two trades are interdependent. One just balances the other, and makes existence possible. Great and crying as is the necessity for reform—as evidenced by the sweated industries exhibitions in Berlin and Frankfurt—the fact must not be lost sight of, that the low rates of payment made to many German workers are made to people whose fundamental economic position is a very different one from that obtaining universally among our out-workers.* Our worker accepting "sweated" prices has no holding, no forest or fishing rights, no grazing rights. Nor has the German town worker, but the country worker may possess one, or more, or all of these. In saying this, however, the writer does not wish to deny the terrible struggle for existence that is the lot of many of these peasantry, notwithstanding such rights and *Nebenberufe*—a struggle to which the statistical returns in many books now appearing on the subject bear ample witness,† as they also bear witness to the superior physique and healthier environment of the country worker in contrast to his town competitor engaged in the same trade.‡

CONCLUSION.

In the face of all these difficulties and conflicting problems, to which they are fully alive, the different States of the German Empire are all agreed as to the advisability of educating the peasant population for these extra callings, and by improvement

* As an example of this:—The Royal Commission on Labour, Vol. V. (Germany), published in 1893, by the English Foreign Office, p. 20, states that "80 per cent. of the Bavarian population belong to the class of small peasant farmers."

† See Appendix II., p. 59, for some of the chief centres of "*verlegt*" low-paid industry.

‡ See Bibliography, p. 61, works by K. Bittmann, P. Arndt, C. Heiss and A. Koppel.

in method, technique, and plant to raise the earning capacity of the workers, and keep a healthy peasantry on the land.

Perhaps it is the presence of this mass of peasant proprietors, and of the undoubted art instinct that is found among them, that accounts for the persistent German belief in craft and the craftsman. The writer has encountered—both in literature and life—English critics of Germany who speak of our own barrack-factory towns as the climax of industrial civilisation, and of “small” industry and independent handicraft as out-worn forms decaying before the inevitable. It surprises them that so intelligent and progressive a nation should see special virtue in craft and in its preservation, and should be entering at this late hour on the seemingly useless task of bolstering up economic survivals. Such action they think must be surely due to sentiment, or to the want of perception as to the direction of the stream of tendency. Whatever be the reason, it is very evident that the German does not believe that the fiat has gone forth that *Kleinbetrieb* must lie prostrate and vanquished at the feet of the Frankenstein monster of *Grossbetrieb*. Facts in his country do not all point one way. Decentralised labour, he realises, may in some trades be a growing and not a decaying force, in spite of the veto of the Social Democrat, and the complaint of the craftsman that apprentices are scarce. At the present moment, to strengthen this opinion, a new phase of industrial development is revealing itself in the spontaneous extension of decentralisation. It is invading industries to which it is new, or has hitherto only existed in small measure. If, in some rural districts, the cry is still that desertion to large towns continues, on the other hand, there are proofs—according to so great an authority as Oberregierungsrat Dr. Bittmann, chief factory inspector for Baden—of a trend in exactly the opposite direction. He gives some striking examples and statistics of this tendency as existent in the Grand Duchy of Baden. It is to be found in the well-known jewellery trade at Pforzheim; in the tobacco trade, which is at the present time one of Germany’s most rapidly growing industries; and, in a minor degree, in the brush-making and clock-making trades. “Employers are deplo-
 “ ploring the empty seats in the tobacco factories. . . .
 “ brush-making is much hindered by want of women factory
 “ hands. . . . In Pforzheim three thousand vacant places
 “ exist in the factories.”* It is said by some that too stringent factory legislation has driven production to the home-worker. In Baden, at any rate, the driving force appears to be of another kind. Dr. Bittmann says, that the feeling that is awakening is the natural love of a man to be “*Herr im Hause*,” to have some dwelling-place and bit of land, however small, that he can call his own. To possess these he will face isolation, lower wages, and irregular arrival of work. All other con-

* Karl Bittmann, *Hausindustrie und Heimarbeit im Grossherzogtum Baden*, p. 1031-2.

siderations are outweighed by the fact of having escaped from the factory and being once more his own master, leading his life with his family working round him.* Dr. Bittmann's belief is that home industry has great possibilities before it. He draws attention to the growing desire for legislation with regard to home industries, some of which are now being carried on as adjuncts to factory work (*Filialarbeitstellen für die Fabriken*). Present social developments demand that work of this kind should be carried on under proper legislative safeguards as regards conditions, wages, and so forth, but such safeguards will, in Dr. Bittmann's view, encourage the formation of new home industries, even if some of the older ones do not survive. As the introduction of steam power tended to the concentration of work in factories, so the use of electricity may make it possible to decentralise certain kinds of work. What the economic significance of home industry carried on under healthy conditions will be, is among the problems of the future.†

The problem is surely one of the most interesting that has arisen of late years. Is the peasant proprietor, with a re-organised *Nebenberuf* to solve the question of "back-to-the-land"? Can such *Nebenberuf* rival, or will it only supplement factory output? Is the new departure merely going to sink the peasantry still further in the helpless and hopeless condition of low paid work and low efficiency, or is it destined to raise such work to the dignity of a craft.

Germany is everywhere striving to answer the question by bringing the best trade teaching available within the reach, not only of those craftsmen who are still holding their own, but also within reach of those home-workers whose future well-being is at the parting of the ways, or who are already sinking into the abyss.

A further point of considerable interest emerges as we take a general survey of the municipal and State education here outlined. In all cases the schools are fully equipped with the latest plant and staffed with the highest expert teaching. None of the schools described attempt to teach a smattering of several trades by means of insufficient plant; or to train, however thoroughly, for trades which were previously non-existent in the district (the lace school at Val de Ville and the furniture school at Fürth excepted).

They train for one trade only, and that trade is the trade of the district, or for some analogous trade as at Enchenreuth, where technical knowledge and manual dexterity already exist and are readily adaptable to new, and what are proving to be profitable, experiments. All these schools are local, and aim at producing efficient local workers to support, raise, and extend local industry and well-being. In some cases they are only for the inhabitants of the district. In others, students from

* Karl Bittmann, *Hausindustrie und Heimarbeit im Grossherzogtum Baden*, p. 1033.

† *Ibid.*, pp. 1087, 1113-4.

a distance are not debarred from entry, but are admitted at a higher fee, and inexpensive board and lodging are provided for them. Such an arrangement is obviously just, for the skill and knowledge, which these students acquire, will not in these instances benefit the locality or the State, which together are bearing the main cost of the training. In fact, the skill and knowledge thus obtained may even eventually compete with their own industry. By means, however, of this higher tariff, the door is left open to genuine desire and talent to make use of the opportunities here provided, and which exist at a few such centres only. Private enterprise has met public demand by providing a hand-book containing a classified list of German trade schools with information as to where such special training centres have arisen, and all particulars concerning them.*

In conclusion the writer would like to touch for a few moments on decentralized labour in England.

No attempt can be made at the end of a short pamphlet adequately to discuss so large a subject, the extent to which it exists, if it be growing or declining, or to compare the relative position of home-workers in the two countries. Most of us, however, are aware of the fact that a large amount of this class of labour is employed in the ready-made clothing trades of London, Leeds and elsewhere, also in box and umbrella making, in the peasant lace industries of Buckinghamshire, Bedfordshire, Devonshire, and other counties, in Scottish homespun, and in Irish crochet, lace, and white embroidery. It may, however, not be so generally realised that a mass of home industry exists, uncaptured by the barrack factory system, of which much less is known and written about. Such, for instance, is the small tool industry and much metal and wood-work.

Before the advent of steam-hammer dies, which to-day make the rough shapes of our smaller tools, such as pliers, pincers, hammers, scissors, &c., all these articles were made in Lancashire and in Sheffield by small makers, and even now the best of these articles are still so made, especially when the variety is large and the sale of each particular article is not sufficiently great to warrant the laying down of expensive plant. In the pocket-knife trade, for example, the better varieties pass through thirty or forty hands before they are completed. Obviously it is only in the cheaper styles of these articles where large quantities of one size and shape are made that machinery can count at all. But machinery when once installed can often be adapted later on to do other work. It therefore frequently occurs that machinery originally put down to produce a common quality of some special article only, by adaptation, gradually works its way into manufacturing a medium quality of the same article. It would have proved a dead loss to have started the machinery to make the medium quality in the first instance. Little by

* *Deutsches Fachschulwesen* herausgegeben von C. Malcomes (See Bibliography, pp. 60-61).

little this method has had the effect of checking variety and more standard patterns have become current. The highest quality of the article is, however, still made in many cases by the "small" master, and is also made in some of the highest class shops, whose name carries great weight among the best class of purchasers.

The Staffordshire trades present, at the moment, a curious study in this respect. To the uninitiated it would appear that the great existing factory buildings are owned by a single firm or company, and that all the goods turned out are the produce of that one firm or company. Whereas, as a matter of fact, they are not. In many of the buildings which have the appearance of being worked as a single whole, the owner himself may only be using a part of the premises. For instance, in a factory or mill consisting of fifty rooms, twenty-five or thirty may be sufficient for the owner's own business. The remainder are let off in self-contained workshops to anyone desiring to take one or more. The tenant pays rent for "shop-room plus power," thereby obtaining, by arrangement, the amount of horse-power that he needs from the engine which is already supplying the rest of the building. The occupants of these rooms are quite independent and work entirely on their own account. They take work from wherever they can get it, and are free to buy and sell where they will. Sometimes they work for some factory owner, sometimes for a "small" master, sometimes they are "small" masters themselves, who have special knowledge and special facilities for the production of some special piece of work. They themselves, or their men and boys, usually fetch their own work, which, when finished, consists of the lesser parts of some whole, or of some simple article finished and complete.

The same methods exist in the Birmingham trades, where many "small" men specialise on the making of one class of article or even on a single article. For example, it has become common for these "small" men to stamp articles like finger plates on doors. These workers simply make the roughly finished stamping only, selling these stampings to other brass-founders or workmen, who finish them off in their own shops as their own articles. The reason for this being that the "small" man by specialising on one pattern, or on one article, can lessen the large cost of the die by producing large quantities of articles from it, and by disposing of them in their unfinished state. In this way all are benefited, and so the complex working goes on, the "small" man being squeezed out in one direction and flourishing exceedingly in another.

Another large group of articles made in a similar way are the locks manufactured at Willenhall, in Staffordshire. This centre would be well worth a visit to anyone wishing to investigate the ramifications of a very wonderful trade.

The domestic woodwork and birdcage-making trades are also industries which are almost entirely in the hands of

“small” makers. Sometimes these workers make a single size of a single article only, and rarely make more than a single pattern in its various sizes. Wooden articles so made are laundry plant, buckets, knife-boards, cinder-sieves, housemaids’ boxes, plate-racks, &c.

These are a few examples of English trades in which “small” masters and home workers at the present time engage, examples which might be extended almost *ad infinitum*, and which lead to the reflection that the England of the twentieth century is not so entirely dominated by the giant factory as some people imagine. They also suggest that decentralised labour and “small” men exist in sufficient quantities to warrant steps being taken for the economic betterment and encouragement of these craftsmen and craftswomen by the provision of sound technical training on some such lines as is being so universally promoted in Germany.

EDITH EDMANN.

APPENDIX I.

SUMMARISED DETAILS OF SOME OF THE SCHOOLS DESCRIBED.

BAVARIA.

STATE AND STATE-AIDED SCHOOLS UNDER THE MINISTRY OF THE INTERIOR FOR CHURCH AND SCHOOL AFFAIRS.

1.—THE WOOD-CARVING SCHOOL AT BERCHTESGADEN.

Administration.—This school is under the Chamber of the Interior of Upper Bavaria, and more directly under the State District Office (*K. Bezirksamt*) of Berchtesgaden.

Management.—The management of the school is vested in a Board composed of the Chairman, or Deputy Chairman, and ten members of the District Council (these latter elected every three years), and also of the School Committee. A treasurer is nominated by themselves from among their number.

Organisation.—The school is in four Divisions:—

Division A.—For figure carvers (a four years’ course).

„ B.—For art cabinet makers (a four years’ course).

„ C.—For house carpenters. Tuition is generally given during the winter months from November to Easter.

„ D.—For elementary school children, apprentices and assistants. This division also includes the two affiliated schools of Marktschellenberg and Ramsau. The study plan is alike in the three schools. This division is further sub-divided into a day school for school children and apprentices and an evening school for apprentices and assistants.

At the conclusion of the four years’ course there is a final examination in Divisions A. and B. The leaving Examination Certificate is granted conjointly by the Ministry of the Royal House and Foreign Department

and the Minister of the Interior for Church and School Affairs. The holder of the certificate having attained his 24th year, and having had three years' further practical experience, is entitled to take apprentices (*Gewerbeordnung*, 7te Juli 1910, 129 Abs.). Full details of the instruction given in each division are to be found in the *Bayerische Landesgewerbezeitung* for March 1911. (See below, Bibliography, pp. 59-60.)

2.—THE EMBROIDERY SCHOOL AT ENCHENREUTH (founded 1900).*

Staff.—*Directress*, Frau Mia Cornelius. *Assistant Directress*, Fräulein Marie Frey (Munich); one teacher of Drawing and Design (Munich); three teachers of embroidery (one trained in Munich and two locally).

Aim.—Not only to train workers for the local white embroidery industry, but also to place them in a position to undertake a good class of order independently. With this end in view the teaching is brought into as close a relationship as possible with peasant home industry.

Term.—Summer course from May to September. Girls join on leaving the elementary school.

Fees.—None.

Sale of Students' Work.—Made-up articles for sale artistically embroidered. The pupils are paid for work done.

Style.—Coloured embroidery, appliqué, and fancy stitching on coarse linen.

3.—THE UNITED PILLOW LACE SCHOOLS OF OBERPFALZ.

Stadlern† (founded 1901), Schönsee (1906), Tiefenbach (1907).

General Art Supervision.—Frau Mia Cornelius (Munich). Each school has also its own highly qualified and certificated State teacher.

Aim.—To give thorough instruction in all branches of pillow-made lace by providing the best teachers and designs possible.

Organisation.—Each school is divided into three divisions:—

Division I.—Beginners and indifferent workers.

„ II.—Girls of average aptitude.

„ III.—Workers distinguished by skill and industry.

Term.—The school year runs from October to the end of July; the terms begin on October 1st and May 1st.

Holidays.—5th August–1st October.

School Hours.—Four hours daily.

Entrance Qualifications.—Each school is open to girls between the ages of 7 and 16 who live within the commune (*Gemeinde*) in which the school is situated.

Fees.—None.

Sale of Students' Work.—Lace for sale. Pupils receive money for work sold.

4. THE ROYAL BAVARIAN TRADE SCHOOL FOR CERAMICS AT LANDSHUT.

Administration.—The school is an independent institution under the State Director of the Municipal Secondary School (*Realschule*) in Landshut, who is assisted by an expert Advisory Committee. Instruction is given in Domestic Art Pottery and Tiled Stove manufacture.

* (See below Bibliography, pp. 60-61. *Deutsches Fachschulwesen*, herausgegeben von C. Malcomes, Heft II., p. 39.)

† *Ibid.*, Heft II., p. 60.

Aim.—To resuscitate the once flourishing pottery trade of the district (a) by training a body of young recruits for the trade, (b) by providing classes for journeymen and master-craftsmen with instruction in the latest methods, particular attention being paid to technique, and the scientific and artistic aspect of the work.

Organisation.—The school is in four departments :—

1. *The Preparatory School.*

Entrance Qualifications.—Previous elementary school or higher grade education.

Length of Course.—Two years.

Subjects of Instruction.—Practice in the workshops, and in kiln work, modelling, drawing, and instruction in trade subjects.

2. *The Trade School.*

Entrance Qualifications.—Satisfactory attendance at the Preparatory School, or two years' apprenticeship under a master-craftsman. Pupils are strongly recommended to serve a three years' apprenticeship and go in for the journeyman's examination before joining the school. Special notice is taken by the management of pupils with this experience.

Length of Course.—Two courses of a year each. Pupils are expected to enter for both courses. Occasional exceptions are made in special cases.

School Year.—From September 1st to July 31st. During the Christmas and Easter vacations at the *Realschule* and from the 14th-31st July the theoretical teaching is discontinued and the time thus set at liberty is devoted to practical instruction.

Time Table.—Forty-eight hours per week. Divided into Courses I. and II. as follows :—

Course I.

	Hours per Week.
1. Practical Work (workshops) with technological illustration - - - -	14
2. Drawing and Painting - - - -	12
3. Modelling - - - -	8
4. Theoretical Chemistry and Mineralogy - - - -	3
5. Practical Chemistry with Technology - - - -	6
6. Physics (with technical experiments) - - - -	2
7. German and Arithmetic - - - -	3
	48

Course II.

1. Practical Work (workshops) with technological illustrations - - - -	12
2. Drawing and Painting - - - -	8
3. Modelling - - - -	12
4. Theoretical and Practical Chemistry and Ceramic Technology - - - -	8
5. Geology with special bearing on Ceramics - - - -	1
6. Physics with technical experiments - - - -	1
7. Firing technique, theoretic and practical - - - -	1
8. Health Laws - - - -	1
9. Industrial Law - - - -	1
10. German and Arithmetic - - - -	3
	48

Fees.—Twenty marks a year for German subjects, forty marks for foreigners. Fees partially or wholly remitted to necessitous German students. Bavarian subjects eligible for grants.

3. *Journeyman's Course.*

Entrance Qualifications.—Satisfactory three years' apprenticeship under a master-craftsman, or the successful passing of the final examination at the recognised Pottery Trade School.

Length of Course.—One year, commencing in September. The arrangement of a course beginning in April is not excluded.

Subjects of Instruction:—

1. Workshops and Kiln Practice.
 2. Practical Chemistry concerning material composition of pastes and coatings. Calculation and manufacture of simple colour-bodies and glazes.
 3. Drawing, Painting, Modelling.
 4. Laws of Health, Industrial Law, Commercial Training, Book-keeping and Arithmetic.
4. *Classes for Master-Potters.*
Such classes are held as required.

WURTEMBERG.

SCHOOLS FOR PEASANT INDUSTRY AND INDEPENDENT CRAFTSMEN UNDER THE MINISTRY OF THE INTERIOR FOR TRADE AND COMMERCE.

THE STATE EMBROIDERY SCHOOL AT WOLFSCHLUGEN.

Administration.—The school is a State school with financial aid from the commune in which it is situated.

Staff.—Special instructress, who teaches Embroidery, Drawing and Design. A master from the elementary school teaches Arithmetic, Book-keeping, and Commercial Correspondence.

Aim.—To improve the local white embroidery industry so that a better quality of work and higher wages may result.

Entrance Qualifications.—Girls resident in the commune over school-leaving age are eligible.

Length of Course.—Two years. The hours of work are seven hours a day.

Method of Training.—The class works collectively on a large sampler.

Designs.—Selected by the State from the work of students at the *Frauenarbeitschulen* of Ulm, Heilbron, Reutlingen and, Stuttgart.

Fees.—Eight marks for the first year's course and five for the second.

Sale of Students' Work.—The school sells no work and provides no materials other than the samplers. The girls, when competent, work for orders in school hours; the teachers, however, leave arrangements concerning payment entirely to the girls and their employers.

THE WEAVING SCHOOL FOR MEN AT SINDELFINGEN.*

This school is typical of a number of similar schools.

Administration.—A State-aided communal school.

Direction.—The Director is paid by the State. The present Director was formerly the manager of a weaving business.

Aim.—To teach the theory and practice of various methods of weaving in relation to the many-sided industry of the district (*Bezirk*).

Organisation.—Daily instruction for the inhabitants of the district.

Fees.—Thirty marks.

* *Deutsches Fachschulwesen*, herausgegeben von C. Malcomes, Heft II., p. 58.

SAXONY.

THE ROYAL TECHNICAL PILLOW LACE SCHOOL AT SCHNEEBERG IN
THE ERZGEBIRGE.*

Aim.—The training of teachers for lace schools, and of competent workers for the industry. Instruction is given in all technical branches of the trade.

Organisation.—The school is in two divisions.

Division A.—*Pupils training as Teachers and Workers for the Industry.*

Entrance Qualifications.—The pupils must have reached their 15th year, have obtained the distinction of "very good" in the highest class of their previous lace school, and have been in the top class of the elementary school.

Length of Course.—Three years.

School Year.—From Easter to Easter.

Holidays.—Easter 2 weeks, Whitsuntide 1 week, Summer 4 weeks, Michaelmas 1 week, and Christmas 2 weeks.

Certificate and Examination.—After having completed the three years' course and passed the examination the pupils obtain a certificate giving them the right to teach.

Fees.—None.

Division B.—*Lace Makers attending for Improvement.*

Instruction.—By the hour.

Fees.—For one hour weekly 5 marks per annum.

HESE-NASSAU (PRUSSIA).

THE ROYAL TRADE SCHOOL AT SCHMALKALDEN FOR SMALL IRON AND
STEEL WARE.

(Under the Royal Prussian Ministry of Trade and Commerce.)

Administration.—The Prussian Minister for Trade and Commerce and the Governor at Cassel.

Governing Body.—The governing body is composed of leading local State and town officials, tradesmen, manufacturers, master-craftsmen, and the Director, numbering ten in all.

Staff.—The staff numbers seven. It comprises the Director, a technical engineer, a trade instructor, three master-craftsmen and the District Medical Officer, who lectures on health and first aid.

School Courses.—I. Yearly course for young men and boys, conducted in a higher and lower division.

II. Evening and Sunday classes for older workmen.

III. Course for teachers in trade continuation schools.

1. *The Day School.*—

Organisation.—The school is divided into a higher and a lower division.

Length of Course.—Two years at least are necessary to perfect the training satisfactorily.

School Year.—The school year extends from Easter to Easter and averages 41 weeks; 27 hours per week are given to practical work and 24 to theory and drawing.

* *Deutsches Fachschullewesen*, herausgegeben von C. Malcomes, Heft II., p. 56.

Holidays.—Whitsuntide, 1 week ; Midsummer, 6 weeks for the lower division and 4 weeks for the upper division ; Christmas, 2 weeks.

Practical Work.—(27 hours per week.) The aim of the practical work is to give instruction in the industry of the district, *i.e.*, the making of articles of good quality in connection with the small iron and steel trade, more especially in special tools needed in local industry. Instruction is also given in tempering, electro-plating, stamping, forging, and locksmith's work.

Technical Work.—(24 hours per week.)

	Time Table.	2nd Division.		1st Division.	
		Subject.	Summer.	Winter.	Summer.	Winter.
1	German and Composition.	3	3	2	2
2	Business methods as applied to Industry.	—	—	3	3
3	Commercial Arithmetic	2	2	1	1
4	Mathematics - - -	5	5	—	—
5	Physics - - -	3	2	—	—
6	Electrical Engineering	—	—	3	3
7	Chemistry - - -	1	1	—	—
8	Mechanics - - -	—	3	3	3
9	Geometrical and Projection Drawing.	6	3	—	—
10	Technical Freehand Drawing.	—	4	6	6
11	Sketching and Trade Drawing.	3	—	—	—
12	Raw Material and Engineering Technology.	1	1	3	3
13	Engineering - - -	—	—	3	3
	Hours per week -	24	24	24	24

Examination.—At the close of each school year an examination is held by special order of the Royal Examinations Commission. Students of the first division are eligible if sufficiently advanced.

Certificate.—Students passing the examination obtain a Government Certificate, which exempts the holder from passing the journeyman's examination, and may also excuse him, during military training, from any further technical examination.

Educational Plant.

(a) *The Power-station.*—The power-station possesses a steam-engine of 25 horse-power—a tubular boiler—2 direct current dynamos of 11 (respectively 4–5) kilowatt power, and an accumulator battery of 216–290 ampère capacity, also the requisite switch-board and measuring instruments. The entire power of the steam-engine is converted into electric energy and drives the machinery, lights the school-house and workshops, and is used for experiments.

(b) *The Engineering Workshop.*—The engineering workshop contains the following machine tools:—5 engine lathes, 3 hollow spindle lathes, 5 mandrils, 1 universal back-gear lathe, 1 capstan lathe, 2 universal milling machines, 1 vertical milling machine, 1 shaping machine, 1 table-

planing machine, 1 surface grinder, 1 universal cylindrical grinding machine, 2 tool grinders, 1 twist-drill grinder, 2 high speed (sensitive) drills, 1 large drilling machine, 1 cold saw, 2 grindstones, and a large number of small tools for the above machines.

(c) *The Locksmiths' Shop.*—This contains 4 benches fitted with 32 vices and the necessary tools for each worker's place. The ordinary tools exist in large quantities and variety, and are checked off in a "tool-book" when given out; the receipt being entered against the pupil's name. There exists besides a lever shear for cutting sheet-metal, a guillotine shear, a punch, a fly press, a large cutting block for metal and the necessary tools, and 5 smaller machines for metal plate-working, and a complete set of appliances for autocene welding, straightening, bench anvil forging, &c.

(d) *The Forging Shop.*—This contains 8 hearths with all necessary accompanying tools for forge work. The fires are fed by a continuous blast from an electric fan. A pneumatic hammer is used for heavy work and for stamping (*Gesenkschmiedearbeit*) a drop-hammer is used. Both are worked by the electric engine.

(e) *The Buffing and Polishing Shop.*—This contains both a buffing and polishing machine, with 6 different model attachments for grinding, buffing, and polishing, which are provided with the best apparatus for dust absorption known.

(f) *The Electro-plating Shop.*—This contains four different baths for nickel, copper, brass, and zinc plating and two for bronzing. Work is done by low-tension current. All the necessary apparatus for surface-treatment also exists, such as a grease-checking table supplied with sprays, alkaline boiler, gas-water boiler, cold-water tanks, &c.

(g) *The Hardening and Tempering Shop.*—This contains a charcoal hearth, a coal-fired furnace, a case-hardening and annealing muffle, a gas furnace with oil valve and pyrometer for controlling temperature, and various other furnaces. There are four large fresh-water tanks for quenching; oil and salt water being used as tempering mediums. The tanks are supplied with heating and cooling arrangements, and with sprays of various kinds, thermometers, &c.

The new Stamping Smithy (Gesenkschmiede) is fitted with a 12 horse-power electric engine and switchboard made in Schmalkalden, an imported lift-hammer on the Bradley principle, a drop-hammer (latest model), by Billings and Spencer. The remainder of the modern up-to-date fittings are of German make.

The new Grinding and Polishing Shop.—This shop is fitted with German machinery and contains two grinding machines (emery powder), three buffing machines (one of the Solingen and two of the Schmalkalden design), two polishing machines, very special and complete arrangements for dust conducting and exhaustion on the latest approved principles, as are also those for ventilation and heating. A switchboard and measuring instruments in connection with the various grinding, buffing, and polishing machines, and the exhaustor complete the installation. Both this shop and the Stamping Smithy have been erected since 1910.

Fees.—For Prussian subjects 60 marks, for German non-Prussian subjects 160 marks, for foreigners 300 marks.

Grants and Reduction and Remission of Fees.—These can be obtained by clever and well-conducted applicants of small means.

APPENDIX II.

CLASSES FOR OUTWORKERS HELD AT THE PRINCIPAL
BRANCHES OF THE TRADE UNION OF THE WOMEN HOME
WORKERS OF GERMANY IN THE READY-MADE CLOTHING,
UNDERWEAR, AND ALLIED INDUSTRIES.

BERLIN (10 groups).

Courses.—Courses are held at the Central Office in connection with the ready-made clothing industry of the district.

Fees are included in the members' subscriptions.

Aim—To train members up to the standard of efficiency required for higher middle-class work.

Sales Workshop.—A sales workshop was started in 1910 at the Central Office under a trained permanent teacher, and was the outcome of successful classes previously held with financial help from the Berlin branch of *Frauenhilfe*, a society for assisting women. Instruction is also given to individual members. Orders are taken. The writer saw a completed order from the Empress for clothing for the poor at Christmas.

BRESLAU.

Municipal Aid.—The Corporation lends two rooms in an elementary school which are fitted up for Domestic Science instruction. A certificated teacher in Domestic Science gives her services. The school also provides light and sewing machines.

Subjects taught.—Whitework, tailoring and cutting out. A course for costume jacket-making is under contemplation.

Length of Course.—Six weeks. The classes are held twice weekly from 8 to 10 p.m.

Fees.—1.50 marks per course. To defray expense of material.

Sales Workshop.—This branch has the contract for the Corporation Clothing Department. A committee of three (selected from the management of the Union) inspect the work before delivery and see that that it is up to the required standard. Each member, before being admitted to undertake the Corporation work, has to make a specimen shirt in the training class.

DRESDEN (3 groups).

Municipal Aid.—The Town Council has granted 300 marks, and an endowed charity (*Mendelstiftung*) has provided a sewing machine for 20 marks.

Subjects taught.—(a) plain work, (b) fine whitework.

Courses.—The courses, which have just been started, consist in:—Fine work: a six weeks' course. Plain work: a three weeks' course. A second class for fine work has been started, as so many wished to join. There is a good demand for the work of the better class workers. A three weeks' repairing course is shortly to be started.

The chief industries of the district are straw hat and artificial flower making. Few of these workers have, however, as yet, joined the Union. Prices are very low for the commoner kinds of flowers. These are manufactured by peasant proprietors in the country districts during the slack agricultural season, whole families working at the trade.

FRANKFURT A.M.

Subjects taught.—Repairing, needlework, and machining. The teaching is done in conjunction with another society for training needlewomen and machinists. The Union provides accommodation and machines, the other society defrays the cost of two trained teachers, light, and cleaning.

Courses.—The Class for repairing, machining, &c., is held every Monday from 7.30–9.30 p.m.

Fees.—Fees are included in members' subscriptions. The expert repairing refers to articles damaged in making. Members provide all material and work necessities. The class is well attended and the results satisfactory. Whitework is the special industry of the neighbourhood. Women make from 16–18 pf. an hour at the commoner work. The better work is well paid. The latter is done in the suburb of Heddernheim and the former in that of Schwanheim.

GRIESHEIM A.M.

Municipal Aid.—Accommodation is provided in an infant school. Two trained teachers from Frankfurt also give their services.

Subjects taught.—Simple tailoring, cutting, fitting, and putting together. The necessary machining is done by the women at home. This course is intended to improve the women's technique and at the same time to teach them to make clothes for themselves and their families. The class started work on factory overalls.

Length of Course.—Six weeks for two evenings weekly. Hours 8–10 p.m. Members provide their own material. The class numbers 24. Much interest is shown and the results are good.

Fees.—1 mark per course.

HALLE (2 groups).

Municipal Aid.—There is a municipal grant of 200 marks. The classes take place in the *Gewerbeschule* (Technical School).

Subjects taught.—Tailoring, repairing, millinery, whitework, white cutting out and pattern drawing.

Sales Workshop.—The sales workshop undertakes contracts and has that of the University Hospital and other institutions. The principal low-paid home industry of the place is paper-bag manufacture.

HANOVER.

Subjects taught.—Renovation of all kinds, including expert darning. Whitework. Tailoring.

Tailoring Class.—Lasts six weeks. Classes four times a week from 8–10 p.m.

Fees.—3.50 marks, including material.

Sales Workshop.—The sales workshop takes orders and strives to train skilled workers, only skilled workers are recommended through the Union's Exchange.

COLOGNE (2 groups).

Subjects taught.—Pillow lace making. The course has not been long started. Several members have obtained permanent work after training.

POSEN.

Municipal Aid.—The Königl. Handels-und Gewerbeschule has opened its doors to members of the Union, who are taking active advantage of the courses in tailoring and whitework.

Subjects taught.—Cutting out and whitework. Both are very successful.

Aim.—To secure efficiency and thereby more permanence of work and better prices.

STOLP IN POMERANIA.

Municipal Aid.—The town provides accommodation.

Subjects taught.—Sewing and Swiss work. White embroidery (edgings) is the speciality of the district.

Sales Workshop.—The sales workshop is proving successful. Plenty of orders are coming in, and a body of young skilled workers is growing up. This work is very poorly paid in the district.

STUTTGART (3 groups).

Municipal Aid.—Accommodation and lighting are provided free of charge.

Subjects taught.—Expert repairing, more especially of linen, lace, and curtains. Classes open to members only.

Length of Course.—Three months. The class is held twice weekly from 7 to 9 p.m. in summer.

Fees.—2 marks per month.

Aim.—To turn out expert darners, patchers, and menders. It is stated that this training in expert repairing affords good prospects, as skilled workers are rare and much sought after. At first only a few joined the course, but the demand for the workers trained therein is now creating a supply of pupils, and latterly the classes have been well attended.

Before leaving the subject it may be of interest to mention a few other centres of low-paid women's home work, although the Union has no branches in these places.

Aachen.—This town is the home of much shoddy (*Lumpfen*) manufacture. Hooks and eyes are also sewn on cards, an occupation which is very badly paid.

Crefeld and Neuss.—These towns have a large cravat-making industry. The work is better paid in the former place than in the latter, where the price is very low. The women sew the length and the middlemen finish the article. Trade schools exist at both places.

Nürnberg.—Many tin-soldiers are made here. This is part-time work and rather better paid than some other trades.

Thuringia.—Toys are made in Thuringia. At Sonneberg the industry is in toys, dolls, and painted wood work. Throughout the district the work is badly paid.

Silesia (Prussian Province).—This district contributes cheap gloves, collars and shirts.

Plauen.—Plauen has a weaving trade which is declining, and makes cheap needle lace and toys amongst other things. These industries stretch from the Erzgebirge into Saxony.

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(This paper is producing, under enactment of the Government, (November 1910), and with the co-operation of the National Industrial Institution (*Landesgewerbeanstalt*), a series of articles on Bavarian Industrial Schools (*gewerblich-technisches Schulwesen*). The schools, for this purpose, are divided into three groups:—1. Intermediate Industrial Art and Technical Schools (*Mittelschulen*); 2. Industrial Trade Schools; 3. Industrial Continuation Schools. The articles are descriptive of the management and development, attendance at, and aims of all such schools. The paper will also contain reports by industrial school experts on questions of technique, method, &c. The January number for 1911 contains accounts of the schools at Zwiesel, Selb, Landshut, Fürth, Lichtenfels, and Enchenreuth. To that relating to the Zwiesel Glass School this present report is largely indebted. The March number contains accounts of the Wood-carving Schools at Berchtesgaden, Oberammergau and Zwiesel, to which the writer is likewise indebted.)

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BOARD OF EDUCATION.

Educational Pamphlets, No. 27.

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ITS RELATION TO PUBLIC
EDUCATION.

LONDON:

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STATIONERY OFFICE

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PREFATORY NOTE.

The following report on the Playground Movement in America has been prepared by Mr. Walter Wood, who visited the United States for the purpose of collecting material and gaining first-hand knowledge of the arrangements made for the play of school children.

The rapid growth of towns and the immigration of large numbers of people who have not been accustomed to organise games may have made the problem more pressing in America than in this country. It has produced that intense use of the available opportunities which characterises the work of many of the large towns, and in particular has led to the special training of play leaders. The attention which is now being given to similar questions in this country leads the Board to hope that the publication of this paper may be of service to those who are considering the extension of the facilities for play both for children and for adults.

The author of the report wishes to express his thanks to Mr. P. P. Claxton, Commissioner of Education for the United States, and to the school authorities of the cities visited throughout the country, for their kind co-operation, and to the following persons for valuable assistance and hospitality: Dr. C. Ward Crampton, Rev. Roswell Bates, Mr. Howard Braucher, and Mr. Bascom Johnson, of New York; to Mr. Otto T. Mallery, of Philadelphia; Professor Graham Taylor and Mr. De Groot, of Chicago; Mr. George E. Johnson, of Pittsburgh; Mr. Joseph Lee, of Boston; Mr. Edgar Martin, of Washington; and Mr. Dwight Meigs, of the Hill School, Pottstown, Pennsylvania.

It will be understood that the Board do not necessarily endorse any opinions which may be expressed in this paper. For these the author is alone responsible.

Office of Special Inquiries and Reports,
July 1913.

TABLE OF CONTENTS.

	PAGE.
I. General History of the Movement	5
II. Types of Playground Administration :—	
(i) Gary, Indiana	10
(ii) New York City	13
(iii) Baltimore, Boston, Pittsburgh	16
(iv) Chicago	18
Appendices to Section II. :—	
A. Development of the Playground Movement in Baltimore, Boston, Buffalo, Cleveland, Columbus, Philadelphia, and Washington	22
B. Table showing in summary form the position of the Playground Movement in 20 lesser cities of the United States	29
III. The Playground Movement in relation to Public Education :—	
Playground activities which concern the School Boards :—	
(i) Salaries of School Teachers and Play Leaders compared	32
(ii) School Teachers as Play Leaders	32
(iii) Training Courses in Play for Teachers and Play Leaders	34
(iv) Cost of equipping a Playground	43
(v) The Playground Staff	45
(vi) Playground Space	46
(vii) Progress made in equipping Schoolyards with Apparatus	47
IV. Conclusion :—	
(i) The Sixth Annual Play Congress at Cleveland	48
(ii) The American view of the movement as social rather than educational work	49
(iii) Some results attained: Prevention of Tuberculosis; Increase in School Discipline and Efficiency; Decrease of Truancy and Juvenile Delinquency; Influence upon the school curriculum	49

THE PLAYGROUND MOVEMENT IN AMERICA AND ITS RELATION TO PUBLIC EDUCATION.

I.—GENERAL HISTORY OF THE MOVEMENT.

The playground* movement in America is about 25 years old. Among the big cities of the East one learns of sporadic attempts made in a small way even before that time. Sand gardens were opened in Boston in 1887, under the control of the Massachusetts Emergency and Hygiene Association, now no longer in existence, and social workers in New York and Philadelphia were experimenting with little children's playgrounds about the same date. The inspiration of this early work may be traced directly to Berlin. In 1885 a letter was written by Dr. Marie Laktionowska to the chairman of the Hygiene Association, mentioned above, pointing out that in Berlin there were placed in the public parks sand-piles, in which children dug and played, and suggesting that something of the kind might be done in Boston. It was nearly 10 years later before the movement began to develop. Between 1894 and 1898 playgrounds were started in New York, Baltimore, Philadelphia, Pittsburg, Chicago, Providence, Brooklyn, Milwaukee, and San Francisco.

As would be expected, the playgrounds of those days were provided by private subscriptions, and with a negative purpose—to keep children from playing in the streets. In most cases some Women's Club was the pioneer. The following is a list of associations found to have been maintaining children's playgrounds in the early days:—Mothers' Clubs; Women's Civic Leagues; Settlement Houses; Society for the Prevention of Cruelty to Children; Health and Hygiene Associations; Women's Christian Temperance Unions; Sunday Schools; Churches; Young Women's Christian Associations; and Women's Clubs of all descriptions. These were the initiators of the movement in the big Eastern cities where the crowded population made the playgrounds a necessity. Everywhere the playgrounds were welcomed and they quickly grew too big for management as a department of a social club. The Playground Associations were formed with strong Committees of social workers, teachers, and school authorities to extend the work. The co-operation of the education authorities was, as a rule, secured without difficulty. Permission to use the schoolyards

* In this report the word "schoolyard" has been used to differentiate between a playground attached to a school and a municipal playground, and the word "playground," in every case, stands for a place set apart for supervised play.

after school hours, and during vacation, was naturally the first favour asked, and once this was secured and the games begun, the sympathy of a section, at all events, of the school board was assured.

The year 1900 roughly marks the second period of growth. The Playground Associations with their many friends now had their grounds well organised and in full swing. Four or five years' work had driven home one fact, namely, that a space in which to play does not make a playground. The realisation of this fact removes the first and greatest stumbling block, as any playground worker in America will testify, and the Associations spent their dollars, not on expensive equipment, but on good play leaders. From this time onward the movement was an established success, for it stood by results.

In those neighbourhoods where the Association had opened a playground, under good play leaders, either in a schoolyard, or in the corner of a public park, or on a vacant lot, testimony came first from the school. The children were more attentive; they came back after their holidays more diligent. Attendance officers reported a decrease in the number of truancy cases. Statistics on these points are hard to obtain, but such as are available are given below (*see* p. 50). The improvement in behaviour noted by the school teachers was followed by the testimony of parents of children using the playgrounds as to a general gain in physical health and less mischief, the last item being endorsed by returns of the probation officers of the juvenile court.

These results brought an increasing number of influential men from the school boards on to the various Playground Associations, and with the coming of the educational officials came the long looked-for municipal grants. The end of this second period saw the Playground Associations strengthened by the addition of public officials to their ranks, and entrusted with the expenditure of sums varying from 25,000 dols. to 200,000 dols. from the City funds.

The third period in the history of the playground movement has introduced complications which have arrested, in many cases, the simple forward march, and which have resulted from two causes. The first is the undecided question as to which department of the municipality is the proper one to control the playgrounds. The second, and this is the real trouble, is the development of the playground movement into a larger-reaching recreation movement. As the movement went west it met with an enthusiastic reception. The new cities were not prepared to delay in the matter, but began operations at once from the City Hall. The following municipal departments were controlling city playgrounds in various cities in America in 1912:—The Park Department; the Board of Education; the Public Health Department; the Commissioners of Public Property; the State Normal School; the Street and

Water Board; the Board of Finance; the Board of Public Works; the Shade Tree Commission; the Public Bath Department.

In the City of Buffalo, New York State, the playgrounds have been variously under the control of the Department of Public Works (1901), the Park Department, and the Department of Public Health. At each change the playgrounds were offered to the Board of Education and refused. The upshot has been the establishment in February 1910 of a separate municipal department—the Playground Commission. The multiplicity of controlling authorities has not been favourable to the movement, especially where circumstances have led to some of the city playgrounds being controlled by one Department, and others in the same city by another, as in Chicago. Before detailing the solution arrived at in New York, Philadelphia, and elsewhere, the second complication may be looked into—the expansion into a recreation movement.

If an idea seems to be a good one it is taken up on trial in the western cities of the United States with enthusiasm. If it proves itself it is bound to grow and prosper, or, at all events, to grow. Where the playgrounds were tried in the West they were at once successful. They had every opportunity, land was not expensive to buy, and there was plenty of money forthcoming for equipment. Above all, except in a few cases, the cardinal mistake of providing an expensive ground with an inexpensive supervisor was avoided by the importation of play leaders from the East. Finally, the playground was found second to nothing for the purpose of gripping the foreign population in the western cities and civilising them to American standards. There is nothing like baseball and the free intercourse of games for turning the southern European boy into an American citizen. Such is the opinion of the playground supervisors from Chicago to the coast. This experience shaped the course of development for the playground movement. The children's playground became the recreation centre, catering for young and old alike. A detailed account of the manifold activities of the recreation centres of Chicago, and a plan of one of these centres, is given elsewhere (*see pp. 18-21, 50*). The recreation centre, however, is an expensive luxury. The Field Houses (the buildings in which the indoor amusements are conducted) are equipped with dancing hall, gymnasium, club rooms, baths, &c., and cost the city anything from 50,000 to 200,000 dols. The smaller cities, seeking to obtain the same benefits at less cost, adopted the plan of putting the money into the schools, and equipping them as social centres. Some account of one of these new pattern schools and its cost will be found below (*see pp. 10-11*). The development of the playground movement in the West, therefore, lies between the expensive recreation centre and the development of the public school as a social centre. In the East, the trouble with the uncertainty of control

led to the establishment, in 1911, in both New York and Philadelphia, of Recreation Commissions. Their purpose is to control the recreation of the people at large, which includes, naturally, children's playgrounds, and extends to the supervision of the cinematograph theatres. Some account of the constitution of these Recreation Commissions will appear later (*see pp. 25-26*). Other cities having separate Recreation Commissions are:—St. Louis, Missouri (pop. 687,029); New Britain, Connecticut (pop. 43,916); and Columbus, Ohio (pop. 181,548). Everywhere in the East the tendency is to follow New York, and to enlarge the field of work to cover the play of young and old alike. The Playground Association of America, a propagandist body formed in 1906, changed its name last year to the "Playground and Recreation Association of America" to allow scope for the larger field. This development in the East will naturally tend to sever the movement from the Boards of Education, and lead to the establishment of the recreation centre on the Chicago plan. Philadelphia is already laying out recreation centres, with Field Houses of the type used in Chicago, though less costly. At the present moment there still remain 46 local Boards of Education in charge of the playground systems of their cities. It seems probable that most of these will in time hand over their charge to a separate municipal department—a Recreation Commission, and that the use of the schools, which after all can only be had out of school hours, will only persist in those towns where large sums have already been invested in the school buildings for the purpose.

It remains to deal with the position of the various Playground Associations. With the intervention of the municipalities, some of these have ceased to exist; others, being more influential, have survived as propagandist and advisory bodies. Some undertake the training of play leaders, while the largest body, the Playground and Recreation Association of America, employs field secretaries to tour the country giving advice on matters of organisation.

It is hoped that this general outline may give a better idea of the growth of the movement than any attempt to do so in greater detail. The movement has necessarily had a very different history in each town and state. Some cities, even in the East, are still in the first stage; others have been for 10 years arguing the question of control between the various municipal departments. As there has been no central control of the movement, so there has been no uniform development.

The number of towns in the United States of over 25,000 inhabitants, according to the 1910 census, is 229. It is known that in 1912 332 cities were conducting organised play under qualified play leaders. Two hundred and fifty-seven towns reporting to the Playground and Recreation Association of America were spending between them $3\frac{1}{2}$ million dols. a year on the maintenance of playgrounds. This does not include

money spent on public parks, golf courses, baths, &c., provided for adult recreation.

Throughout the country the feeling is general that money spent on children's playgrounds represents a good investment for the city. The educational authorities, so far as the writer's experience goes, support the movement unanimously, and everywhere the policy of enlarging and equipping schoolyards is in progress. Citizens are proud of their playgrounds. Newspapers everywhere are glad to print articles and photographs, and public men constantly refer to the work. The present Commissioner of Education for the United States was a Director on the Board of the Playground Association of America. Governor Hughes, Mr. William Jennings Bryan, and President Woodrow Wilson have all spoken frequently on behalf of the playground movement. The following two quotations are from the public speeches of two ex-Presidents of the United States:—

“I hope that soon all our public schools will provide in connection with the school buildings, and during school hours, the place and time for the recreation, as well as the study, of the children” (Theodore Roosevelt).

“Every city is under the strongest obligation to its people to furnish to the children, from the time they begin to walk until they reach manhood, places within the city walls large enough and laid out in proper form for the playing of all sorts of games which are known to our boys and girls, and are liked by them” (William Howard Taft).

These opinions receive substantial support. During the past 10 years Chicago has expended 11,000,000 dols., and New York about 16,000,000 dols., in establishing playgrounds.

II.—TYPES OF PLAYGROUND ADMINISTRATION.

As shown in the foregoing historical outline, the playground movement has developed into a recreation movement, with social aims directed to the welfare of young and old alike. The course of this development has followed two channels, terminating for the one, in the erection of schools equipped to serve as social centres, and for the other, in the construction of a system of recreation centres, independent of the schools, or any other municipal undertaking. It is sometimes difficult to trace the causes which have led a city to adopt the one or other of these policies. The present writer is inclined to think, after a comparison of the history of the movement in the various cities, that the attitude of the educational authorities has had considerable influence in this matter. Where the Boards of Education have taken over the playgrounds, the development has naturally tended towards the school as a social centre. Nearly every city has at one time or other offered the control of its playgrounds to the Board of Education, which has not always appreciated the honour. When the educational authority has proved cold, the playground enthusiasts have generally

followed one of three courses, they have either remained a voluntary organisation with perhaps a municipal grant; or found a more sympathetic municipal body to take over the playgrounds; or, where they have been strong enough to do so, they have established a separate municipal Playgrounds Commission, which probably develops into a Recreation Commission.

The last five years have witnessed a very noticeable change in the attitude of educational authorities towards the playground movement, with the result that the movement, coming late to the new cities of the West, has frequently been embraced by the Boards of Education with enthusiasm from the start. Thus the school as a social centre is more typical of the new western towns.

Chicago stands for the summit of achievement on the recreation plan, and Gary, Indiana, for the best example of the working of the school as a social centre. It must be remembered, however, that the latter has not, as yet, reached its full development; it is rather an experiment upon trial.

(i) GARY, INDIANA.

Gary is a steel town. In 1906 it was not in existence, in 1910 the population was 16,000, in 1911 21,000, in 1912 26,000. The first annual report of the Board of School Trustees is dated 1909. Two quotations from this document will serve to show the attitude of the citizens of Gary towards the playground movement:—

“ We consider the public and school playground absolutely necessary to supplement the work of school. The public playground for children and the school playground should be one and the same, and should be located adjacent to or near by the school.”

The report mentions an “ absolute minimum playground space,” in connection with the recommended sites for new schools, of 49 square feet per head. One more quotation:—

“ We further desire that each of these buildings, (public schools) be a social centre for the respective School Districts. The manual training, technical, commercial, and industrial courses, and physical culture classes will be especially emphasised in the night schools. The gymnasium, swimming pools, shower baths, playgrounds, auditoriums, lecture rooms, outdoor gymnasium, industrial rooms, (cookery and carpentry), and branch stations of the public libraries, (located in the schools), &c., are intended for the adult population as much as for the school children.”

The report, which is here discussing the latest and most improved type of school in Gary, (The Emerson School), goes on to offer something in the nature of an apology for the expenditure.

“ Every part of the school plant is occupied every hour of the day. The children that are in the swimming pool for instance, would have to have a schoolroom provided for them if they did not have this swimming pool . . .

... The playgrounds, gymnasia, and manual training rooms, are used every school hour, and all of these cost less *per capita* than regular classrooms which would have to be provided to take their place."

A brief account of the Emerson School, the very latest of elementary schools, recently erected in Gary, may be of interest. It has a frontage of 245 ft. 9 ins. and a depth of 141 ft. 9 ins. This is not including the boiler house, which is an outbuilding.

Ground Floor (there is no basement) :—

- 6 regular class rooms.
- 2 kindergarten rooms.
- 2 library rooms (same size as class rooms).
- 4 manual training rooms (each of these is twice the size of a regular class room, and is most elaborately fitted with electric cooking plant, &c.)
- 2 gymnasia, with washing rooms, lockers, and shower baths attached.
- 1 swimming pool.

First Floor :—

- 12 regular class rooms.
- Headmaster's office.
- 2 teachers' rooms.
- Store room for school supplies.
- 2 general lavatories.
- 2 large locker rooms (these are for the children to keep their school books in).
- The auditorium, seating 546. (Stage with footlights, head-lights, &c.)
- Large main hall, for assembly of school.

Second Floor :—

- 12 regular class rooms.
- 2 manual training rooms.
- Gallery of the auditorium seating 278.
- 2 hospital rooms fitted with all simple remedies.
- Conservatory for plants.
- 2 general lavatories.
- Large hall (excellent light—planned for a school museum).

Third Floor :—

- One large room for drawing classes and for use as an art gallery.

It is hardly necessary to add that the heating and ventilation systems are perfect.

The Emerson School cost 225,000 dollars (over 45,000*l.*) Each class taught by a single teacher contains 40 children, thus the school accommodates 1,400 children in the class rooms at one time, while there is provision for a grand total of 2,240 children at work or play in the school building. There were actually about 2,000 in attendance in 1912.

Such are the schools now being erected to serve the community as social centres. Mr. Carroll G. Pearse, Superintendent of Schools, Milwaukee, and late President of the National Education Association, detailed, in a recent speech, the equipment necessary in a school building to fit it for use as a social centre:—An assembly hall for dancing, a library, a gymnasium, rooms for use as club rooms, baths. Few cities, he told his audience, are building public elementary schools to-day without these things.

All school buildings, erected in Detroit for the last 14 years have had auditoria seating between four and five hundred people. The Detroit plan is to open the schools for social work for five nights a week from October to March. Rochester, a city with a population of 220,000, has provided all its public schools for the last five years with gymnasia, baths and club rooms, and the School Commissioners announce that the public schools are to be available for use as social centres wherever the neighbourhood shows a need for them. The School Board, which shares with the Park Board the control of the playgrounds, is at present engaged upon the enlargement (wherever possible) and equipment of the schoolyards. The City Board of Apportionment has granted 8,000 dols. this year expressly for the purpose of fitting the schoolyards with paddling pools and apparatus of all kinds. The sum of 25,000 dols. was set apart for 1912 in Rochester for recreation work in connection with the schools.

The arguments in favour of the use of schools as social centres appeal strongly to the business instincts of the American citizen. To close down a public building and grounds so that it is out of use altogether for 18 hours out of the 24, is not their idea of the use of public property. A wider use of the school plant is the tendency everywhere, and the first step is usually towards a better use of the schoolyard. The author has seen in New York, Gary, and elsewhere schools where the yard has been in use for organised play throughout the day. This continuous use of the playground by the school in sections is an economy in time and space, as pointed out in the paragraph from the Gary School Board report quoted above. This idea of making some use of the schoolyard, undreamed of 10 years ago, initiated the vacation playgrounds. The success which attended the vacation playgrounds, has suggested a further extension in the supervision of the school playground after school hours, and on Saturdays. The Board of Education in Alameda (a city in California, with a population of 25,000) issued a regulation last year to the effect that organised games supervised by the teachers should take place during the noon recess, and for a period of one hour after school, in the playgrounds of all schools. This regulation was not popular with the teachers at first, but the superintendent of schools for Alameda, Dr. William C. Wood, in his report for 1911 declares,

after a full year's trial, that the beneficial results have more than compensated the teachers for the slight additional work. A larger proportion of children "made their grades" last year than ever before: and the principals of schools report an average decrease of 50 per cent. in children sent up for punishment. The regulation entails two to three hours extra work per week,* in the playground, for the teachers. Many teachers are voluntarily doing more than this amount.

A better understanding between teachers and children has also been established. The improvement in quality of work and discipline was most noticeable, the report states, amongst backward children.

(ii) NEW YORK CITY.

The Board of Education, controlling 291 playgrounds, is the principal playground authority for the City of New York. The population of New York in 1912 was 4,766,883. The Park Commissioners for the boroughs of Manhattan and Brooklyn have another 35, and 17 more are under local Playground Associations in the city. There are also five recreation piers maintained by the Parks and Playgrounds Association, and 29 Guilds of Play. The total number of playgrounds in New York City is, therefore, 348. Every stage of development in playground work is to be seen in New York from the very latest—a Permanent Recreation Commission—established in the City Hall, down to the small playground maintained by a women's club and supported by voluntary contributions. The two outstanding features are the work in the schools, and the ingenuity of the new Recreation Commission in calling into use every possible means at disposal for public recreation. Manhattan Island, upon which is crowded half the population of the city, has no further space available for playgrounds, and land is priced at a million dollars an acre. A great effort was made in the 10 years, 1895–1905, to preserve a few open spaces for the public use on the Lower East Side, Manhattan Island. During this period 10 acres were purchased for three small parks at a cost of 5,237,363 dols., more than the cost of the whole of Central Park's 840 acres, purchased only 20 years previously. Paradise Park Playground at Mulberry Bend, Lower East Side, cost 176,000 dols., which is at the rate of a million an acre, and was purchased as far back as 1902. Again a block of tenements on the East Side in one of the most congested quarters of the city was purchased at a cost of 1,811,127 dols., demolished and converted into the Seaward Park Playground with an area of 3.315 acres.

The Public Recreation Commission of New York City was established under an Act of 1911. It consists of seven persons

* Remunerated on the scale of class room work.

—the President of the Park Board, *ex officio*, a nominee of the Board of Education, and five others appointed by the Mayor. The Commissioners serve for five years. Mr. Bascom Johnson is installed as permanent secretary. Mr. Johnson is determined that every New York child shall be within a quarter of a mile of some sort of a playground within the next few years. This may mean the erection of 30 or 40 storey play buildings with a playground on every floor, but it can, and will, be done. Every available space is being called into use—roof gardens, riverside piers, even the meagre spaces beneath Brooklyn and Manhattan Bridges, vacant lots, pending building operations; everything that the ingenuity of an ingenious people can devise is being done to vindicate the child's right to play.

The work in the schools is conducted in part by the Board of Education, and in part by the Public Schools Athletic League.

Dr. Crampton, Director of Physical Training to the Board of Education, New York, believes in the continuous use of the schoolyard for organised games. He has also abolished to a large extent the old physical drill in favour of mimetic exercises. He finds the boys are markedly more alive over—

Starting for a race,	Fencing,
Boxing,	Throwing the hammer,
Putting the shot,	Baseball pitching, &c.,

in dumb show than any of the meaningless movements of the old drill.

The Public Schools Athletic League was organised in December 1903 for the purpose of providing boys in the public schools of the city with opportunities for organised games, athletic sports, and recreation of all kinds. A girls' branch was added two years later. Both branches of the Public Schools Athletic League have been placed, for practical purposes, under the Board of Education. The boys' branch owes its origin to Dr. Gulick (at that time Director of Physical Training to the Board), and the present secretary of the girls' branch was appointed Inspector of Athletics in the public schools in 1909. The officials of both branches of the League serve on the Committee on school athletics of the Board of Education, and the Department of Physical Training refers all questions of school athletics to the League.

The boys' branch has drawn up a series of individual and class tests in the Standing Broad Jump, Running (40 to 80 yards according to age), and pulling up with the arms on the horizontal bar. Athletic Badges are awarded in these contests by the Board of Education. Athletic Meets between schools and inter-school baseball leagues are also organised.

The girls have the same tests and Athletic Meets both in their own schools and with other schools. A programme of the Athletic Meet in the girls' school is given here. The

Meet took place on the roof playground in a space of about 100 by 40 feet. The dancing was to a gramophone; about 50 parents were present, besides the teachers and others interested in the school. The Clubs referred to on the programme are organised by the children themselves, with a little friendly supervision, only girls of a certain age and standing being eligible; they elect their own members; the rivalry between them is very keen.

ATHLETIC MEET. PUBLIC SCHOOL, 59. GIRLS' DEPARTMENT.

Programme.

1. Address of Welcome.
2. Contest: Shuttle Relay.
3. Songs (*(a)* Spinning Maiden; *(b)* Stars of the Summer Night): 8 B.
(*i.e.*, girls in B. section of the eighth grade).
4. Contest: Distance throw (with a ball*).
5. Contest:—
 - a. Mountain Polka. Stitt Club.
 - b. May Pole Dance. Brice Club.
 - c. Seven Jumps. Draper Club.

Intermission.

6. Flag Drill.
7. Contest: Pass Ball.
8. Reap the Flax:—
 - a. Stitt Club.
 - b. Brice Club.
 - c. Draper Club.
9. Contest: All up Relay.
10. Decision of Judges.
11. Presentation of Trophy.
12. Presentation of Pine.

The relay races provided the greatest excitement, the club supporters encouraging each with its particular "yell." These Athletic Meets are general in every school; the particular one of which the programme is given is interesting as showing what the school with no playground except the roof can do in the way of athletics.

The morning recess of 20 minutes is so arranged that by distributing the different grades over different periods the playground is never overcrowded. Organised games, the teachers participating, are the rule throughout the city. Dr. Maxwell has given much thought to the problem of how to insure the best use of this recess period. Elementary School Circular No. 16 deals with the question at length; and Dr. Crampton has drawn up a typical programme, which is given below.

* The ball used was a basket ball—the size of a big football, and much heavier. The distance throw must be made with two hands, thus 15 to 20 yards is a very good throw.

DEPARTMENT OF EDUCATION, THE CITY OF NEW YORK.

Typical Programme for Organised Recess.

I. First and Second Years. Girls, Boys, and Mixed Classes.

a. Game. b. Song. c. Dance.

- | | |
|--|---|
| i. Cat and Rat.
Round and Round the Village.
Chimes of Dunkirk.
Muffin Man. | iii. Squirrel in the Nest.
Snail.
Kindapolka. |
| ii. Herr Slap Tark.
Did you ever see a Lassie?
Danish Dance of Greeting.
Hansel and Gretel Dance. | iv. Have you seen my Sheep?
Walking up to London Wall
Carousel.
v. Last Man.
* Jolly is the Miller.
Shoemaker's Dance. |

II. Third and Fourth Years. Girls and Mixed Classes.

- | | |
|---|--|
| i. Corner Spry.
I See You.
Swedish Klap Dance. | iii. Dodge Ball.
Washing Song.
Tantoli. |
| ii. Swedish Fox and Geese.
As I was Walking down the Street.
Nixie Polka. | iv. Pass Ball or Bean Bag.
First of May.
Lassie's Dance (Kull Dance, |
- Teachers and Classes Ball or Bean Bag.
Relays may be used instead of games, and any games suggested for boys may be used by girls.

III. Third and Fourth Years. Boys.

a. Game. b. Relay Race.

Games—

- | | |
|-------------------------|------------------|
| Black and White. | Four Round. |
| Centre Base. | Hare and Hounds. |
| Circle Race. | Home Run. |
| Corner Spry. | One Foot On. |
| Dodge Ball. | Prisoners' Base. |
| Hunt the Fox. | Touch Ball. |
| Have you seen my Sheep? | End Ball. |

Relays—

- | | | |
|-------------------------|----------------|-------------|
| Simple Relay. | Run around. | Arch Ball. |
| Shuttle Relay. | Ball overhead. | Touch Ball. |
| Potato Race (Bean Bag). | | |

A ball, a bean bag, or a dumbell may be used.

In ball relays a basket ball is the best.

Approved, C. Ward Crampton, M.D., Director of Physical Training.

William H. Maxwell, City Superintendent of Schools.

(Printed by the boys of the vocational school.)

(iii) BALTIMORE, BOSTON, PITTSBURGH.

The position in Baltimore,* where the schoolyard playgrounds are maintained by the Playground Association, which receives a grant from the municipality for the purpose, is quite unusual to-day, though a few years ago it was common enough. The State laws do not always permit the education authority to expend money for this purpose, but these powers are everywhere being extended. In Boston,† for example, this enlargement of

* See Appendix A., p. 22.

† See Appendix A., p. 23.

powers dates back to 1907, when the School Committee were empowered, by act of the legislature, "to make appropriations for athletics, sports, games, and play, in the same manner as the School Committee makes appropriations for the support of public schools." The State of Massachusetts went considerably further in the following year when it enacted a law making it compulsory for all cities of the State having a population of 10,000, or over, to hold a vote whether or not they should establish playgrounds. All but two cities, out of 23, voted for playgrounds supported by public taxes.

The State legislature of Pennsylvania enacted, in 1911, that the Board of School Directors in every school district in the Commonwealth—

"May establish, equip, furnish, and maintain the following additional schools or departments for the education and recreation of persons residing in said districts, which said additional schools or departments, when established, shall be an integral part of the public school system in such school district, and shall be so administered, namely:—High Schools; Manual Training Schools; Vocational Schools; Domestic Science Schools; Agricultural Schools; Evening Schools; Kindergartens; Libraries; Museums; Reading Rooms; Gymnasiums; *Playgrounds*; Schools for blind, deaf, and mentally deficient; Truant Schools; Parental Schools; Schools for Adults; Public Lectures."

These wide powers are justification for the belief that in time the playground work throughout the State of Pennsylvania will come into the hands of the educational authorities. The State legislature has empowered the educational authorities to make annual appropriations for the maintenance and equipment of playgrounds in schoolyards since 1895. In Pittsburgh this power has been used, but the appropriation has been paid over to the Treasurer of the Playground Association by a warrant on the City Treasurer, a somewhat curious procedure. The powers and functions of the local Boards of Education are increasing all over the country, and, in those States where the educational authorities are not active in playground work, the inference is that the existing machinery is considered adequate, rather than that the Board of Education has no power to act.

The playgrounds of Pittsburgh—59 in number—are magnificently equipped. The Field House on Lawrence Park Playground is fitted thus:—

First Floor.—Large playroom for little children with dolls' houses, rocking horses, bricks, &c.; Shower Baths.

Second Floor.—Library; Gymnasium; Sewing Room for girls.

The Swimming Pool Building, adjoining the Field House, contains:—Supervisors' Office, Carpentering Room, Cooking Class Room, Arts and Crafts Room, Lecture Hall with stage, and the Swimming Pool lockers and Dressing Rooms. Round the Swimming Pool is a wide trough of sand for building castles and digging. The playground attached has almost every form

of apparatus, besides flower beds, pergola, and lawns. The area is only 4½ acres, but every yard is in use. The total cost was roughly 100,000 dols.; and the average attendance is 1,500 children per day.

“The little playgrounds,” as they are called in Pittsburgh, are somewhat a feature of the work in the city. These are for children under ten. The play leaders in charge are the more highly trained. Play is conducted in open Parks, in the streets, closed temporarily for the purpose, on vacant lots, and in school-yards. In the last case the play leaders appear on the ground about a quarter of an hour before the children come out of school. Simple apparatus, if not already fixed, is produced from lockers, and sheds, kept on the ground. When the children come out the games begin and continue for the remainder of the evening with a short interval of rest.

The attendance on the Pittsburgh playgrounds is very large. Five Recreation Parks had a total attendance of over a million persons for the year 1911, and nine small childrens' playgrounds a total number of 36,736 children.

The Pittsburgh training courses for play leaders will be dealt with in the next section (*see* p. 38 below).

The curious position in Pittsburgh, where the Board of Education provides the money and the playground authorities spend it, results from opposition, coming both from within and without, to the education authorities controlling the playgrounds. The Pittsburgh Playground Association has an income of over 77,000 dols. per annum, and its activities cover far too wide a field to be taken over by the Board *in toto*. On the other hand it is difficult for the Board of Education to persuade the playground officials at the head of those departments of playground work which more properly belong to the education authority to enter its service, because the playground workers feel that their methods would have less freedom and be the subject of inexpert interference. The division of playground work into educational and social, has been made in other cities, however, and is on the way to being made in Pittsburgh. In New York and Philadelphia* the solution has been a Public Recreation Commission to manage the large social centre playgrounds, while the schoolyards, and all the educational work, is undertaken by the Board of Education. This solution is the *media via* between Gary, on the one hand, and Chicago on the other.

(iv) CHICAGO.

In Chicago the question of control is solved by bringing all the playgrounds of the city under one or other of five Park Boards. Work in the schools has made comparatively little progress, due to the magnificent provisions of the Park Boards.

* See Appendix A., p. 26.

18a



0 1875

Noon recess. Schoolyard. Pittsburgh.

The Board of Education sees little need for equipping school-yards when every child is within reach of a municipal playground.

The parks and playgrounds of Chicago are the finest in the United States. The system, as stated, is under the control of five separate Boards of Park Commissioners. Of these three—the Lincoln, or North Park Board, the South Park Board, and the West Park Board—are bodies independent of the municipality, having been so created by Act of the Legislature of the State of Illinois. The Special Park Commission is a municipal body created in 1899 to take over the few playgrounds remaining at that time under the control of private corporations. The Outer Park Commission exists for the purpose of guarding the interests of the public in the outlying districts of the town, and to insure that, in the midst of the building everywhere in progress, ample space for parks and playgrounds shall be reserved for the public. We have only to consider the rapid growth of a city like Chicago to see the great value of such a body as the Outer Park Commission. In 1880 the population was 503,298; in 1910 it was 2,185,283, and the city area, which in 1887 was 36,662 square miles, was returned in 1910 as 191,325 square miles. The Outer Park Commissioners estimated that, in 1950, the population of Chicago will be nearly 10,000,000. In proportion to this rapid growth in size is the rapid rise in the playground movement. Thirteen years ago the Playground Association of Chicago was struggling for a grant of 1,000 dols. of public money. To-day it is calculated that a sum between thirty and forty million dollars has been invested in the city parks and playgrounds.

The magnificent system of public parks and playgrounds erected by the South Park Commissioners of Chicago is, in the words of Mr. Roosevelt, "the most notable civic achievement of any American city." The amount of money invested by the people of this one district alone is returned thus:—

	Dols.
For Lands - - - -	5,776,915
For Improvements - - -	11,306,413
	<hr/>
	17,083,328

The South Park system stands as a model, and delegates from all over America, and from Europe and Asia too, come to admire and to envy. It is worth while to consider the system in detail.

The South Park Commissioners are five in number, and the Commission came into existence in 1869. The five members are not elected but, with a view to their removal from politics, are appointed to hold office for six years, by the circuit Judges of the United States Court. The Park Commissioners, as already explained, are independent of the city, and levy their

own taxes, employ their own police force, and, as far as the Parks are concerned, are in every way supreme.

The South Park Commission controls in all 23 parks, made up as follows:—Four big parks of from 200 to 500 acres; four small parks of from 25 to 100 acres; 15 play parks. Of these 15 play parks, eight are over 10 acres; six are 10 acres exactly, while one, Hardin Square, is 4·95 acres. Those of 10 acres or less are known as squares.

The total acreage of the 23 parks and playground squares in the South Park system is 2,021 acres, and in addition, the South Park Commissioners look to the upkeep of 28 miles of Boulevard. The cost in upkeep for the 23 parks and squares is roughly 500,000 dols. per annum. Armour Square, one of the busiest of the 10 acre recreation centres, cost 170,000 dols. to build and equip, and is now costing 29,000 dols. a year to maintain (*see* plan facing p. 50). It is a question whether the city receives an adequate return for the enormous sums invested. There is no doubt, however, that good use is made of this splendid system of parks and playgrounds by the public. For example, records of attendance, over a period of twelve months, at Davis Square, one of the recreation centres, show that 752,782 persons made use of the baths, gymnasium, reading room, &c., in the Field House. These would be all children and young people. Ten playgrounds in the South Park system had an attendance of 5,175,500 for the year 1910; 6,000 persons attended the swimming pool at the West Park Recreation centre No. 1 in one day. The Field Houses with which every park and playground in Chicago is equipped, are real social centres, and represent the high water-mark in public provision for recreation in America. From each is conducted a variety of enterprises which are by no means for the exclusive use of children. Each is fitted with an indoor gymnasium (for use when the weather is unfavourable to the use of the two outdoor gymnasia), a dancing hall, an auditorium for dramatic entertainments, a library, club rooms, play rooms, manual training rooms, and baths. Each Field House is the home of ten to a dozen clubs among the young people of the neighbourhood. These might be made up as follows:—Five social clubs for boys and girls (literary, debating, &c.); three athletic clubs (baseball, track athletics); one old scholars' club, high school fraternity, or lodge; one dramatic club.

The expensive Recreation Centre plan in effect in Chicago is meeting with a good deal of criticism. Those who favour the adoption of the school as a social centre liken Chicago to the farmer who cut two holes in his fence, a large one for the cat and a small one for the kittens. Again, Philadelphia boasts that it is building Field Houses just as effective at less than half the cost.

Nothing has been said of the West and North Park Commissions. The work is similar to that of the South Park,



Hamilton Park Wading Pool. South Park System. Chicago.

and their Recreation Centres are planned and conducted on the same lines. Their investments have been slightly less, and their annual expenditure is considerably less. The South Park system is the show one. Mr. De Groot, head of the system, is a man who thinks in millions, and his policy has been regardless of expense.

An account of the training courses for playground workers organised by the Chicago Training School for Playground Workers and by the Chicago School of Civics will be found in a later section, as also copies of the examination papers set by the West Park Commissioners in the examination for Playground Directors and Instructors (*see pp. 34-37 below*).

After hearing so much of the Chicago Park system it is somewhat surprising to learn that the actual Park area is no more than 3·62 per cent. of the total area of the city. This brings home the fact that the excellence lies in the laying out and the use of the available space.

The spectacle of the people of an industrial city like Chicago at play in the parks through the summer evenings is the spectacle of a city working out its own salvation. On the banks of the lagoons the older people sit in the shade of the trees, while the young people, both men and women, are engaged in baseball, tennis, and all manner of out-door games. For children between the ages of 10 and 15 there are playgrounds, one for boys and one for girls, equipped with every kind of apparatus. For little children there is a third playground containing swings, slides, see-saws, a sand-heap, shaded from the sun, and a paddling pool. In the Field House building there are the books, the dancing classes, the debating clubs. After dark the grounds of the smaller parks are brightly lit and the Field House is crowded with all its manifold activities in swing until eleven o'clock.

No better idea of the developments of the playground movement in America can be gained than from a comparison of the present position in these four cities, Gary, New York, Pittsburgh, and Chicago. In Gary they believe that the school should be the centre of all community recreational activities for young and old alike. In New York the social and educational work of the recreation movement is divided, the former being organised by a Recreation Commission, and the latter being under the control of the Board of Education. In Pittsburgh we see the transition stage of development, the Board of Education not being prepared, as yet, to take over all the educational work of the Playground Association but having undertaken some of it, *e.g.*, school gardens. In Chicago, all the playgrounds of the city are under the control of the Park Boards, and real recreation centres have been made of the parks and squares.

The question of which is the proper municipal authority, failing a separate department, to control the playgrounds is still

an open one. The arguments for and against the three principal controlling authorities may be summarised thus:—

Voluntary associations suffer from lack of funds and public interest. On the other hand, they have a certain independence, and the workers are usually enthusiastic. The Park Boards hardly pay sufficient attention to supervision, also they incline towards laying out large athletic fields rather than the small children's playground in a congested district. Both these errors are noticeable in the administration of the Park Department in Boston. What the Park Department can do, if given an absolutely free hand, is illustrated by the work in Chicago. The School Authorities often fail as regards the quality of the supervision, not having a sufficient supply of trained play leaders. The work is often entrusted to teachers without experience, and without a knowledge of the value or purpose of play. Many authorities have their playgrounds open only in term time, and the play in vacation schools is often too stiff and formal. Against this, however, we have to set the fact that the education authorities have the children, the grounds, and the buildings all available, and in the staff of teachers, the ideal material for play leaders.

If it were not for the fact that the peculiar needs of American civilisation had forced the development of the children's playground movement into a recreation movement for the people at large, there could hardly be any question as to the propriety of the work being in the hands of the educational authorities.

In Appendix A. to this section will be found a statement, in summary form, of the position in 1912 in seven of the cities visited, and in Appendix B. a table setting out the principal facts with regard to twenty other towns.

APPENDICES TO SECTION II.

A.—DEVELOPMENT OF THE PLAYGROUND MOVEMENT IN BALTIMORE, BOSTON, BUFFALO, CLEVELAND, COLUMBUS, PHILADELPHIA, AND WASHINGTON.

BALTIMORE, Pop. 558,485.

Playgrounds were opened by the Baltimore Playground Association in 1894, but failed owing to lack of supervision. Duluth, Pawtucket, and Toledo have all shared this experience of being obliged to close unsupervised grounds. Where the grounds are left without play leaders, they either fall into the hands of gangs of rough boys, who soon make them a menace to the neighbourhood, or else they remain unused, for there is no doubt that the municipal children's playground has to compete with the many attractions which the streets offer to boys as places in which to play.

The Baltimore Playground Association was refounded in 1897, and now controls 27 playgrounds, 18 in schoolyards, and 9 in the public parks. The Board of Education assists in the maintenance of the 18 schoolyard playgrounds to the extent of providing apparatus in 12 of them. The Association uses portable apparatus on the other six, which is put up on July 1st and taken away again when the vacation ends, about the middle of September. The grant from the city to the Playground Association last year was 14,000 dols., a sum less than might be expected, due to the fact

that the Public Athletic League is also assisted by the city. The Association organises a training course for playground directors (*see below*, p. 39).

The Public Athletic League is an institution organising recreation on behalf of boys and girls between the ages of 12 and 18. Hence the League does not come into close relationship with the Baltimore Board of Education. Such financial assistance as the League receives comes direct from the municipality in an annual grant of from three to five thousand dollars.

The Public Athletic League, as already stated, exists for the older boys and girls. The League uses the parks, in which baseball fields and running tracks for boys and basket ball fields for girls are set apart for their use during the summer. In winter the League uses school buildings, settlement houses, market halls, chapels—in fact any form of building which can be obtained. Portable apparatus is used when no other is available. The League is in touch with some 2,000 boys and 500 girls, and exists to organise and turn to social use the play of adolescent boys and girls. The boys' baseball league games are contested before big crowds, and their Athletic Meetings, at which the League presents gold and silver medals, produce excellent performances. The Public Athletic League has initiated a system of medical inspection among the contestants. This inspection, which is compulsory for boys entering for the track events, is, as a rule, readily submitted to, 1,717 boys having been examined last year. The examination made is considerably more searching than the school medical inspection which, in Baltimore, deals only with eyes, nose, and throat. Moreover, this examination, coming at a critical period of the boys' development, has been found in many ways especially helpful, and has proved a revelation to the medical men engaged upon it.

The Playground Association specialises somewhat in play on the streets and in vacant lots (*see also* Washington, p. 29), and in institutional work. In the last case, play leaders are sent to Orphanages, Rescue Homes, Feeble Minded Asylums, and Reformatory Schools, where play is needed as medicine for mind and body.

Considerable use is made of the school buildings, by both the Public Athletic League and the Playground Association. The new schools of Baltimore are very well equipped. One of the public schools (No. 51) built in 1911 cost 125,000 dols. The Board of Education has recommended a floor space of 26 × 32 feet for each class room, with a height of 12 feet, and by a Baltimore City Ordinance this is now the minimum area to accommodate a maximum of 48 children. Each of the new schools has a basement hall of 90 × 37 feet, fitted as a gymnasium. The Public Athletic League uses these halls for gymnastics and dancing every evening throughout the winter. Each basement hall is reached by a separate outside entrance, the way up into the school building being locked after school hours.

BOSTON, Pop. 670,585.

The playground movement has had a longer history in Boston than in any other city in the United States. The principal playground authority is the Park Department, which controls 30 grounds. The School Committee has a right to carry on games and supervised play on all these grounds and uses 25 of them. There is a scarcity of good play leaders, and the experts complain of the appointment by the civic authorities of good baseball players rather than good play leaders as heads of the several playgrounds. The Boston School for Social Workers is starting a course for playground leaders, and the State Normal School is now teaching a little about play.

The School Committee is at present maintaining 21 schoolyard playgrounds during the summer vacation at a cost of 12,434 dols. The items of expense on one of the largest of these are as follows:—

Emerson Schoolyard Playground.

	<i>Dols. cts.</i>
Teachers' salaries - - - - -	396.63
Janitors' salaries - - - - -	118.68
Apparatus - - - - -	207.46
Supplies for games - - - - -	28.13
Supplies for quiet play - - - - -	15.19
Labour on ground - - - - -	17.77
Total for 208 sessions - - -	783.86

‡ The average cost of a vacation playground is 593 dols. The average attendance was 132 children per session, and the cost per head per session, 29 cents.

Appended is the official programme for the day on a schoolyard playground.

BOSTON PUBLIC SCHOOLS. (DEPARTMENT OF SCHOOL HYGIENE.)
PROGRAMME for SCHOOLYARD PLAYGROUNDS and CHILDREN'S CORNERS
in PARKS.

Summer Session, 1912.

9.45 to 10 a.m. -	Putting up swings, tilts, slides, sand-tables, &c.		
10 to 10.15 a.m. -	Distribution of playground material. Opening exercises.		
	DIRECTED PLAY UNDER CHARGE OF—		FREE PLAY.
	First Assistant.	Assistants.	From 10 a.m. to 4.45 p.m.
10.15 to 10.30 a.m. -	Active games for older children : Ball games and running games.	Care of grounds, material, and of younger children.	Swings. Tilts. Merry-go-rounds. Giant stride. Tether ball.
10.30 to 10.45 a.m.	Quiet games and care of yard.	Ring games and singing games for smaller children.	Slides. Sand-tables and sand material
10.45 a.m. to 12 p.m.	Collection of material.		Checkers. Jack-stones. Blocks.
12 to 1 p.m. - -	Luncheon	Care of grounds : Quiet games. Luncheon	Ring-toss. Bean bags. Bean bag boards.
1 to 2 p.m. - -	Care of grounds : Quiet games.	Care of grounds : Embroidery and reading : Monday, Wednesday, and Friday.	Balls. Jumping ropes. Hoops. Reins. Ringfoil.
2 to 3 p.m. - -	Dancing : Monday, Wednesday, and Friday.	Embroidery and reading : Monday, Wednesday, and Friday.	Puzzles. Quoits. Croquet. Tennis.
	Care of grounds : Embroidery and reading : Tuesday, Thursday, and Saturday.	Story telling : Tuesday, Thursday, and Saturday.	
3 to 3.30 p.m. -	Care of grounds : Cutting.	Dramatics	
3.30 to 4.45 p.m. -	Active games	Active games	
4.45 to 5 p.m. -	Taking down the swings, slides, sand-tables, &c., and the collection of material. Closing exercises.		

Inter-playground games, meets, and demonstrations to be scheduled by supervisors.

THOMAS F. HARRINGTON, M.D.,
Director.

BUFFALO (STATE OF NEW YORK), Pop. 423,715.

The playground movement in this city has had a peculiar history. Nothing was attempted until 1900, when a Women's Club, attached to a Settlement House in a poor quarter of the city, raised money by public subscription, and, having obtained permission from the education authorities, equipped Emslie Street Schoolyard as a playground. The work obtained instant recognition from the municipality, and in 1901 the city took over the Emslie Street playground, and the Park Department started the Terrace playground in the Italian quarter, receiving an appropriation of 2,900 dols. from the city for the purpose.

In 1903 the playgrounds, six in all, were transferred to the Public Works Department.

In 1904 the Public Health Department undertook the maintenance of the six playgrounds, and the appropriation was increased from 13,150 dols. in 1903 to 23,695 dols. in 1904, 11,845 dols. being for the purchase of land for the Bird Avenue playground.

In February 1910 the Playground Commission was formed to take over the playgrounds from the Public Health Department. The appropriation for this year amounted to 145,570 dols., three new grounds being added. In 1910 the appropriation from the city was 29,962 dols.; of this sum 13,110 dols. went to the maintenance of the nine existing grounds and the balance to the acquisition of new sites.

In 1911-1912 the appropriation was 36,990 dols. for the maintenance of 11 playgrounds. In 1912 36,590 dols. was granted to the Playground Commission for the upkeep of playgrounds with a total area of 748,486 square feet, and, in addition, a bond issue of 100,000 dols. was authorized for the purchase of land and permanent improvements.

The present Superintendent of Schools in Buffalo is not particularly sympathetic to the play movement. He is elected by a majority of votes in the city, and is not, as in most other cities, a paid official of the local Board of Education.

By a clause in the regulations governing the Civil Service examinations in Buffalo, candidates for a position as Director or Head of a playground must have been three years resident in Buffalo. (*See below*, p. 40, for a copy of the examination paper for the position of Playground Director.) Since there is no training school for play leaders in Buffalo, the directors of the various playgrounds come to the work untrained, and this is felt to be a considerable handicap.

The Playground Commissioners of Buffalo (seven in number) state in their latest report to the Common Council that they consider the recreation facilities of Buffalo very inadequate.

CLEVELAND (STATE OF OHIO), Pop. 560,663.

The Playgrounds of Cleveland, with the exception of two, maintained by Settlement Houses, are under the Cleveland Board of Education. The total number for the city is 39. Of the 37 maintained by the Board of Education, 23 are on schoolyards, and are open under trained supervision for the 11 weeks of the summer vacation. Besides these schoolyard playgrounds, the Board maintains 14 children's playgrounds in public parks, and these are open all the year round. The upkeep of the schoolyard playgrounds costs the Board for the 11 weeks roughly 10,000 dols.; the 14 park playgrounds cost about 9,000 dols. for the year. The average cost of a vacation playground is 435 dols. The two Settlement House playgrounds are supported at a cost of 1,000 dols. a year each.

The policy of the Board of Education is towards equipping all the schoolyards with apparatus, except in the case of those schools adjacent to a Park playground, or where one equipped schoolyard is of sufficient size, and so located, as to serve more than one school.

The municipality has granted 100,000 dols. for the express purpose of extending the playground space attached to the public schools, and this work is now in progress.

Cleveland is not satisfied with its playground accommodation. A million dollar bond issue, for play purposes, was voted in 1911 and only narrowly defeated. The State Legislature requires in such cases a two-thirds majority of the voters in the city, and although the bond issue had a clear majority, it was defeated. There is every reason to expect that the bond issue will soon be carried as a result of holding the sixth annual Playground Congress in the city in June 1912.

COLUMBUS (STATE OF OHIO), Pop. 181,511.

In July 1910, Columbus appointed a Recreation Commission of seven persons to hold office for three years, and during that time, to make a report upon the recreational requirements of the city. Their report is now to hand, and has resulted in the establishment of a permanent municipal Department of Public Recreation, and an increase in the number of playgrounds from 8 to 12 in the first year. The Recreation Department favours the establishment of Recreation Centres on the Chicago plan, and the placing of little children's playgrounds (sand boxes, &c.), on every schoolyard.

PHILADELPHIA (STATE OF PENNSYLVANIA), Pop. 1,549,008.

The first public playground in Philadelphia was opened by the Woman's Civic Club in 1894. In the same year the City Parks Association joined the movement. In 1895 the Board of Education opened four public schoolyards as vacation playgrounds through July and August. In 1908 the number of vacation playgrounds maintained by the Board was 56, and in 1912 it was 91. The maintenance of these 91 playgrounds through July and August was estimated to cost the Board of Education 45,000 dols., or roughly 500 dols. per playground.

The Playground Association of Philadelphia was founded in 1907 and exists now as a propagandist and advisory body only, although it still controls a number of summer camps for boys and girls. In 1909 a Public Playgrounds Commission was appointed to investigate and report upon the recreational facilities of the city of Philadelphia. The Commission reported in April 1910, and its principal recommendation was in favour of the appointment of a separate municipal department to supervise the city playgrounds. This recommendation was acted upon, and the Philadelphia Board of Recreation was constituted in 1911.

The Board of Recreation consists of seven members, the Mayor and the Superintendent of the Public Health Department *ex officio*, and five others appointed by the Mayor. As constituted in 1912, Dr. Brumbaugh, the Superintendent of Schools, is President of the Board of Recreation; and Dr. William Stecher, Director of Physical Education to the Board of Education, is also a member of the Board of Recreation. Thus the two Boards of Recreation and Education are united and can work together in harmony.

The Board of Recreation has now taken over the few playgrounds existing in 1910 outside the control of the Board of Education, but the latter continues as the principal controlling authority in the city. The Board of Recreation has, all told, 13 municipal playgrounds now in operation. Four of these are recreation centres on the Chicago plan, though far less costly. Sherwood Park Recreation Centre, for example, has a field house equipped with swimming bath, gymnasium, club rooms, auditorium, and everything that is to be found in Armour Square, Chicago, yet Sherwood Park cost only 56,000 dols. to build and equip, as against 170,000 dols.—the cost of Armour Square. Of course Armour Square is 10 acres and Sherwood Park only just over three, but the question is whether the community is not every bit as well served by the smaller ground.

The Superintendent of Schools, Dr. Brumbaugh, regards games and play as an essential part of elementary education. The Board of Education accordingly has a training course in play for teachers (518 students being registered for 1912, *see below*, p. 40), and teaches games in school hours as part of the physical training course. The Director of Physical Education to the Board has arranged a schedule of games for the eight grades of the elementary school. Each game is described with full instructions in the physical training manual issued to the teachers of the respective grades.

The schedule* is as follows :—

I. GRADE.

Cat and mouse.	Bean Bags (R).
What are you doing in my garden ?	(a). Toss up and catch.
Running race (short distances).	(b). Toss to a partner.
Hand tag (R).	(c). Combine (a) and (b).
Squatting tag (R).	(d). Teacher.
Skipping tag (R).	Bound ball (R).
Follow the leader (R).	
Long jumping rope (R).	

II. GRADE.

All games of Grade I., may be played.	<i>Ball Games.</i>
Cat and mouse, in two concentric circles.	Increase the difficulty of the games in Grade I., by greater distances; by designating the hand that tosses or catches; also by hand clapping once (or oftener) before a bag is caught.
Cat and mouse with two cats.	Toss the bag for height.
Change tag.	Toss through a bag board (R).
Catch me.	Bag in the ring (R).
Spin the plate, or catch the wand (R).	Dodgeball, with one foot in a circle (R).
Jacob where are you ? (R).	
Long jumping rope (R).	
Jump over the seats.	

III. GRADE.

All the games of Grades I. and II. may be played.	<i>Ball Games.</i>
Potato race, planting and picking.	Play the ball games of the preceding grades with a large gas ball, a soft base ball, or a basket ball.
Running and hopping races.	Duckstone (with bean bags) (R).
Third tag and run.	Guess who ? (R).
Pussy wants a corner.	Throw at a bell or through a hoop. (R).
The beetle is out.	Also quiet games for warm days.
Fox and chickens.	
Pass the bean bag (bag relay).	

* The games enumerated here are described in the work of the respective grades. Games marked with an (R) can also be played in the school room. They are all described in "Games for the Playground" by Jessie H. Bancroft (New York. The Macmillan Co., 1910).

IV. GRADE.

The games of Grade III. may be played.

Day and night.
Bogey man (black man).
Break through (bear in the ring).
Last pair run.
Lame goose.
Catch the wand or spin the plate.
Girls : jumping rope.
Boys : Leap frog.
Foot in the ring.
Wrestle for the wand.

Ball Games.

Play the ball games of Grade III. with a small soft rubber ball or a tennis ball.
Throw for height and distance.
Toss up and bat a gas ball.
Toss and catch a tennis ball.
Toss up (name the catcher).

V. GRADE.

The new games of Grade IV. may be played.

Relay race.
Three deep.
Poison.
Hopping circle.
Girls : jumping rope.
Grace hoops.
Rubber quoits.
Boys : rooster fight.
Quoits (horseshoes).

Ball Games.

Girls and boys, bat ball with a volley ball or light basket ball (one base and home).
Chase ball (with a basket ball — two sides play against each other).
Medicine ball (toss for height).

VI. GRADE.

Rabbits, two hunters on a line.
Relay race.
Three deep.
Catch the robber.
Poison.

Ball Games.

Bat ball with a basket ball.
Bat over a rope (with a volley ball).
Chase ball.
Kick ball (who catches the football kicks it).
Pass ball, in a circle.
Medicine ball.

VII. GRADE.

Rabbits, one hunter on a line.
Relay race.
Three deep.
Prisoners' base.

Ball Games.

Hand base ball with a basket ball (girls with a volley ball, nine players on a side).
Captain ball.
Dodge ball in a circle.
Kick ball.
Pass ball over head (in a circle).
Chase ball.
Medicine ball.
Volley ball (with one bounce).

VIII. GRADE.

Prisoners' base.	<i>Ball Games.</i>
Relay base.	Hand baseball.
Rabbits (one hunter on a line and a captain).	Wall baseball.
Three deep.	Captain ball.
	Hurl ball (medicine ball with a strap handle).
	Volley ball (on a fly).
	Pass ball (overhead).
	Chase ball.
	Battle ball.
	Progressive dodge ball.

PLAY APPARATUS FOR SCHOOLYARDS.

<i>For boys and girls.</i>	<i>For boys.</i>
Giant strides.	A low horizontal bar.
Horizontal ladders.	A pole vaulting set.
Seat swings.	A few low hurdles.
Teeter boards.	
Tether ball.	<i>For girls.</i>
Standards for high jumping.	A few long jumping ropes.
Sandpit for broad jumping.	Several dozen short jumping ropes
Rubber quoits.	Several dozen bean bags.
A few basket balls.	A few bag boards.
A few footballs.	Several dozen grace hoops.
Playground baseballs and bats.	A few soft rubber balls.
A medicine ball.	
A hurl ball (with a handle).	

WASHINGTON, D.C., Pop. 341,069.

Washington has 11 public playgrounds under the control of the Board of Education. Each ground has an average attendance of 400 a day. In 1911 the Board spent 17,000 dols. on the upkeep of these playgrounds.

Mr. Martin, of the Washington Playground Association, explained the formalities necessary before closing a street for play. The name of the street, with the distance required (sometimes as much as a quarter of a mile), is sent beforehand to the police authorities, together with the dates and times of the proposed closing. When the police permission has been obtained, a board, similar to the familiar "Closed for repairs" sign is placed across the section of the road to be used—"This street is closed for play." Policemen stand at each end to divert the vehicular traffic, pedestrian traffic continuing as usual, the roadway being given over to roller skating and games. Street play is, without doubt, a very effective method of reaching the children, and is now favoured in nearly every congested city. The play leaders chosen to conduct street play are usually the most expert on the staff.

B.—TABLE SHOWING IN SUMMARY FORM THE POSITION OF THE PLAYGROUND MOVEMENT IN TWENTY LESSER CITIES OF THE UNITED STATES.

City.	State.	Popu- lation.	Num- ber of Play- grounds.	Number of Employees.*		Hours open under Supervision.	Average Daily Atten- dance.	Controlling Authorities.	Expenditure.	Sources of Support.
				Men.	Women.					
Alameda - -	California -	23,383	3	1	3	All	500	City Council - - -	Dols. Cts. 10,350·00	Municipal funds.
San José - -	California -	23,946	7	—	—	All	—	Board of Education -	5,500·00	Municipal funds.
Hartford - -	Connecticut -	98,915	6	1	23	All	2,537	Board of School visitors and Social Settlement.	} 1,250·00 {	Municipal and Private funds.
New Britain -	Connecticut -	43,916	4	1	5	—	950	Recreation Commission and private individual.		775·00	Municipal and Private funds.
Dubuque - -	Iowa - -	38,494	2	—	2	4	230	Women's club - - -	450·00	Private funds.
Louisville -	Kentucky -	223,928	18	21	31	9-12 : 2-6	7,100	Park Board - - -	32,500·00	Municipal funds.
Easthampton -	Massachusetts -	8,524	1	—	2	5½	86	School Board - - -	339·72	Private funds.
New Bedford -	Massachusetts -	96,652	8	8	25	9-11.30 : 2-5 p.m.	—	School Board - - -	3,641·55	Municipal funds.
Worcester - -	Massachusetts -	145,986	23	17	65	9.30-11.30 : 2.30-5.30.	} 6,333	Playground Commission -	17,704·00	Municipal and Private funds.
Battle Creek -	Michigan - -	25,267	8	0	1	8.30-4 p.m.		—	Board of Education -	1,500·00	Municipal funds.
Detroit - -	Michigan - -	465,766	16	20	39	9-4.30	11,195	Park Commission and Board of Education. }	} 170,200·00 {	Municipal and Private funds.
Grand Rapids -	Michigan - -	112,571	20	5	44	All	3,289	Board of Education -		21,353·96	Municipal and Private funds.
Minneapolis -	Minnesota -	301,408	21	10	18	All	1,136	Board of Education, Park Board, and Unity House.	18,358·66	Municipal funds.

St. Louis -	Missouri -	687,029	12	17	24	9-9 p.m.	7,228	Playground Commission and Board of Education and City Council and County Park Commission.	10,733-00	Municipal and County funds.
East Orange -	New Jersey -	34,371	9	3	8	All	1,700	Board of Education -	4,507-21	Municipal funds
Toledo -	Ohio -	168,497	12	12	6	8-12 : 4-8 p.m.	1,383	Playground Association and Park Commission.	7,700-00	Municipal and Private funds.
Youngstown -	Ohio -	79,066	10	12	12	All	2,600	Mayor's Committee on Playgrounds and Playground Association.	8,137-46	Municipal and Private funds.
Providence -	Rhode Island -	224,326	18	22	47	9-30-9 p.m.	4,030	Board of Education -	1,800-00	Municipal funds
Madison -	Wisconsin -	25,531	4	4	3	9-5 p.m.	100	Park Commission -	8,517-91	Municipal funds
Milwaukee -	Wisconsin -	373,857	9	-	-	9-8 p.m.				

* Exclusive of caretakers.

III.—THE PLAYGROUND MOVEMENT IN RELATION TO PUBLIC EDUCATION.

If the whole of the playground movement is not to be properly relegated to the educational authorities, there are certainly a number of playground activities which belong to the elementary school. Manual training for boys, cooking classes for girls, vacation schools, school gardens, and medical inspection—to mention only a few. The Allegheny Playground Association in Pittsburgh has equipped seven public schools with cookery and manual training apparatus. The school garden work of the Pittsburgh Playground Association has just been taken over, officials and all, by the Board of Education. Mr. Johnson, Secretary of the Pittsburgh Playground Association, was appointed Director of Special Schools in May last, a post he declined much to the relief, it may be imagined, of the Playground Association.

There is no doubt that in many cities the school authorities look to the playground workers to help them over the stony places, and that the result of the co-operation is a wider view on the part of the former of their obligations to the child.

(i) SALARIES OF SCHOOL TEACHERS AND PLAY LEADERS COMPARED.

A prominent Superintendent of Schools has said that his ideal is to make every elementary school teacher a play leader. Towards this ideal nearly all candidates for the teaching profession are learning something about play in their training course. As regards salaries offered, in those towns where the playground movement is municipally controlled, and on a good footing, there is little to choose between the emoluments of school teaching and play teaching, though the former at present offers a better future. The salaries of the Pittsburgh elementary teachers were fixed in 1912 at a minimum of 105*l.* and a maximum of 315*l.* a year. Principals, in buildings with 16 rooms or more, receive a minimum of 437*l.* and a maximum of 540*l.* Play leaders' salaries vary very much according to the size of the playground and the value placed upon their services by the body employing them, but they are seldom less than 180*l.* a year for leaders and 140*l.* for assistants. The heads of the playgrounds in Chicago receive 400*l.* to 600*l.* a year, but these positions invite considerable competition, and—in accordance with the Chicago scale—are somewhat above the average. The administrative posts in playground work vary from 500*l.* to 1,000*l.*, slightly less than the educational administrative official's salary.

(ii) SCHOOL TEACHERS AS PLAY LEADERS.

On the whole the school teachers are better paid; on the other hand there is a big demand for trained play leaders, and

salaries are conspicuously on the increase. It is not too much to say that the playground movement to-day has the sympathy and support of the teaching profession as a whole. A few years ago teachers were somewhat suspicious of the new ideas. Regulations enforcing the participation in organised games at recess were not unnaturally unpopular. Many thought the intercourse between teacher and pupil on the playground would be detrimental to discipline. The practice, however, in those cities where the teachers participate in the playground work, has presented no difficulty. Consideration of the following points will explain this :—

- (i) Most young teachers now have learned something about play in their training course ;
- (ii) Games at recess, in those cities where the regulations require them, are organised from headquarters ; programmes offering a wide choice, with full instructions, are sent out each term ;
- (iii) The number of teachers on duty at recess games is no more than was formerly required for ordinary playground supervision ;
- (iv) Older teachers unwilling, or unsuited, for playground work are not required to participate.

In those cases where the playgrounds are open for an hour, or sometimes longer, after school hours, and the supervision is left to the teachers, the work is paid in accordance with the scale of school work. This last practice, however, is extremely rare and is criticised both by school and playground authorities. The teachers are tired and the children (without any reflection on the teachers) are tired of the teachers. Opinion is divided upon the question of whether the school teachers (given every suitable qualification) make good play leaders for their own children. Mr. George Johnson, an eminent authority, who has been a school teacher, school superintendent, play leader, and superintendent of playgrounds, thinks that the teachers should work and play with their children. The majority of playground workers, however, schools and teachers being what they are, are inclined to differ on this point. Mr. De Groot, head of the South Park system in Chicago, is of opinion that play in the hands of educational authorities generally is cramped, and its importance underestimated. The school teacher is apt to make play the antidote rather than the complement of school work, and School Boards to regard it as physical training.

Experience has allayed the fears and doubts of school principals in the matter of playgrounds and discipline. The first effect of equipping and maintaining a schoolyard as a playground is an improvement in the school discipline, and this has been a prime factor in winning the sympathy of school teachers.

In Pottstown, for example, a small conservative town of 16,000 on the borders of the Pennsylvania Dutch Country, the

teachers, unable to rouse the Board of Education, set to work last year and themselves equipped four of the schoolyards out of funds raised by school entertainments.

(iii) TRAINING COURSES IN PLAY FOR TEACHERS AND FOR
PLAY LEADERS.

(a) *Chicago Training School for Playground Workers.*

The Chicago Training School for Playground Workers was opened in October 1911. The course extends over a year, and includes lectures, and practical work on the Chicago playgrounds. The staff of the Training School consists of seven persons, and there are six visiting lecturers. The subjects taken are:—

- i. Folk dancing of all nations.
- ii. Folk games for little children.
- iii. The organisation of festivals and pageants.
- iv. Rhythm—practice and theory.
- v. Social dancing.
- vi. Physical training and gymnastics.
- vii. Team games and athletics.
- viii. First aid.
- ix. Anatomy, physiology, and hygiene.
- x. Dramatic art (production of children's plays).
- xi. Plays for children under ten.
Games for children under ten.
- xii. Winter sports and street play.
- xiii. Story telling.
- xiv. Anthropology—"the purpose of this course is to examine the facts of primitive life, and to show their relation to child life, and to the play of childhood."
- xv. Child study.
- xvi. Pedagogy.
- xvii. Club organisation.

This formidable list is copied from the prospectus of the course, which is nothing if not comprehensive.

The visiting lecturers include among their number Mr. De Groot, the head of the South Park system, and Mr. Mills, Director of the famous Hull House Boys' Club.

The fee for this course is 150 dols.

The following is a copy of the "Special Subject," or technical paper set at the last examination held by the West Park Commissioners for the position of head of one of their playgrounds. The examination consists of two other papers, one on General Experience, and the other Educational (Arithmetic, English, Civics, and General Information). Besides these three papers there is an oral test involving the discussion of various playground problems with examiners.

CIVIL SERVICE BOARD.

WEST CHICAGO PARK COMMISSIONERS.

Examination No. 36.

May 20th, 1912.

Playground Director, Class D., Grade III.

Subject: Special Subject.

(In addition to this written paper, each candidate will be given an oral test. The weight of the oral test will be one fourth the total weight assigned to the special subject.)

1. What rules and regulations should be laid down by the Playground Director to apply to the use of the playfield as a skating pond during the winter at a recreation centre such as West Park 1, 2, 3, and 4? As Playground Director what would you do in order to make skating a successful and valuable activity at your playground?

2.—(a) If you had supervision of the work of six janitors, whose duties were all alike, upon what features would you base your judgment of them in order to determine which one was most deserving of an increase in salary.

(b) Explain fully how the locker rooms and toilet rooms connected with the mens' gymnasium should be cleaned and maintained in order to have them always in a sanitary condition.

3. If you were in charge of a playground or a recreation centre in the immediate neighbourhood of a public grammar school, describe fully how you would co-operate with the principal and teachers in the school in order to increase the value of your playground to the community?

4. Give a full statement of your ideas as to what each of the following equipment or activities at a recreation centre should offer to the people of the community?

(a) The outdoor swimming pool.

(b) The branch of the Chicago Public Library located in the Field House.

(c) The club rooms in the Field House.

(d) The mens' and womens' gymnasium.

5.—(a) What is the importance of kindergarten and playroom work in a playground or recreation centre? Tell fully how you would proceed to develop this activity, and how you would have the outdoor children's playground handled in conjunction with it.

(b) Describe fully all the proper uses to which the assembly hall in a Field House may be put.

6.—(a) What would be the relation between the Playground Director and the various clubs and associations which are organised and make their headquarters at the recreation centre?

(b) What are the eight most important lectures which you would arrange for during the first season of a new recreation centre? Suggest a title for each and state briefly what the nature of the lecture would be.

7. What hygienic principles should a Playground Director always have in mind and how should he apply them in supervising (a) gymnastics and athletics; (b) public assemblies; (c) swimming; (d) children's games and play? Answer fully in each case.

8.—(a) Name the different pieces of apparatus and equipment which constitute the typical equipment of a boys' outdoor gymnasium.

(b) Give a few of the important rules or principles of the following forms of sport or recreation, and draw a sketch showing the shape and dimensions of the field used in each case.

1. Baseball.

3. Basket ball.

2. Football.

4. Playground ball.

9. The duties of a Playground Director are as follows:—

“Has full charge of a particular Field House, with its accompanying playground, ball field, and swimming pool; is in charge of all the employees, keeps their time, and arranges hours of work and of relief; is responsible for the conduct and discipline of individuals and groups in all parts of the playground; enforces rules and regulations for the guidance of employees and the public; leads, guides, and promotes all activities, and is responsible for the good name of the Park; orders all necessary supplies; keeps records and prepares statistics of the uses, efficacy, and economy, of the equipment in his charge.”

Give a list in consecutive order of the routine work you would perform as Playground Director on a typical day of work, from the time you arrived till the time you left at the end of the day.

10. What means would you employ to ensure the best possible handling of such things as:—

- (a) A panic in the Field House.
- (b) A young man who is abusive to the Playground Director and the Gymnasium Instructor, and who does not obey the rules and regulations established by them.
- (c) A club or organisation which has its headquarters at the Field House and holds boisterous and disorderly meetings in the clubhouse.
- (d) Two attendants assigned to work together in the swimming pool who are of different nationality, and constantly quarrelling with each other.

The following is a copy of the Special Subject paper in the examination of Playroom Instructors:—

CIVIL SERVICE BOARD.

WEST CHICAGO PARK COMMISSIONERS.

May 11th, 1912.

Examination, No. 32.
Playroom Instructor, Class D., Grade II.

Subject: Special Subject,
Weight of 5.

(In addition to this written test, the Special Subject will include an oral and a practical test with a class of children, including the teaching of a ring game and a folk dance, the telling of a story, and playing piano. The weight of the oral and practical test will be one-fifth of the total weight of the Special Subject.)

Children's Playgrounds and Gardens.

1.—(a) How would you proceed in supervising the outdoor apparatus (swings, slides, and teeter-totter) in the children's playgrounds during the summer season, in order that they would be put to the best use by the children without harmful effects or danger of accidents?

(b) Suggest any rules which you think necessary for the use of the outdoor apparatus by the children in order to bring about these objects.

2.—(a) Describe fully how you would proceed in establishing outdoor individual gardens for children, and what space of ground should be allotted to each child for this purpose.

(b) Name four plants well suited to be raised by children.

(c) What care should each child take of its individual garden?

3.—(a) What use would you make of an outdoor sand pile in the instruction and entertainment of little children? Describe fully your method of carrying on this activity.

(b) What would you do with the children in the outdoor playground on a day too hot for them to play exerting games?

Indoor Playroom Work.

4.—(a) What class of stories are best suited and appeal most to boys and girls of about five years of age?

(b) What class of stories are best suited and appeal most to boys and girls of about eight years of age?

5.—(a) Name four ring games and four group games best suited for boys and girls from five to eight years of age.

(b) Name four implement or table games best suited for a game class of boys and girls from five to eight years of age.

6.—(a) Tell fully how the Playroom Instructor may supervise and carry on parties for children and young people.

(b) Suppose that a number of schoolgirls under 16 years of age came to you and wished to hold a surprise birthday party for one of their friends. Tell briefly what advice you would give them as to the kind of party they should give, and the means of entertainment they should use.

7.—(a) As Playroom Instructor at a playground describe three clubs which you would form for the children.

(b) Describe three clubs which you would form for the ladies. Describe these clubs in the order of their importance, giving their objects, telling how you would carry on the activities of each, and outlining the means you would use to promote and organise them.

Adult Instruction.

8.—(a) What stress would be laid upon the study or instruction of sewing, crocheting, rafia work, basket weaving, or handwork at a playground? To what extent and in what manner should they be taught?

(b) Tell in which of these you are capable of giving instruction, demonstrations, or lectures.

Dramatics.

9.—(a) What benefits should be derived from dramatics for young children.

(b) Suggest three plays or dramatised stories and tell to what ages of persons each is adapted.

Dancing.

10.—(a) In a class of boys and girls where social dances are taught, what instructions would you give in addition to the dance steps?

(b) To what extent may folk dances be successfully introduced in a social dancing class?

(c) Name one folk dance suitable for girls alone. Name one suitable for boys alone.

(b) Chicago School of Civics Course.

This is a three months' course held at the Chicago School of Civics. Twenty-one lectures in all were delivered by 11 lecturers in the last course held. Some of the topics are—

The American Playground Movement.

Social conditions and the need for Recreation.

Recreation in a City's Plan.

Nature and function of Play (three lectures).

Playground Organisation and Management.

Street Play.

Recreation in the Schools (two lectures).

Playground Equipment (two lectures).

This short course, held twice a year, is very popular.

(c) Pittsburg University Course.

Pittsburg University appointed a Professor of Play—Mr. George E. Johnson—in 1910. On the Faculty attached to the School of Education in the University are three Instructors of Play assisting in the Professor's course. There are two courses in Play, a one-year course and a two-year course. The syllabus for the one-year course is as follows:—

One-Year Curriculum in Play.

History of Philosophy.
 History of Human Progress.
 American Ideals.
 Psychology.
 Principles of Education.
 History of Education.
 Play.
 Childhood.
 Playground Experience (Apprenticeship and Practice Work).
 Biology.
 Physical Education.

Students successful in the examination can proceed to a degree after the two-year curriculum.

A course of lectures by one of the Instructors of Play, entitled "Play in relation to the Elementary School," is given as a part of the regular course in Education of the University. This course is outlined thus in the prospectus:—

"This course aims to establish principles guiding the selection of plays, games, occupation, and stories for the elementary school. A study of play periods is made from the genetic point of view, and all play is viewed in relation to the interests of the corresponding periods. School subjects are considered in relation to these developing interests. A study of school festivals is included, lectures, readings, play and games."

The Professor's course in Play consists of lectures under nine headings:—

1. The Structure of Society.
2. Physical Interests of Children.
3. Play (dealt with generally by Professor Johnson).
4. Musical Interests of Children.
5. Nature Interests of Children.
6. Domestic Interests of Children.
7. Story Interests of Children.
8. Athletic Interests of Children.
9. Constructive Interests of Children.

There is some over-lapping tending to confusion in reviewing these courses, but the situation is thus. The University of Pittsburgh has a School of Education; in going through this school for a degree the student may take the course in Play,

with Education and Philosophy attached (*see* one year curriculum), or he may take the course in Education with a course of lectures on Play by one of the Instructors of Play attached.

(d) *Training Class for Playground Directors, Baltimore.*

This is organised by the Children's Playground Association of Baltimore, and comprises at least two weeks' practical work under supervision on the Baltimore playgrounds, and a course of lectures spread over four or five months. The classes are divided into two years, senior and junior.

The fee for the course is 15 dolrs. Papers are written after every lecture, and classes are held once a week for practical work in learning the games and songs.

The lecture course includes among the subjects:—

Symbolism in Play.

The Adolescent Girl.

Athletics for Boys and Girls.

Library Work and the Influence of the Story.

Play and Character Building.

Certificates are conferred on students completing junior and senior years in the classes and having had two years' experience as Assistant or Director.

(e) *University of Wisconsin Course.*

Mr. George Ehler is Professor of Physical Education and Play at Wisconsin University; with him are three assistant professors and a staff of instructors. The Play course may be taken either as a major or minor course. That is, it may be taken *in extenso* or in part with some other course, usually Education. The full course is arranged under headings:—

1. Physical Education in Elementary and Secondary Schools.
2. Nature and Functions of Play.
3. Playgrounds—Organisation and Administration.
4. Secondary School Athletics.
5. Scoutcraft.
6. First Aid.
7. The Physical Examination of School Children.
8. Principles and Methods of Coaching, *i.e.*, basic principles of baseball, basket ball, football, track and field and other sports, and the methods of teaching and coaching; physical care and needs of players.
9. Playground Athletics and Games for older Boys and Girls.
10. School Gymnastics and Plays and Games for Children under 10.
11. Folk dancing.
12. Athletics.
13. Swimming.

There is also a course of lectures on Festivals, open to the University at large. These lectures are given five days a week, and are marked "No academic credit." The course includes practical work. Students are expected to present papers for the class discussions and to do laboratory work in preparation for the children's festivals.

(f) *Board of Education, Philadelphia. Teachers' Playground Course.*

1. Theory of Play. Administration of Playgrounds.
Twelve lectures by the Director of Physical Education.
2. The Plays and Games of Children from 5 to 8 years.
Six periods of practical work.
3. The Games of Children from 8 to 14 years.
Twelve periods of practical work.
4. Apparatus Work for Boys and Girls.
Three periods of practical work.
5. Occupation Work for Children from 5 to 14 years.
Six periods of lectures and practical work.
6. Songs and Stories.
Three periods of lectures and practical work.
7. Playground Dances.
Six periods of practical work.
8. The Psychology of Play.
Three lectures.

The course is open to all teachers in the public schools. Application cards may be obtained from Principals of schools or from the Director of Physical Education, City Hall, Philadelphia.

(g) *City of Buffalo. Copy of Civil Service Commission Examination for the position of Playground Director held on April 19th, 1912.*

Technical.

1. Write a short article of approximately 200 words giving the advantages, aims, and purposes of playgrounds.
2. Make out a playground programme for a day during the summer vacation.
3. Name at least 20 games or amusements with which you would employ the child's time and classify them according to the age and sex of the children.
4. What would you consider a necessary first aid equipment for a playground?
- 5.—(a) What would you do in the event of a child being rendered unconscious by receiving a blow and a cut on the head.
(b) What treatment would you give for head lice.
6. What would you do in the event of (a) a sprain, (b) broken arm, (c) cut or bruise, (d) cut artery, (e) cut vein?
7. Describe the process of resuscitation after drowning.
8. Describe briefly the best methods to obtain order and discipline on the playground.

9. What would you do should a gang of loafers visit your playground and occupy all the apparatus?

10. Is it necessary to use force to maintain order on the playground; if so, under what circumstances.

Experience.

Write a brief sketch giving the nature and extent of your education, mental and physical (state definitely from what high school you are a graduate or what other education you had which is equivalent to a high school education), your occupation since leaving school, any experience you may have had as an instructor of athletics, any experience you may have had as a teacher, trainer or director of large numbers of people, any experience you may have had tending to show your capability as a playground director.

Note.—There is no training school for play leaders in Buffalo and this examination is only open to those who have resided for three years in Buffalo.

(h) Training Courses and Schools on the Pacific Coast.

(i) *Courses for School Teachers in the State Normal Schools.*—These have been established in the Normal Schools of Cheney and Ellensburg, in the State of Washington, and at Chico, San Francisco, San José, Los Angeles, and San Diego, in California. The course at Cheney includes, besides the theory and practice of plays and games, a medical inspection course designed to enable the teacher to set children with constitutional defects, such as weak backs or chests, at those games which will strengthen them. Forty-nine teachers were trained in play leadership at the State Normal School at Chico last year. Fifty-three are taking the course this year. All the student teachers of the Normal School in San Francisco are required to do practical playground work in specially provided playgrounds.

(ii) *Courses in the Universities.*—Washington University, Seattle, has a summer course, but no course, as yet, in the regular session.

The University of California has a course in plays and games under the Department of Physical Education held during the summer session. In 1911, 1,100 students registered in this course.

Mr. Weir, Field Secretary of the Playground Association of America for the Pacific Coast, deplures, in his report for 1912, the lack of an adequate number of training courses, and especially the lack of University courses. The demand for trained playground supervisors exceeds the supply by 500 per cent. Because the Universities have not met the need for trained workers, three of the leading cities of the Pacific coast were obliged to establish municipal training schools for their workers.

In Seattle and Portland the Park Departments have training schools. The Los Angeles Playground Association also conducts a training school in the summer months.

In the matter of present provision for the training of play leaders the feeling is that a University course is the most satisfactory, and in this regard Pittsburgh University is a model. Here, as already explained, a student may take a course in play with the education course, this being designed for teachers intending to take up Playground work out of school hours; or he may take a complete course of play, including some philosophy, sociology, physical training, psychology, and child study, this course being for those going into work as a profession distinct from school teaching.

(i) *Playground and Recreation Association of America.*

Three suggested courses in play were drawn up by the Committee appointed for the purpose after the first Congress of the Playground Association held at Chicago in 1907.

These courses are :—

1. A course in Play for Grade Teachers, that is, a course for student teachers in Normal Schools.

2. The Institute Course in Play, that is, a course to be given by playground supervisors and others to the workers in institutes, and settlements, and to those on their staff who have taken up playground work without preliminary training.

3. A course for Professional Directors, designed to assist in the formulation of a University course.

This last course is divided thus :—

Syllabus 1.—Child Nature.

- (i) General Theory of Evolution as it relates to Animal life.
- (ii) General Theory of Evolution as it relates to Man.
- (iii) General Theory of Childhood as a Re-creation of Man.
- (iv) General Laws of Heredity.
- (v) Child Nature (specially considered).

Syllabus 2.—The Nature and Function of Play.

- (i) Theories of Play.
- (ii) Pleasurable Elements in Games.
- (iii) Aims and Spirit in the Conduct of Play.
- (iv) Age and Sex Differences in Play.
- (v) The Teaching of and Rotation in Games.
- (vi) Factors controlling the expression of the Play Impulse.
- (vii) The Relation of Play to Work.

Syllabus 3.—Social Conditions of the Neighbourhood.

- (i) Race, History, Tendencies, Prejudices.
- (ii) Living Houses, Conditions of; Housing.
- (iii) Social Conditions.
- (iv) Industrial Conditions.

Syllabus 4.—Hygiene and First Aid.

- (i) The Body as a Machine.
- (ii) Personal Hygiene.
- (iii) Preventive Medicine.
- (iv) Emergencies.

Syllabus 5.—The Playground Movement.

- (i) Playgrounds of Germany.
- (ii) Playgrounds of Great Britain (Cricket and Football at Eton, Harrow, &c.).
- (iii) The Play Movement in the United States.
- (iv) The Sand Gardens and Playgrounds for small Children.
- (v) The School Playgrounds.
- (vi) The Municipal Playgrounds.
- (vii) The Field Houses.
- (viii) Playgrounds in the Parks.
- (ix) Bathing Beaches and Swimming Pools.
- (x) Playgrounds for Institutions.
- (xi) Departments and Organisations controlling Playgrounds.
- (xii) Allied movements.

Syllabus 6.—The Practical Conduct of Playgrounds.

- (i) What is a Playground?
- (ii) Spirit and Aims in the conduct of Play.
- (iii) Activities.
- (iv) Organisation and Management of Activities.
- (v) Care of Supplies and Ground.
- (vi) Discipline.
- (vii) Dealing with Parents.

Appendix 1. Class Athletics.

„ 2. Group Athletics.

„ 3. Track and Field Meets.

Syllabus 7.—Organisation and Administration of Playgrounds.

- (i) Personal Recreation.
- (ii) A study of General Recreational Facilities.
- (iii) Planning a Playground System.
- (iv) Securing the Playgrounds.
- (v) The Construction of Playgrounds.
- (vi) The Equipment of Playgrounds.
- (vii) The Purchase and Care of Supplies.
- (viii) The Conduct of the Playground Office.
- (ix) The Training of Teachers.
- (x) Selection of Teachers and Planning of Work to be undertaken.
- (xi) Tramps and Excursions.
- (xii) Relations with Parents and other Departments.
- (xiii) Promotion of the Movement.
- (xiv) Securing the Funds.

The Committee appointed to draw up the three courses of which the above is the most complete, consisted of 24 persons, and included representatives from Missouri, Columbia, Harvard, Clark, and Chicago Universities, as well as many well-known educational officials.

(iv) COST OF EQUIPPING A PLAYGROUND.

Allowance should be made in considering these figures for the cost of material and labour being considerably higher in the United States than in this country. As will be seen, it is possible to put in a very serviceable outfit for as little as 50 dols. On the other hand, some of the Chicago playgrounds cost between 4,000 dols. and 5,000 dols. to equip. These figures, how-

ever, include two outdoor gymnasia, one for women and one for men. The average cost for playgrounds alone (not including outdoor gymnasia) is about 150 dols. to 200 dols. For playgrounds with outdoor gymnasia 500 dols. to 1,000 dols.

A. A Fifty-dollar Outfit.

The following apparatus, as supplied on the playgrounds of Providence, R.I., may be put in for as little as 50 dols., and serve the use of many hundred children:—

Three-bar horizontal and vaulting bar, with gas-pipe bars of graded heights, one bar of which may be adjustable. Supporting posts of chestnut or locust wood. (Cost should not be over 10 dols.)

Ten-foot double swing frame, with triangular ends braced, and two swings or one swing and a pair of rings. (Cost, 10 dols. to 12 dols.)

Children's 6-foot swings, with two or three canvas slings for little children to swing in, or even to sleep in.

The swings should be in a shady spot, or have an awning. (Cost, not over 12 dols.)

Seesaws; wooden horse, 35 inches high, with two 14-foot boards. Two or more should be provided. (Cost, 4 dols. to 6 dols. each.)

Sandbox or boxes. These should be long and narrow rather than square, as according to the experience in Providence the former shape gives greater available play space. Basket ball goals. These may be placed on buildings or trees, but where these are not available, temporary stands should be provided.

An outfit of this sort may be installed for 50 dols.

B. Approved Equipment.

For schoolyard playgrounds in Philadelphia.

For children under six.

Sand bin, 10 by 30 feet. (Cost of frame, 15 dols.; frame, with uprights to support awning, 35 dols.; awning, 15 dols.; sand, 15 dols.)

Sand buckets and shovels, five dozen to a playground. (Cost, 1 dol. a dozen.) Bean bags, 5 by 5 inches, weighing 4 ounces each, five dozen to a playground. (Cost, 60 cents. a dozen.) Low benches, 1 by 4 feet, one dozen to a ground. (Cost, 2.25 dols. each.)

For children of six to twelve years.

Giant strides, for girls and boys, consisting of 16 feet 4 inches of steel pipe, eight ropes with three knots each, each rope having at its upper end 1 foot of chain. (Cost, 25 dols. each.)

Horizontal ladders (two), adjustable in height from 4 feet 6 inches to 6 feet, made of wood, with supports either wood or pipe frame. (Cost, 30 dols. each.) Swings, with four seats each (two), made of gas-pipe frame, with manilla rope, 9 feet high. (Cost, 40 dols. each.) Tether poles (four), made of gas-pipe pole, with four wooden paddles. (Cost, 4 dols. for complete tether set.) Basket balls (four). (Cost, from 2.75 dols. to 4 dols. each.)

Playground baseballs (two dozen for the season), soft ball, regular size, with light bat for the boys and paddles for the girls. (Cost, 6 dols. a dozen.) Teeter boards (two), for the smaller and younger children six to seven years old, boards 13 to 14 feet long on supports 20 inches high. (Cost, about 5 dols. each.)

Jumping ropes, two dozen short and two long ropes for the season.

For municipal playgrounds.

For the municipal playgrounds the approved plan calls for a shelter house or pavilion with toilet arrangements, storeroom, and, if possible, shower baths; a wire fence around the grounds, with a hedge or shrubbery on the inner side; a running track between the girls' and boys' sides; with facilities for jumping and an open space, about 60 by 150 feet, for miscellaneous games.

For girls and young boys, apparatus is needed as just outlined for the schoolyard outfit, with the following additions:—Travelling rings, swinging rings, seat swings (two), 12 feet high, with four seats each; giant strides (two), tennis courts (two) when feasible. For the older boys the following apparatus is needed:—Travelling rings, swinging rings, horizontal bars (two), adjustable for heights; one full-sized baseball diamond and two smaller ones; two tennis courts when feasible.

(v) THE PLAYGROUND STAFF.

A big playground of 10 acres, having a Field House, will require a staff of 10. Many of the Chicago playgrounds have more than this number. The staff will be made up thus:—

- One Playground Director.
- Two Play Leaders.
- Four Assistant Play Leaders.
- One Indoor Worker.
- Two Caretakers.

There are probably in addition visiting librarians, gymnasium instructors, and other specialists, *e.g.*, swimming instructors and dancing mistresses.

An average playground of 3 or 4 acres, divided for boys and girls, probably needs two play leaders, two assistants, one caretaker, and one visiting leader. Usually a Playground Director is only necessary when there is a large Field House with its accompanying variety of social activities.

A small playground of $1\frac{1}{2}$ or 2 acres, not divided for boys and girls, needs one play leader, with one, or sometimes two, assistants, and a caretaker. The caretakers are generally very carefully selected; they are often old soldiers who take a real delight in being with the children. Good salaries are paid to these caretakers, 9*l.* or 10*l.* per month being about the average.

(vi) PLAYGROUND SPACE.

The report of the Gary School Commissioners states that the Board of School Trustees have decided to adopt 49 square feet per head as a minimum for playground space.

In the State Legislature of Washington a Bill, supported by the Superintendent of Public Instruction, was presented in 1910 to make it obligatory that all new school sites throughout the State should provide a minimum of 100 square feet per head for play space in their schoolyards. The Bill failed, although it was initiated and supported by the school authorities.

The Milwaukee Recreation Survey was undertaken in 1911. The Committee reporting say that 30 square feet per head (the minimum schoolyard area at present) will just allow a child to swing its arms. The Committee lay down that not more than 300 children should play on an acre. That is at the rate of 145 square feet per head.

Dr. Henry Curtis of Olivet, Michigan, has just submitted a report on the use of public school playgrounds* to the U.S. Commissioner for Education, and he recommends a city block (about $2\frac{1}{2}$ acres) for each city school as the proper playground space. This means, roughly, 100 square feet per head. He estimates that one in every four of the public elementary schools throughout the country now has its schoolyard equipped with apparatus, and that the proportion should be as high as one in three by next year. Several cities, such as Bloomington, Illinois (pop. 25,768), and Grand Rapids, Michigan (pop. 465,766), have completed this work and have all their public schoolyards equipped. School Boards are enlarging and equipping their schoolyards in every state, adopting wherever possible the 100 square feet per head standard. The sites for new schools in western towns allow an average of three acres for playground space.

* "The Reorganised School Playground" by Henry S. Curtis. United States Bureau of Education. Bulletin 1912, No. 16. Whole number, 488. Washington: Government Printing Office, 1912.

The following estimates for playground space are given by the Committee on Equipment of the Playground Association of America :—

	Number of children.	Area.
		Feet.
Minimum space for little children and girls -	150	100 × 200
Ideal space - - - - -	500	200 × 350
Minimum space for boys over 10 years - -	100	100 × 200
Ideal space - - - - -	300	200 × 450

That is about half an acre for 150 to 200 little children as a minimum, with nearly double that space for older boys. This is, in effect, accepting the 100 square feet per head as a minimum for girls and boys under 10, but requiring twice the space for boys over 10, who need room for baseball.

The Parks and Playgrounds Association of New York states in its report of 1909, that the normal park area is one acre for 250 persons; and that the minimum play area for the city playgrounds in the crowded districts is one acre for 1,000 children.

(vii) PROGRESS MADE IN EQUIPPING SCHOOLYARDS WITH APPARATUS.

The following table shows the progress made in the work of equipping the schoolyards with apparatus. It should be noted that schoolyards in the neighbourhood of a municipal playground are not equipped; and that one equipped schoolyard frequently serves more than one school.

City.	Number of Public Schools.	Number of these having their schoolyards equipped.
1. Boston - - - - -	233	26
2. Buffalo - - - - -	62	5
3. Chicago - - - - -	272	17
4. Cleveland - - - - -	92	20
5. Detroit - - - - -	98	65
6. New York - - - - -	538	250
7. Grand Rapids - - - - -	34	34
8. Philadelphia - - - - -	259	207
9. Pittsburgh - - - - -	137	44
10. Pottstown - - - - -	20	6
11. Rochester - - - - -	34	7
12. Washington - - - - -	134	42

An average for twelve cities of 37·2 per cent. of equipped schoolyards.

IV. CONCLUSION.

(i) THE SIXTH ANNUAL PLAY CONGRESS AT CLEVELAND.

Before attempting to estimate the tangible results of 25 years of playground work in America, a short account of the sixth Annual Play Congress held at Cleveland in June 1912, may be useful in showing the position attained to-day. A study of the programmes of the five preceding Conventions shows how each problem has been tackled in turn and solved in the light of experience. The first great stumbling block—the question of supervision—solved itself. Mr. Roosevelt, in the first term of his presidency, addressed himself thus to a deputation of playground workers. He said:—"It is a splendid thing to provide in congested districts of American cities spaces where children may play; but let them play freely. Do not interfere with their play, leave them alone. Do not meddle."

He was voicing public opinion of the time. He has since changed his views; public opinion has changed also. Un-supervised playgrounds were opened and either remained unused or else were closed by public protest in a few months. The question of the controlling authority is still open, but a settlement will probably be in favour of Public Recreation Commissions as soon as sufficient time has elapsed to test the experience of the Commissions of New York and Philadelphia.

The following extract from the Programme of the Sixth Annual Play Congress held at Cleveland in 1912 will show the problems engaging the attention of playground workers at the present time. The Congress was divided into two sections, Recreation in Cities, and Rural Recreation, and some of the subjects treated were as follows:—

Recreation in Cities and Towns—

The Playground and the Home.

The Best Games for Boys and Girls in crowded Cities.

Should Boy Scout Activities be supported by public funds.

The social value of a Recreation Centre.

Recreation Centres as an aid to Immigrants in adjusting themselves to American conditions.

Park Life: Wholesome employment for City Boys during the Summer Vacation.

The Recreation Commission.

Equipment Problems.

Regulation of Commercial Recreations.

(Picture Palaces, Dance Halls, Theatres.)

The School as a Social Centre.

The Training of Recreation Secretaries.

Rural Recreation—

Rural Recreation through the County School House.
The County Pastor and Community Recreation.
Health and Recreation Surveys in Rural Communities.
Recreation of the Farmer's Wife.
Higher Standard Citizenship through Rural Recreation.
Need of Rural Recreation.
The Rural Pageant.
Corn Clubs.
Contests in Gardening.
A proposed Recreation Bill for Rural Districts.
Recreational Resources of a Rural Community.

The Congress lasted for four days and was attended by some four hundred delegates from every part of the country. The Rural Recreation section was a new feature of this year and shows the spread of the movement on the positive side. Anyone familiar with country life knows the poor resources of country folk, and especially country children, in matters of amusements and play.

A glance at this programme is enough to show that the movement is no longer "to promote normal wholesome play for children" but has grown into an attempt to direct and further public recreation. We must bear in mind this change of aim in judging results. The results for which an enthusiastic playground worker, in these latest developments, is striving, is not so much the mental, moral, and physical betterment of the children of a city, as the promotion of American ideals of citizenship in the foreign quarters. The head of a big playground is naturally more concerned with the conduct of the nightly dances, lectures, team athletics, and youths' clubs than with the children's play corners, which occupy little of his time or thought. There is no suggestion that the children are neglected; only that the success which has greeted the children's playgrounds has led the organisers on to the other forms of social work reaching a larger field.

(ii) THE AMERICAN VIEW OF THE PLAY MOVEMENT.

The American view of play regards it as social rather than educational work. To attempt to sum up the results of a social movement of this size with its numerous activities from moving picture shows to libraries and one cent lunches, would be an impossible task. Therefore, in spite of the injustice, this section is confined to the mention of a few results which may be directly traced to the children's playground section of the recreation movement.

(iii) SOME RESULTS ATTAINED.

1. *Prevention of Tuberculosis.*—The pulling down of tenement houses for the erection of children's playgrounds in

congested areas has had a highly beneficial effect in the fight against tuberculosis. The National Association for the Study and Prevention of Tuberculosis issued a statement last year in which it was reported that there were nearly 1,000,000 school children in the United States to-day who would die of the disease before they were of age. The Association strongly commends playgrounds in congested areas as the best means for preventing the spread of tuberculosis. It is argued that the exercise provided by the playground makes it a far more efficient machine for this purpose than a mere park; also the elementary instruction in hygiene given incidentally on playgrounds is valuable.

2. *Increase in School Discipline and Efficiency.*—The effect of the playground movement on school discipline and efficiency can only be gauged from the testimony of school principals and teachers, and of this there is no lack. The report for 1911 of the Superintendent of Schools for Alameda (*see above*, pp. 12-13) deals briefly with this topic.

3. *Decrease of Truancy.*—No statistics as to the effect of playground activities on truancy are available. The following facts are, however, given by Mr. J. L. Riley, Principal of the Elm Street School, Pittsburgh, and are quoted in Mr. George Johnson's Book on Play* :—

Year ending June 1901,	99	cases of corporal punishment.
" " June 1905,	21	" " " " "
" " June 1901,	281	cases of truancy.
" " June 1905,	33	" " " "

This was the effect of equipping the schoolyard with apparatus in 1902 and conducting play thereon.

4. *Decrease of Juvenile Delinquency.*—Judge Lindsey, the originator of the Juvenile Court System in the United States, has written much on the effect of playgrounds in reducing the juvenile delinquency of a neighbourhood.† The only study of the subject that has been made was conducted in Chicago in 1908. Mr. Allen Burns, reporting the result,‡ says that a small park neighbourhood Recreation Centre such as those of the South Park System can be expected to be coincident with a 28½ per cent. decrease of juvenile delinquency within a radius of half a mile. To provide a probation district with adequate play facilities is coincident with a 44 per cent. reduction.

* "Education by Plays and Games" by George E. Johnson. Boston and London: Ginn and Co., 1907.

† *Playground Technique and Playcraft.* Edited by Arthur Leland and Lorna H. Leland. New York: Baker and Taylor Co. 1910 (Chapter V. By Judge Ben B. Lindsey).

‡ *Yearbook of the Playground Association of America*, 1908, p. 165. New York City: Playground Association of America.

5. *Influence upon the School Curriculum.*—There is little doubt that the claim the playground workers make—to have roused the various education authorities to a wider view of elementary education—is a true one. An attempt has been made in these pages to show how numerous activities, now recognised in the school curriculum, have found their way there by way of the playground. Children's gardens and libraries have passed from the hands of the Playground Association to become school gardens and school libraries. The marked success of the manual training and cookery classes initiated by the playground workers has convinced the School Boards of the need for such things, and they have generally been glad enough to take over the work, including the officials, from the Playground Association. The abolition of drill in favour of organised games as physical training in the schools is a good example of the influence of the playground movement. Probably when the courses in play now being started for student teachers are more generally established we shall see further changes.

Children's play is not akin to adult recreation ; it does not serve the same ends. Discarding the recreation side of the American movement, we find that what has been accomplished is this : The municipalities have acknowledged the responsibility upon them of providing children's playgrounds in crowded districts, and have recognised the necessity of having competent play leaders to supervise them. Finally, school authorities are alive to the fact that a child's education is not accomplished by the completion of a term of years in a classroom, and that to leave the schoolyard unused is to neglect one of the finest opportunities for character training which the elementary school system affords.

WALTER WOOD.

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Primary School

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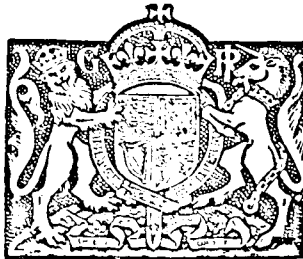
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N. B. Mathur, Supdt., Nazir Kanun Hind Press, Allahabad.
The North India Christian Tract and Book Society, 18, Clive Road, Allahabad.
Ram Dayal Agarwala, 184, Katra, Allahabad.
Manager, Newal Kishore Press, Lucknow.
The Upper India Publishing House, Ltd., 41, Aminabad Park, Lucknow.
Rai Sahib M. Gulab Singh & Sons, Mufid-i-Am Press, Lahore and Allahabad.
Rama Krishna & Sons, Booksellers, Anarkali, Lahore.
Puri Brothers, Booksellers and Publishers, Katcheri Road, Lahore.
The Tilak School Bookshop, Lahore.
The Standard Bookstall, Lahore.
The Principal, Sanskrit Book Depôt Said-mitha Street, Lahore.
Manager of the Imperial Book Depôt, 63, Chandney Chowk Street, Delhi.
Oxford Book and Stationery Company, Delhi.
Supdt., American Baptist Mission Press, Rangoon.
The Modern Publishing House, Ltd., 30, Phavre Street, Rangoon.
Burma Book Club, Ltd., Rangoon.
Manager, the "Hitavada," Nagpur.
Bhisey Brothers, Booksellers and Stationers, Sitabaldi, Nagpur.
S. C. Talukdar, Proprietor, Students & Co., Cooch Behar.
The Manager, Ceylon Observer, Colombo.
The Manager, The Indian Book Shop, Benares City.
The Srivilliputtur Co-operative Trading Union, Ltd., Srivilliputtur (Satur S. I. R.).
Raghunath Prasad & Sons, Patna City.
Dandekar Brothers, Indore City.
The Hyderabad Book Depôt, Chaderghat, Hyderabad (Deccan).

Frontispiece.



VILLAGE SCHOOL GARDEN AT SABOUR.

FOREWORD.

Many proposals have been put forward for introducing an agricultural element into rural education in India and some have been embodied in school courses. In Bihar, however, excursions in this direction on preconceived lines have been consistently deprecated by the Agricultural Department itself and nothing was done up to 1923. The closing of the Agricultural College at Sabour in that year seemed to afford an opportunity of examining the question at first hand, and Rai Sahib S. N. Sil, formerly Assistant Professor of Agriculture at the College, undertook to see what could be done to amend the teaching in the local primary school in the desired direction without disturbing its normal functions.

The school is an ordinary village school attended by some 70 boys, of 5 years of age and upwards, of whom about 7 pass on to a High School every year. The great majority are the sons of cultivators. Preliminary enquiries showed that neither parents nor teachers wished for any change in the teaching; the parents were satisfied to leave every thing to the *pandits*, who had neither the time nor ability to amend their system of teaching.

In the circumstances the only thing that could be done was to offer help with those parts of the curriculum which could be more effectively taught in a garden which was available, close to the school, on the College Farm; and Mr. Sil decided to use this garden for the purpose of "school gardening", which was included among the optional subjects occupying 5 hours a week in the curriculum. Part of this time is devoted to formal lectures in "nature study" and "general administration" and to spinning, drawing, and clay-modelling, and in effect the garden work is attended by one *pandit* and about a dozen boys for little more than an hour a week.

Mr. Sil's reports, which follow, are reproduced in their original form and give a plain narrative of the work done from July 1924 to October 1926, together with his comments on the difficulties encountered.

Apart from the practical illustrations which the reports give of the correlation of school with garden work in practice, their chief significance seems to me to lie in the slow emergence which they record of an interest in the work on the part of the boys, and what is no less essential from the practical point of view on the part of the *pandits*. This interest may have been stimulated in the first instances by the striking effect of sulphate of ammonia on potatoes and onions (pp. 5, 9) which induced one of the *pandits* to spend over Rs. 8 on this manure for his own garden; but the mere repetition of a demonstration of this kind can not account for the increasing interest of both the boys and *pandits* in the work, which must I think be attributed to the quality of original discovery which Mr. Sil has so successfully imparted to the observational side by going

straight ahead with the practical work and making as much use of failures as of successes as material for lessons to be learnt. He has, in effect, utilised the very short time available in demonstrating to the *pandits* and boys the application of the experimental method of acquiring knowledge—the method to which modern science owes its origin.

The fault of the teaching in a village school is that it tends to be a purely mental exercise in words and figures—leading to mere sophistication. It may be said that this must be so, as long as the direct object of teaching is the passing of examinations; but even examinations commonly relate to things that matter, or have mattered, in the world at large; and the preparation of the school boy for the ordeal that examinations impose could surely be made easier if all *pandits* could be taught by demonstration that the things which matter (and on which it may even be worth spending Rs. 8 out of a monthly pay of Rs. 16) consist in changes and relations entirely outside their consciousness, and can not be comprehended in mere words and figures. The symbols and records which form the subjects of examinations amount, in fact, for the most part, merely to keys or indexes to such changing relations, and can be more easily familiarised by direct practical use, as such, on the most varied relevant material that comes readily to hand, than in any other way.

If the simple record below may serve as a key to improvements in the methods of education in elementary natural science in village schools the work it represents will not have been in vain.

A. C. DOBBS,

*Director of Agriculture,
Bihar and Orissa.*

SABOUR;

The 26th April 1927.

Plan of the Garden 1924-25.

Safflowers	Cauliflowers } Cabbages, } Radishes, } Garlic }		Sown by boys,			Brinjals, Tomatoes, Chillies and Cape gooseberry			Maize (Local)	Karela	Maize (Local)
	Safflowers	Aniseed (sown by boys)	Tobacco unmanured		Cauli flowers			Maize (Jaunpur)	Kaddu	Maize (Jaunpur)	
Tobacco manured (Ammonium Sulphate)			Cabbage			Juar (Millet)	Kaitha	Juar (Millet)			
Safflowers	Aniseed (sown by boys)			Kohl Rabi	Onion	Garlic	Marua (Millet)	Jhingli	Marua (Millet)		
		Coriander (Sown by boys).		Potatoes manured and unmanured (Ammonium Sulphate)			Kaoni (Millet)	Khira	Kaoni (Millet)		
Hedge of Safflowers	Aniseed (sown by boys)			Radishes and Turnips			Shama (Millet)	Kankri	Shama (Millet)		
		Coriander (Sown by boys)		English peas	Palang sag	Carrots	Meth	Kaolima	Meth		
				Fallow			Kalai	Ucchhe	Kalai		
							Sunn hemp	Bora	Sunn hemp		
							Kudrum	Sen	Kudrum		
Rahar border			Wheat (Federation)			Maize (Local)	Bhindi	Maize (Local)			
			Wheat (Pusa No. 12)			Maize (Jaunpur)	Sag	Maize (Jaunpur)			
Rahar			Wheat (Local)			Juar (Millet)	Murai	Juar (Millet)			
			Barley			Marua (Millet)	Kaddu	Marua (Millet)			
Rahar			Oats			Kaoni (Millet)	Kadima	Kaoni (Millet)			
			Kabul gram (White)			Shama (Millet)	Jhingli	(Shama Millet)			
Rahar			Pusa gram No. 24			Meth	Grounds nuts	Meth			
			Sabour gram No. 4			Kalai		Kalai			
		White pea			Sunn hemp	Sunn hemp					
		Field pea			Kudrum	Kudrum					
		Lentil									
Rahar			Khesari								
			Rape (Gota)								
Hedge of Rahar			Colza (Purbi)								
			Mustard (Rainchi)								
		Linseed									
		Select lines of Linseed and Khesari									

Garden Work in the Sabour Village School

(Near Bhagalpur, Bihar and Orissa).

Kharif Season, 1924.

As the monsoon set in very late, the preparation of land and sowing of crops had perforce to be postponed till July 1924.

Laying out.—The whole area (acreage 4) was divided into two large plots separated by a grassy path in the middle. The eastern plot was put under monsoon crops as below and the western one was sown with *dhaincha* for green manuring and kept for *rabi* and other irrigated crops. This was done owing to the proximity of the well to the western plot.

20 long plots (5' × 66') were made, and sown with the following crops in duplicate (see the plan of the garden).

Kharif cropping.—Maize (Jaunpur and yellow local), *juar*, *marua*, *kaoni*, *shama*, *meth*, *kalai*, *sannai* and *kudrum*. In the centre of each plot was a small bed (5' × 7') of rainy season vegetables and groundnut. The following vegetables were grown:—*karela* (bitter gourd), *kaddu* (bottle gourd), *kaittha* (snake gourd), *jhingli* (luffa), *khira* (cucumber), *kakri* (a kind of melon), *kadima* (pumpkin), *ucchhe* (a kind of bitter gourd), *bora* (cowpea), *sim* (bean), *bhindi* (ladies' finger), *sag* (pot herbs), *murai* (radish) and groundnuts.

In the border of the fields were sown annual crops like castor, cotton and *rahar* (both early and late) for observation.

Six pots with different classes of paddy (*aus*, *katki* and *aman*) were grown and kept in the garden for the boys' observational work.

On account of excessive rain, most of the crops did not grow well. The monsoon vegetables, except *jhingli* (luffa), made exceedingly poor growth.

Field observational and other kind of work.—Some of the boys helped in weeding and interculture. They made, or rather they were persuaded to make, some sort of effort in observing the growth and development of the plants in the garden. Some attempted free-hand drawing of the following:—

Roots of maize and *rahar*.

Root nodules of *dhaincha*.

Leaves of paddy, maize, cotton, *kalai* and *dhaincha*.

Flowers of *kudrum*, *jhingli*, groundnut, maize and paddy

Fruits of *jhingli*, groundnut, maize and paddy.

They were shown insect visitors within cucurbitaceous flowers, and told what they could bring about (pollination and fertilization being popularly explained).

They were also shown the peculiarity in fruit formation of groundnut in the soil, by elongation of the flower stalk, and were told the bearing of this on its soil requirements; differences in hairiness on the surface of maize and *juar* leaves, as a means of identifying them in their young stages; detailed structure of the flower of paddy, under the microscope, showing pollen grains and how they were germinating on the stigmas; and bacteria inside the root nodules of *dhaincha*.

Oral discussions were initiated on plants, soil, weather, insects and fungi, as they presented themselves on the particular days when the boys were in their field classes—how plants live, what soil does, how rain affects soil and crops, what insects do (*e.g.*, ricebug, grasshopper), what a fungus is (*e.g.*, mushroom), etc., etc.

Initial difficulties and how they were overcome.—It has unfortunately to be recorded that the *pandits* appeared to be entirely apathetic as regards this kind of garden and nature-study work. The head *pandit* could not arrange to bring the boys to me in the garden to see or help in the laying out, ploughing, sowing of border crops, green manure crops, vegetables, and field crops, though on every occasion a reminder was sent to him the previous day. Afterwards on discussing matters with him he represented that the parents or guardians of most of the boys objected to this kind of work in the rainy season, and therefore he could not take the boys to the garden. As it seemed to me that further enquiries on this point would serve no useful purpose, I did not carry the matter further but plainly told the *pandit* that this nature-study and school-gardening class by me was not *compulsory* but *optional* and those who liked might attend. After this, I noticed some improvement in the situation, as thence-forward the *pandit* with some boys attended the class regularly on Saturday as arranged. This I have mentioned to show the nature and extent of the difficulties one has to encounter at the beginning in attempting to develop the teaching in village schools of this backward type.

It appears that the school boys in present circumstances (young age, prejudice against work in some cases and inability to do work in other cases, the present educational system and control, etc., etc.), can not be expected to take systematic care of a garden; and I think we shall have to do most of the work and let the boys do what they can to help the making of a common garden for all the classes. In all this, the main ideal would be, as hitherto, to develop the spirit of enquiry and to establish in their minds as far as possible a belief in causation—the inevitable chain of events—a belief which has immense potentialities for freeing a man from superstitious beliefs and customs and enabling him to weigh evidence and arguments, thereby making him more amenable to reason as he grows up.

Rabi Season, 1924-25.

The western half of the area near the *pucca* well, which was green-manured with *dhaincha* during the monsoon, was put under *rabi* vegetables and field crops as was planned at the beginning.

A small pump (chain and bucket) has been fixed on the well by the Agricultural Engineer, as desired by Director of Agriculture. Experience has shown that it is not very effective for irrigation purposes, either in the expenditure of labour or in time taken to irrigate a small area.

Rabi cropping.—The sowing and planting of the area were done between 21st October 1924 and 7th November 1924 (see the plan of the garden).

The following vegetables were sown or planted in lines or *kearis* (beds):—*brinjal*, tomatoes, chillies, *tīparis* (Cape gooseberry), cauliflower, cabbage, kohl-rabi, onion, garlic, potatoes, radish, turnips, (two kinds), carrots, *palag sag* and green peas.

The following field crops were sown in long narrow strips:—

Wheat (Pusa, Federation, and local), barley, oats, gram (No. 4, Pusa 24 and Kabuli), peas (field and garden), *musur* (lentil), *khesari*, *maghi gota* (rape), *purbi* (colza), *rainchi* (mustard), safflower and tobacco.

Besides the above, a few lines of my selected *khesari* and linseed were sown for observation. These were specially grown to give the boys some idea by ocular demonstration of the fundamental concepts in plant breeding, *viz.*, heredity and variation (*e.g.*, in the lines of *khesari* and linseed, some gave different kinds of plants as judged by flower colours in the same line while others did not), and of plant adaptation to environment (*e.g.*, one race of white *khesari* showed non-adaptation to upland soils).

The effect of castor-cake and ammonium sulphate on local potatoes was demonstrated with very marked results. There were 10 lines of manured and 10 lines of unmanured potato in one plot which were treated exactly alike in all respects except with respect to manure. The crops dug from the manured and unmanured portion weighed 18 seers and 8 seers, respectively.

Field work, systematic observation, and work of other kinds.—In the sowing and cultivation of the *rabi* crops and vegetables, the boys occasionally helped, especially during sowing and weeding times. They had also a small plot of land, exclusively left to their care, where they grew coriander, aniseed, garlic, tobacco (*bilaiti*) and cauliflower, etc., they themselves arranging for their seeds, plants, etc., from outside.

As regards other kinds of observational work, the boys selected plants and trees of every kind growing inside the garden area and in its immediate neighbourhood which they marked with stakes or card-board labels with a view to make general phenological observations as to their life-cycle, *e.g.*, sprouting, budding, leafing, flowering, fruiting, leaf-fall, etc., etc.

A number of pots were filled with different kinds of soil, *e.g.*, clayey, loamy, sandy, humous, *kankar* (calcareous), laterite (ferruginous) and *usar* (alkaline) and a beginning was made in making observations on their water relations, crop-adaptability, etc., etc.

For purposes of recording their observations, the forms given in their nature-study books were amended to suit our requirements.

During this season they attempted to make a plan of their garden, noting the names of the crops in their proper places. In this work they were shown what a scale is, how one can be drawn, and how better and more intelligent maps and plans can be drawn with its aid. (This is part of their geography course).

They have also been shown and told about the following:—

- (a) How to distinguish between seedlings of wheat, oat, and barley (by ligules and auricles), between gram and *masur* (by the hairs on their leaves) and also between *gota*, *rainchi* and *purbi* (by the extent to which the leaves clasp the stem).

NOTE.—Some attempted drawings of the differentiating features as noted above.

Parasitism in plants was first explained to the boys by actual ocular demonstrations before them. Actual specimens of *hadda* (Broom rape) infesting the roots of mustard and cabbage were shown, and then they were led to the microscopic examination of minute parasitic fungi, *e.g.*, rusts of wheat and linseed. They were told why it (rust) is called *harda* (yellow thing), and that it did not drop from the sky.

The work is in progress.

Kharif Season, 1925.

As it seemed necessary that attempts should be made to elaborate some kind of routine, which might be interesting both to the *pandits* and the boys and which they might follow without much help on our part, less assistance was given to them this year.

The work was done mostly on the lines of the previous year except that the boys were made to do most of the work themselves.

They sowed maize, *juar*, *marua*, *kaoni*, *kalai*, *meth*, *sannai*, *kudrum* and groundnuts in long narrow strips on the eastern plot, as in the previous year. Some seeds of ordinary vegetables (mostly cucurbitaceous) easily procurable locally (*kaddu*, *kadima*, *jhingli*, *paror*, *bhindi*, etc.), were also sown. The seeds of both the field and garden crops were procured by us and the boys were told that they must arrange for their own seeds in the next season. Cotton, castor and *rahar* were also sown as border plants. The crops, except maize and vegetables, grew fairly well. The maize almost failed on account of the poverty and bad condition of the soil after sowing. Of the vegetables, *jhingli* and *paror* appeared to be rather hardy and produced some fruits which were given as prizes to the first three boys who did well in their garden work. Regarding their



MANURED WITH AMMONIUM SULPHATE.

UNMANURED.

EFFECT OF AMMONIUM SULPHATE ON POTATOES.



UNMANURED.

MANURED WITH AMMONIUM SULPHATE.

EFFECT OF AMMONIUM SULPHATE ON ONIONS.

observational work, they made observation notes and drawings of what they were told or shown how to do. But in fact one or two intelligent boys did the actual work while the others seemed to copy from them. It seems to me that at the present stage we shall have to remain satisfied with this state of things as their outlook (both that of the *pandits* and that of the boys) on natural objects and phenomena is very much circumscribed owing to a system of education which seems to aim in effect only at the development of a little literary intelligence, taking them away from nature and their rural environment.

Something of the nature of experiments was also done. In the pots containing *usar* soil and treated with gypsum at 20, 10, 5 and $2\frac{1}{2}$ maunds per acre, *marua* seedlings were transplanted and the growth appeared to vary exactly in the proportion of gypsum applied. In the non-treated pot the seeds germinated well but the seedlings all died at a very young stage. In the other pots containing different kinds of soil, *marua* seedlings were also transplanted for observation. Different kinds of paddy were also grown in pots for observation. A strip of *kalai* was also sown for demonstration; half of it was treated with gypsum and the other half untreated. The growth in the treated plot was better than that in the untreated one and both the *pandits* and the boys were impressed with the result. But the fruiting in both the strips was unsatisfactory owing to insect attacks.

Rabi Season, 1925-26.

During the *rabi* season the garden work was continued as before with this exception that the boys themselves arranged for their seeds and seedlings from their homes and did the sowing and planting themselves; the land of course had to be ploughed for them.

Different kinds of local and farm wheats, barley, oats, gram, peas, *khesari*, *musur*, mustards, linseed and safflower were sown in long narrow strips. Seedlings of *brinjal*, tomato, cauliflower, cabbage, onion and tobacco were transplanted in *kearis*. Potatoes and onions were also grown for demonstrating the effect of ammonium sulphate. The boys staked some selected plants of each crop for noting in their books the time of sprouting, branching, flowering, fruiting, etc. The effect of ammonium sulphate on potatoes and onions was marked and was very impressive, as may be seen from Plates I and II.

The results of the demonstration gave—

Manured plot (Ammonium Sulphate 2 mds. per acre)	29	} Potatoes.
Unmanured plot	11	
Manured plot (Ammonium Sulphate 3 mds. per acre)	22	} Onions.
Unmanured plot	5	

They were so much impressed with these results that the second *pandit*, who has got some land, has bought one maund of ammonium sulphate this year from Shaw Wallace's agent in Bhagalpur for manuring his potatoes.

They made observations on the plants staked by them as to their life-cycle, which they noted in their books.

In January 1926, it was noticed one morning that some young potato and tobacco plants were cut clean off at their bases as if by a knife, and that the cut portions were lying close by. I asked both the *pandits* and the boys to find out if possible the real cause of this damage. The *pandits* after some observation and consultation with each other came to the conclusion that the damage must have been done by the children of the staff who lived near by, or by other mischief-makers cutting the plants with some sharp instrument. I asked them to dig the soil near the cut plants with the help of the boys and report to me what they found. Then I left them and went to office. After about an hour the boys with the *pandits* came running to me with excitement and carrying with them about a dozen *agrotis* caterpillars in different stages of growth. They described in detail how and where they were found and seemed to be convinced that these insects were the real cause of the damage. I confirmed their belief and told them that not only potatoes and tobacco but succulent stems of other *rabi* field crops like gram, peas, etc., are similarly damaged by these insects especially on the *char* lands of Ghogha and Colgong. As they seemed to know very little about these insects, I asked them to collect some of the caterpillars carefully and rear them in small rearing glass cages which I gave them from the entomological section. They were also asked to keep some sort of record of what they observed during the rearing of these caterpillars. They reared the insects carefully but some died, some formed pupas, while others disappeared. Their disappearance in some cases could be explained as they observed some insects fighting, biting and even eating each other, thus showing the cannibalistic propensities of these insects. But their disappearance in other cases could not be satisfactorily explained by them, till on opening one of the cages out flew an *agrotis* moth and we wondered when they were told that the moth was but the final stage in the life-cycle of the insect. In another cage a fly was found and this could not be very easily explained. We all agreed that it must have come out from one of the caterpillars kept and as we were all sure that the same kind of *agrotis* caterpillars were kept in all the rearing cages and as the rearing work was done with care this fly must have come out of the body of an *agrotis* caterpillar. We further agreed that it was not improbable that an insect parasite entered the body of the *agrotis* caterpillar and that after eating up the host, the parasite remained and finally developed into this fly. In the light of the evidence before them it was not difficult to convince them of this fact. The fly was afterwards scientifically identified as one of the *agrotis* caterpillar parasites. Some of the boys attempted to make drawings of what they observed in this

agrotis lesson. They were also told how the pest could be controlled by hand-picking and Andre-Maire traps.

Another insect, the mustard aphid, also became very destructive and affected nearly the whole of the mustard crop within a few days. These days were damp and cloudy. The *pandits* and boys honestly believed that these insects really dropped from the cloudy sky. They were told that it was not so and that it was due to the enormous and rapid multiplication of this class of insects both asexually (parthenogenetically) and also sexually; and that damp cloudy weather was the most favourable condition for the growth, multiplication and attack of these insects. They were also shown under the lens both the winged and wingless aphid and their rapid multiplication. As the weather cannot be brought under human control they were convinced how difficult it would be to control such insect attacks in field crops.

To give both the *pandits* and the boys some elementary ideas about plant foods and feeding rough experiments on water-culture were made in ordinary earthen pots. Six such pots were used. One contained only tap water, one well water, one ordinary soil, one very fertile soil, one *usar* soil, one a complete fertilizer solution (containing a little potassium nitrate, calcium phosphate, and potassium sulphate). Very young (about 3 weeks old) barley seedlings were uprooted carefully, with the roots intact, from fields, and kept for a few days in ordinary water to get them accustomed to living in water, and then they were transferred singly to the respective pots as above. The soil extracts, etc., were added to the culture-pots as required from time to time. These pots were kept in the immediate charge of the head *pandit* in the school room. They observed the root growth and plant development in the several pots and noted how the plants grow more vigorously in the fertilizer solution and fertile soil-extract pots than in the others, and how they were in a more or less dying condition in the pots containing the *usar* soil, thus giving an ocular demonstration of the necessity of certain minerals as plant food materials and the injurious action of others on plant growth and development. Incidentally they were told about manures and manuring. In the frontispiece the head *pandit* is seen standing by the pots.

The cotton plants grown last year were in full bearing this season and the boys were asked to pick and examine the lint carefully, find out the percentage of lint to seed cotton by actual weighment, and then to make yarn from this lint with the spinning-wheel (*charka*) provided by the school authorities. The yarn made by the boys was reported to be good by the spinning master.

In the tobacco plots, the effect of topping and the removal of suckers was demonstrated, as the *pandit* seemed to have the wrong notion that it would be better to leave the tobacco plants alone. The larger size of the leaves in the topped and sucker-freed plants was very characteristic.

Various observational questions were asked and discussed, e.g., the cause of failure of cauliflowers (by mistake they planted a very

early variety late in the season), of radishes (they got local cheap seeds which are very bad), and of *brinjals* (which were transplanted very late), and the reason of success with cabbages, onions, and potatoes (due to proper cultivation and application of ammonium sulphate), etc., etc.

A few beer bottles, with stoppers of *dhaincha* pith to be sealed with mud paste, were supplied to the head *pandit* for preserving the seeds of the *rabi* crops grown by the boys after selection and harvest for next years' sowing. The seeds kept very well in them.

Kharif Season, 1926.

As most of the monsoon vegetables did not grow well during the monsoon, they were planted again during the summer months on the potato and onion plots. After their harvest, pumpkins, cucumbers, bottle gourds, *tuffas* and ladies' fingers were grown by the boys. They had to be irrigated. Their growth was more successful than that in the monsoon in spite of human, cattle and goat depredations. Some of them bore fruit during the next monsoon as well.

The little experience gained in my humble efforts at elaborating a stimulating routine for both the *pandits* and boys in this very backward local primary school, with the idea of stereotyping a mechanically educating environment, seems to show that their out-look on nature must be thoroughly changed. And to make this change effectively, radical changes in the present system of primary education may perhaps be necessary.

S. N. SIL.

FLATE III. DIAGRAMS AND FIGURES FROM THE BOYS' DRAWING BOOKS.



विद्यार्थी सुरेन्द्र प्रसाद मण्डल पञ्चम श्रेणी चम्बरो डि० बोर्ड अ० प्रा० स्कूल। अन्दर
 काषिकौलिज सवीर जिला भागलपुर। ता० ७-२-२७ ई०।
 द० नंगमोलाल हेडपण्डित चम्बरो डि० बी० अ० प्रा० स्कूल।

References to the Diagrams. Plate No. III.

1. Root of *rahar* (tap root).
2. Root of paddy (fibrous root).
3. Radish (fleshy root).
4. Paddy plant with fibrous roots (fr) and panicle (p).
5. Maize plant with fibrous roots (fr), adventitious roots (ar), male flower or tassel (t) and female flower or cob (c).
6. Leaf of wheat with inconspicuous ligule and auricle.
7. Leaf of barley with conspicuous ligule and auricles (a).
8. Trifoliate leaf of *kalai*.
9. Non-stem-clasping leaf of *rainchi* (mustard).
10. Stem-clasping leaf of *maghi gota* (rape).
11. Digitate leaf of *kudrum* or *patua*.
12. (a) Leaf of tobacco from untopped and unsuckered plant.
(b) " " topped and suckered plant.
13. Pinnate leaf of *dhaincha*.
14. Fern leaf showing reproductive bodies underside. One such body magnified (a).
15. Male (m) and female (f) of flower of *jhingli*.
16. Tobacco flower showing parts, *e.g.* :—
s—sepal, p—petal, a—anther, st—stigma,
o—ovary containing ovaes.
17. Anthers (a) discharging pollen-grains (p) on stigma (St).
18. Root nodules of *dhaincha*.
19. Groundnut plant showing aerial flowers entering the ground and forming nuts.
20. Potato plant and agrotis insect—
A—Potato plant cut by agrotis;
B—Agrotis caterpillar.
C—Agrotis pupa.
D—Agrotis moth.
21. Rust of linseed attacking leaves and stem (a)—spores much magnified (b).
22. Broom rape (b) infesting maghi gota roots (gr).
23. Two kinds of *kaddu* (bottle gourd)—(a) pear shaped; (b) bottle shaped.
24. Germination of *sim* (bean)—
(a) bean seed; (b) split open showing embryo;
(c) and (d) embryo germinating.
25. Effect of ammonium sulphate on onion—
(a) onion from manured plot.
(b) onion from unmanured plot.
26. Effect of ammonium sulphate on potato—
(a) potatoes from manured plot.
(b) potatoes from unmanured plot.

Phenological Observation Book—Sample page.

प्राकृतिक यन्त्रो (पोधों के जिन्दीगो का घुमाव) डिस्ट्रीक्ट बोर्ड अपर प्राइमरी स्कूल चम्बेरी अन्डर कृषी कौलज सबौर जिला भागलपुर ।

सि० नम्बर	कारो नम्बर	फसिलों का नाम	बोना	जन्मना	पसला पत्ता	दुसरा पत्ता	डालो वा शाखा	गवभा	श्रीम फुट जाना	फूलकौ का दी	फूल खिलना	दूध	पीकत वा तय्यार	पकना	कैफियत।	
१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४	१५	१६	
१	१	कट्टू	२०-४-२६	२४-४-२६	२६-४-२६	१-५-२६	१५-५-२६	—	५-६-२६	२६-६-२६	३-७-२६	१०-७-२६	२४-७-२६	२८-७-२६		
२	२	भिंमती	"	"	"	"	"	—	"	"	"	"	१४-७-२६	७-८-२६		
३	३	परील	"	"	"	"	"	—	"	"	"	"	१७-७-२६	२८-८-२६		
४	४	राम परील	"	"	"	"	२६-५-२६	—	"	"	"	६-७-२६	१०-७-२६	२४-७-२६		
५	१-१५	मकई	८-७-२६	१२-७-२६	१४-७-२६	१७-७-२६	—	२४-७-२६	७-८-२६	—	—	—	—	—		
६	२०-२१	कसनी	१०-७-२६	१२-७-२६	१५-७-२६	१७-७-२६	—	२४-७-२६	७-८-२६	—	—	—	—	—	अचानक ता० ८-८-२६ ई० को मकई और कसनी के बिलकुल गाँवों की मवेशी चर गया।	
७	७	जमाली मेहू	१६-११-२६	१६-११-२६	२१-११-२६	२२-११-२७	११-१२-२६	२४-१२-२६	२-१-२६	—	—	२२-१-२७	२७-२-२७	—	} निम्नलिखित वर्तमान फसलों में अधिकतर फसिल अभी नहीं पका है।	
८	१६	जई	"	२१-११-२६	२३-११-२६	३०-११-२७	४-१२-२६	२४-१२-२६	२-१-२६	—	—	५-२-२७	१६-२-२७	—		
९	५	दंश्री बूट	१४-११-२६	"	२६-११-२६	२३-११-२६	२७-१२-२६	—	—	१-२-२७	३-२-२७	१२-२-२७	२१-२-२७	—		
१०	१६	खिचारी	१७-११-२६	"	२४-११-२६	२६-११-२६	११-१२-२६	—	—	२६-१२-२६	८-१-२७	२२-१-२७	१२-२-२७	—		
११	२०	मसूर	"	"	"	२६-११-२६	४-१२-२६	—	—	१५-१२-२६	२२-१२-२६	८-१-२७	१६-१-२७	४-४-२७		मसूर काटा गया।
१२	१२	दंश्री चिकना	"	"	२३-११-२६	"	"	—	—	२५-१२-२६	८-१-२७	२६-१-२७	१२-१-२७	—		
१३	१३	गोटा	"	"	"	२७-११-२६	१०-१२-२६	—	—	१८-१२-२६	२५-१२-२६	३-१-२७	१५-१-२७	२६-१-२७		गोटा काटा गया।
१४	१४	रैची	"	"	"	"	"	—	—	२३-१२-२६	३१-१२-२६	१५-१-२७	२६-१-२७	२६-२-२७		रैची काटा गया।
१५	६-१०	कुसमी	"	"	"	"	११-१२-२६	—	—	८-१-२७	२२-१-२७	१२-२-२७	—	—		

६० संवत्सी लाल डिस्ट्रिक्ट चम्बेरी डि.
वी. अ. प्रा. कृषि अन्डर कृषी कौलज
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Experiments in Primary Education in the Orissa Feudatory States.

After nearly five years intimate connection with primary education in the Orissa Feudatory States, during which I have inspected some two thousand schools, I have been forced to the conclusion that the root cause of nearly all the weaknesses and failures of the system lies in the neglect of the small boys and girls at the very beginning of their school career. It will perhaps serve to secure attention for the opinions which follow if I give at the outset figures which show the result of 4 years of more natural care of the beginners. The figures relate to the same 491 schools in 1922 and 1927.

Year.	Boys reading in Class I.	Boys reading in Class II.	Boys reading in Class III.	Boys reading in Class IV.	Total.
1922 . .	13,899	3,133	2,397	1,957	21,386
1927 . .	10,270	6,272	4,737	3,478	24,757
	-26%	+100%	+100%	+78%	

The average school in these two years is—

1922 . .	28·	6·	4·8	4·	43·
1927 . .	21·	12·7	9·	7·	50·

The centre of gravity of the school is seen to have moved markedly forward and the number of boys actually receiving the minimum education has doubled. But this is not the only gain. The larger number of boys now annually passing out from Class IV have as a general rule taken only four or five years to do the course as against seven or eight in the past.

This result is the fruit of four years concentrated effort to compel sub-inspectors and teachers to attend to the beginners from the outset. It has been achieved with poorly qualified and in many cases untrained teachers and the methods used might therefore be found helpful elsewhere.

In 1922 I found that the conception of a school as a dynamic progressive institution, where boys of average intelligence made progress by regular stages in limited periods, was unknown. The chief obstacle to the realisation of this fundamental conception was

the age old habit of boys' taking admission to the school at any time of the year and the consequent impossibility of the teachers' dealing with class I as a class, a teaching unit. The custom of restricting admissions of new beginners to the beginning of the school year was, then, the first change introduced. To do this we had to face losses and the obduracy of parents but with such pressure as can be brought to bear in the Garjats the practice is becoming well established and is in my opinion an essential step towards dealing adequately with the infant class.

But assuming that a new class of infants was enrolled in January, were the teachers competent to teach these boys to read and write intelligently in one year? They were emphatically not competent nor did the system of teaching in use allow them to do it. It was calculated to weary the most patient of children and to encourage the formation of thoroughly bad intellectual habits. The system briefly was learning to read from memory; it put the names of the letters and the spelling of words before the pronunciation of letters and the meaning of words. In the case of Oriya this is entirely unnecessary. It is an ideal language for beginners. By completely ignoring the alphabet scientifically arranged by grammarians, and adopting a system based only on the needs and interests of the child, it was found possible so to train even poor teachers, that they were able to secure intelligent and rapid progress. The chief characteristics of this new system were:—

I. The order in which the letters were taught was determined in each *guru* training school by actually constructing and analysing a child's vocabulary. Such an analysis shows that some of the most necessary symbols were in the old system taught far too late.

II. Names of letters were not taught at all.

III. Letters were introduced first in familiar words.

IV. As each new symbol was learned the boys had themselves to combine it with symbols already known to form new words. Thus the letters were learned *by use* in the way natural to children and not by dull and tedious repetition.

V. The words were connected with their meaning from the outset by simple conversation.

VI. Sentences were introduced and their meaning discussed at the earliest possible moment. In actual practice a successful teacher has his boys writing simple sentences in a month or so from the start.

VII. Reading and writing went hand in hand, and hence it was possible to get boys to correct their own mistakes in writing by getting them to read exactly what they had written. This habit has proved to be one of the most difficult to establish, so deeply ingrained is the habit of reading what they remember to have heard.

These may seem small changes and undoubtedly lip-service would be paid to them by all trained teachers, but the fact that no

attempt had been made by trained teachers or sub-inspectors to put them into vigorous practice and that the text books in use were all based on the memory—alphabet system shows that their importance was not understood. By insistence, by conferences and demonstrations and by a system of small rewards for successful work it can be claimed that this more natural way of teaching beginners has now become established but not stereotyped. Every teacher has been encouraged to make his own scheme and no book has so far been put into their hands. Many of the sub-inspectors have prepared books but I have discouraged any publication. The teachers have thus been compelled to think out what they are doing and this has made for freshness, not only in this particular work but throughout the school.

In arithmetic under the old system the reduction of the training to mechanical memory work was achieved in the early stages by the use of simple clue words, by means of which the necessity on the part of the children for thinking out the process was prevented. The use of these has been forbidden and variety has been introduced in the form of questions, which have also been drawn into closer relation with village life.

These have been the two main lines of attack so far as the actual work of the infant classes is concerned. The rest of their school time is devoted to games and stories with the sole object of making their life in school interesting and happy. They make small bricks and build walls, they make garlands and wear them, they act the stories they hear and they play their indigenous games.

The main objects in view in these changes have been—

1. To meet the parents' legitimate grumble that schooling takes their boys from profitable work. If we can take a child of six and show the parents that he can be regularly taught and make regular progress, thus finishing the lower primary course by the time he is ten, I believe the parents' objection will to a very large extent be met. In many States where the changes have been carried out with energy and intelligence there is already unmistakable proof of this in the great increase in the number of boys proceeding to the upper primary schools, *i.e.*, the parents show their willingness to make a limited sacrifice of their boys' time provided the result justifies it. There is also a steady improvement in attendance which points in the same direction.

2. To make the school attractive to the boys themselves and thus to secure better attendance, an essential condition to steady progress.

3. Above all to make an early start in the fight against the two chief enemies in Indian Education, *viz.*, "Words" and "Routine". The extent to which the ability to repeat words is considered to be a true measure of knowledge in India is superficially recognised and lamented. It is not fully realised nor is it recognised that the treatment of beginners in school is such as to found and establish firmly this divorce between words and ideas.

If ever Education in India is to become founded on the understanding of ideas rather than on the memory of words it will have to be as a result of careful and consistent work at the earliest stages of new generations of scholars. Closely connected with the tyranny of verbal memory is the tyranny of routine. Things are always done in the same way, questions asked in the same form and work taken in the same order. As a result of these two tyrannies a boy's mind-process when he is faced with a problem becomes:—

- (a) Hearing the words.
- (b) Groping in his mind for a past experience of the same kind.
- (c) Doing what he did before.

Instead of—

- (a) Hearing.
- (b) Understanding.
- (c) Acting.

It is difficult to separate in their effects the tyranny of verbal memory and that of routine. The following illustrations will refer therefore sometimes to one, sometimes to the other but generally to both. They are taken from actual experiences in the Garjat schools and have of course been tried over and over again. My conclusions are based on the general results of the tests in many schools.

I. I sit on the floor with a six year old child after some months in class I and put 3 beans into his left hand and ask. How many beans have you in your left hand? He answers correctly. And how many beans have you in your *right* hand? The answer is always 3 or 5. He says "3" presumably because he thinks I want him to say 3, I, having given him 3 beans. He says "five" because the question usually asked about his hand is "How many fingers have you on your right hand"?

II. I find class IV boys arranged in 3 rows and after conversing about the arrangement I say without giving any clue whatever "In the back row the 3rd boy from the right stand up." There is no response. Sub-inspectors have suggested that the boys did not understand and I have asked them to do the test. Their method is as illuminating as the failure of the class. They gaze steadily at the boy intended to move or even motion to him with head or hand thus supplying the clue which takes the place of thought. When I asked them to turn their backs to the class and repeat a similar order there is the same failure to respond as when I asked the question myself. Why is this? The boys have no previous experience to recall. They look helplessly from one to the other and to the teacher. Routine does not help them; memory does not help them. All that is necessary is to associate simple words with their meaning and this they cannot do because their training prevents it.

III. I ask the boys in class IV to write in figures the number 10,010. It is a trick number and many mistakes are made but it is not the fact of the mistakes that is significant. A boy has written 1,010 and I go to him and ask him to enumerate the units, tens, hundreds, etc. He does so glibly pointing to each figure in turn. Pointing to the left hand figure he says thousands and I then ask him to read what he has written. He invariably reads what I told him to write, *i.e.*, 10,010 although he is pointing to the figure 1 and saying thousands! In this test, too, many boys actually enumerate units, tens etc., beginning from the left.

IV. The boys of say class III have "learned" the story of the Mahabharat. When the sub-inspector of schools or a teacher is asked to test them the question is always the same, *i.e.*, "Tell the story of Mahabharat." This form of question is the clue to a particular stream of words which comes glibly from the boys. Stop one and the next will go on exactly where he left off. If however these same boys are asked some such question as, who was Judhistir? Who was Arjun's chief enemy? The response or lack of it has convinced me that this apparent knowledge is a matter of words only without any understanding behind them.

V. I have devised a few simple intelligence tests based on ideas so familiar, that it is impossible for anybody *not* to know them. The tests avoid the use of words, requiring instead the expression of the boys' ideas by a very simple drawing. The element of drawing is reduced to a minimum, what is required from the boy being generally only the alteration of a line or so in a sketch copied from the black board. A schedule of these tests is attached. (Appendix A) The results obtained confirm to the full the powerlessness of these boys to deal with ideas.

VI. Letter writing is taught in class IV. This too has been reduced to routine and has become the commission to memory of a formal letter. I get exactly the same letter produced in schools all over the Garjats. It is a letter to the boy's father about the school—quite a suitable subject for a boy to write about—but it invariably follows the following course with minor variations:—
"Sanskritic salutations. The reason for my writing is to tell you that I am very well and hope by the mercy of God that you are also well. I have been promoted to class IV and need some more books. Please send Rs. 2."

I have asked boys to write to their boy friend on an entirely different subject. The same Sanskrit salutations are used.

I have asked others to write to the village post master to enquire about a lost parcel. They have assured him that they are well and hope by the mercy of God that he is well too!!

Other forms of composition are similarly formalised. There is hardly ever a trace of individuality. Every boy in a class invariably writes roughly the same composition.

The few samples of evidence I have given may not sound very conclusive to a casual reader but the whole experience from which

they are assorted has convinced me that the boy of average intelligence, relying solely on the primary school for his education, is getting little or nothing out of it and spends excessive time in doing it. From this springs the indifference of parents and irregularity of attendance which constitute a vicious circle, to the breaking of which much effort has been devoted in the past. The vicious circle is usually held to run:—indifference of parents, bad attendance, lack of result and so on and the efforts to break it have been directed mainly at the first two. It is my belief that the indifference and bad attendance are the results and not the causes of the lack of effective work in the schools, and that any attempt to break the vicious circle must be directed to the school and *must begin and be made effective first of all at the bottom of the school*. The intellectual effects of the dreadful treatment and teaching of school children in their earliest years in school persist throughout all the later stages and are responsible for the comparative ineffectiveness of high school and college education. They are seen most strikingly in our own department in the failure by trained teachers and sub-inspectors of schools to put into practice the theory they have committed to memory. I have heard trained graduates talk learnedly about “Apperception masses” who in their teaching showed no appreciation whatever of the meaning. I have heard a shrewd discourse on “Fatigue” by a trained headmaster whose arrangement of his time tables showed that he had no practical understanding of the subject.

I believe that the intellectual habits indicated in the foregoing paragraphs are almost part of the inheritance of an Indian boy but they are confirmed and strengthened by the school system in its earliest stages instead of being fought against and directed into useful channels.

The system does its most deadly work in the first year or two of the boys' school life and it is here in my opinion that the fight will have to be fought. It has been hopefully begun in the Garjats with the present generation of teachers and the results are seen to be in the desired direction.

There may have been some loss of efficiency in the higher classes but this is not a necessary result. Single handed against mountains and ages of prejudice I have had to force attention to one thing at a time to exaggerate the very great importance of the infant classes and even to neglect the higher classes to get attention paid to them. This neglect is however only an undesirable transitional phase. As soon as we had shaken sub-inspectors of schools and teachers out of the comfortable belief that little boys can be allowed to sit about in dark corners for a year or two and repeat the names of letters monotonously, and had in its place established the habit of beginning work with beginners in January, it was possible and will remain possible to give proper attention to the higher classes. The line of attack I chose here was composition and the object in view was the development of individuality. The principal means used was a violent break with all the traditional

subjects of composition and the substitution of subjects on which every boy had ideas to express. The reliance of the boy on the teacher for his ideas and the habitual uniformity of composition have proved very strong obstacles and I have not so far had any great measure of success in getting spontaneous and individual expression.

To demonstrate the practical nature of this and other subjects, I am this year trying an experiment in eight upper primary schools in five States. I arranged with the Deputy Director of Agriculture at Cuttack to supply a quantity of paddy seeds on receipt of a letter from the head boy of each school giving careful particulars of the nature and extent of ground on which the experiment will be tried. The bearing of this on composition will be seen when I say that two out of the eight boys failed to get seeds because their letters were defective. A further exercise in composition will be afforded in drawing up a report for me on the experiment. The whole project, which consists of comparing the productivity of local seed as against that supplied by the government farm, will afford exercises also in accurate measuring, weighing and calculation as well as in hand work—making fences, ploughing and making receptacles for storing. The grain produced this year will I hope be used for extending the experiment to other schools next year. Arrangements have also been made for a further similar project next year having for its object the testing of sulphate of ammonia as a manure.

These remarks are somewhat disconnected because the whole subject is concerned with small points of detail which make all the difference between training an automaton and educating a boy. To deal adequately with such small points would be out of place in a brief note of this sort. Hence the sketchiness of the remarks. The opinions formed as a result of the experience behind the remarks are however by no means sketchy. They are—

I. The absolute necessity and even urgency of attacking the problem of the bottom of the school by—

- (a) *ad hoc* instruction of the existing staff.
- (b) Improved training of a more practical nature in colleges and schools for training teachers.
- (c) Method based, not on tradition, but solely on the needs and nature of the child.
- (d) A powerful and unremitting attack in the earliest stages on all forms of the verbal memory and the "clue system" of teaching. The practical ways of doing this must constitute an important part of the practical work of the training schools.

II. The necessity of bringing the work in the higher classes of primary schools into more intimate connection with ideas and things

and with the boys' own environment. The best lines of attack for this purpose are I believe—

- (a) Composition.
- (b) Hand-work.
- (c) Occasional projects of a practical nature.

(a) Composition is at present merely a small development of formal grammar. Properly treated it can be made to bring into the school freshness, variety and above all individuality.

(b) I do not believe in the possibility of introducing any form of vocational training into primary schools. The call for it is, I believe, the result of the failure of the schools to deal with their proper work systematically and progressively. The result of the failure has been that many boys of 15 and 16—proper subjects for vocational training—have continued to waste their time in primary schools. If the primary school is made effective, it will have finished with the boy by the time he is 10 or 11 (lower primary) and 12 (upper primary). Boys of such an age are not fit subjects for vocational training.

Any form of hand-work that causes the boys' head and hand to work together is however valuable and should be developed strongly. I have tried straw mat making—the boys of class IV in one State now make all the mats required for the infant classes to sit on. I have also tried brick-making and miniature house building. Dyeing with jungle produce, hurdle and fence making and rope making are other experiments that are being tried hopefully. Wherever a boy has some special ability he is made to teach the others.

(c) This is at present an idea only in process of being put to test on a small scale. I have mentioned before the general nature of one project and to show the expected scope of it I attach the preliminary instructions issued. (Appendix B) I think at present that this idea might be elaborated and a series of similar projects initiated for the final year of the primary course.

I may add this. If the measures suggested be taken in the infant classes, and the age group 5=6 be drafted each year into the school, it will be found that the present syllabus for class I will be too much for one year. A return to the two year infant class course will have to be made. The primary course can be shortened to five years but never by putting undue pressure on the smallest children. In my opinion the best course would be to abolish the difference between the lower primary and upper primary courses and have a standard five year primary course for children from the ages of 6 to 11 or 12 in a three teacher school.

H. DIPPIE,

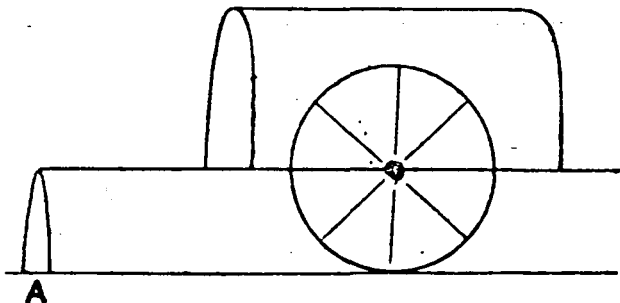
Agency Inspector of Schools.

APPENDIX A.

SCHEDULE OF SIMPLE INTELLIGENCE TESTS.

Test I.

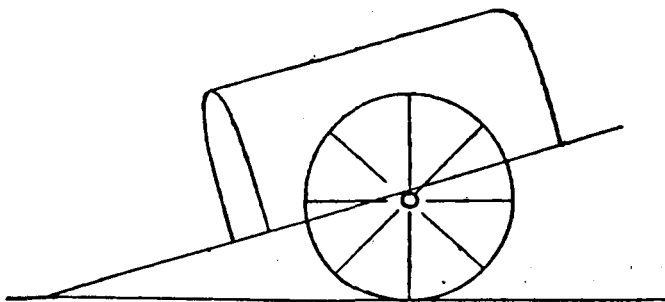
Sketched on the black board.
To make the drawing easier the hood can be rubbed out after the object has been recognised.



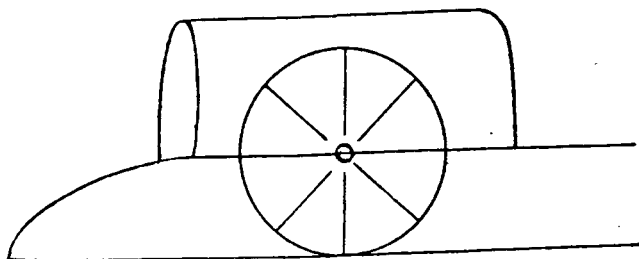
This is generally recognised as a bullock cart and the object at "A" is recognised as a "tipai" (support).

The test is "Draw the cart as it will be when the "tipai" is removed".

Correct solution—



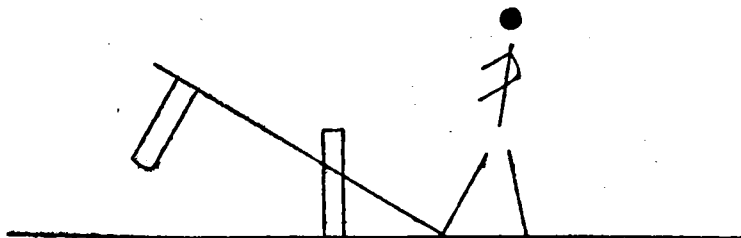
Usual solution—



i.e., The boy undoubtedly knows what happens. As soon as I put the problem into words as "When the front end goes down what will happen to the back"? It is correctly done.

Test II.

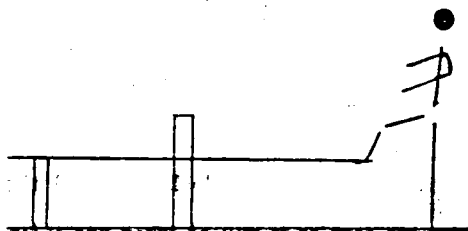
Sketched on black board.



This is recognised as a *dhenki*.

The test is "Draw the *dhenki* (never mind the figure) as it will be when the foot is raised."

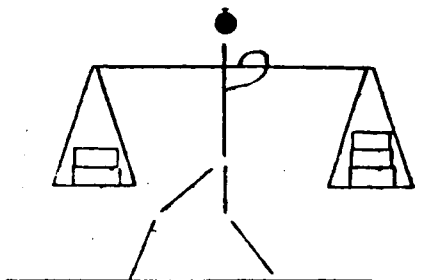
Correct solution—



Usual solution—

*Test III.*

Sketched on black board.



This is recognised generally after some hints as a man carrying a bar with bricks. The test is "What big error is there"?

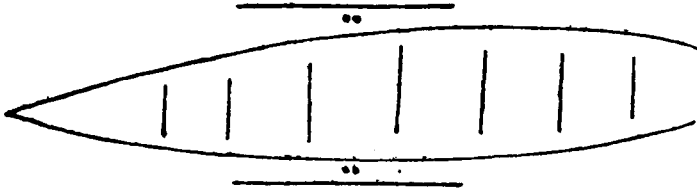
Answer.—Three bricks don't balance 2 bricks.

Result.—Very rarely discovered.

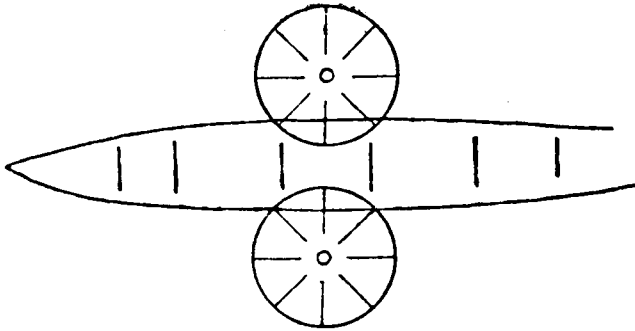
Test IV.

The same sketch as in Test I. When recognised I rub out the hood and ask "Where is your eye when you see the cart like this. Behind, above, in front or at the side"? I get the correct answer—"at the side" occasionally. If not I explain and then give the test. "Draw the cart as it will be seen when your eye is directly above."

Correct—

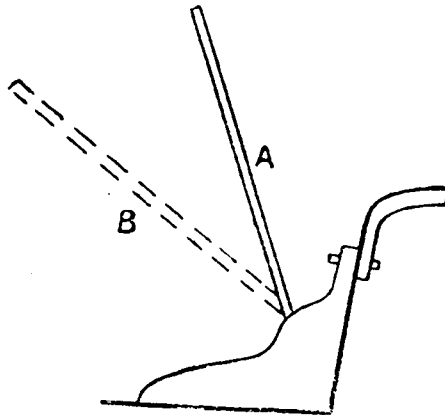


In those cases where a reasonable attempt is made the result is usually this.

*Test V.*

Sketch on black board.

The "easa" A or Yoke piece is drawn at an absurd angle.

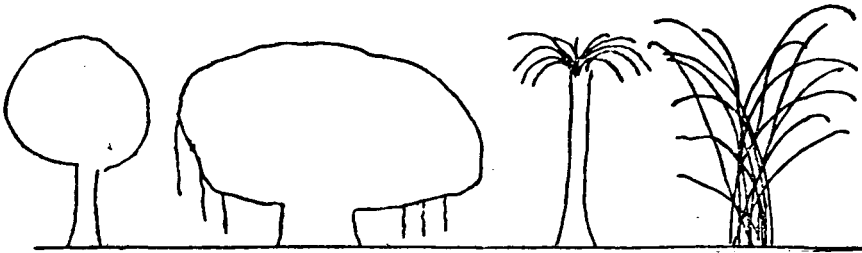


Test.—What is wrong in the sketch?

Result.—Rarely noted. After putting in the correct position as dotted in sketch the boys invariably vote for "B" as being correct.

Test VI.

Sketch on black board.



The trees are fairly regularly identified as mango, banyan, palm, bamboo, especially the banyan and palm.

The sketches are then removed.

Test.—Draw the banyan tree.

Result.—The only point to note is the general direction of the falling rootlets. Usually these are drawn as if radiating from the centre of the tree.

APPENDIX B.

PRELIMINARY INSTRUCTIONS ISSUED REGARDING A PROBLEM FOR
BOYS IN PRIMARY SCHOOLS.

I will be glad if deputy and district or sub-inspectors, as given below, will co-operate with me in carrying out the following experiment in class VI of the schools mentioned below.

Patna—2 schools.
Angul—2 schools.
Dhenkanal—2 schools.
Athgarh—1 school.
Pal-Lahara—1 M.V. school.

The general idea of the scheme is that boys should be confronted by a problem in a natural setting and should themselves solve all the smaller problems that arise, and actually carry out their solution.

Problem.—Which of two sets of paddy seeds produces the best result?

There are other kinds of paddy than those used in the village. I have arranged that at the appropriate time a sufficient quantity of other seed will be forthcoming on due application and the problem is to test this as compared with village seed which the boys will obtain from their homes. This will give rise to various problems. Now in this note, which is addressed to deputy or sub-inspectors, I will simply state the problems and the solution which I think a boy should find, but the deputy or sub-inspectors will render the experiment quite valueless if they do the same to the boys. The *sub problems must not be stated to the boys*. They must be led to feel the problem, and the necessity for its solution and *then be left to solve it in their own way*. Uniformity, my solution or your solution must not be insisted on. If the boys' solution is adequate let him carry it out without further instruction. If inadequate, make him realise its inadequacy by questions and lead him to a better solution. The essence is that it is to be boys' own thought, boys' own work from first to last. Select schools where there is an intelligent *head-pandit* and get the boys to select a leader who will be the channel of communication with me. Tell him to send his name and postal address very early please to the Agency Inspector of Schools, Orissa Feudatory States, Sambalpur Bengal Nagpur Railway.

The problems then which I expect to boys to feel and be led to solve are:—

I. The necessity of choosing two equal pieces of land of *exactly* the same quality and in *exactly* the same condition.

Subsidiary problem.—The necessity for making a measuring rod. It will not do to measure roughly by paces or eye. Absolute *exactness* is necessary.

II. Ploughing and preparing this land. Borrowing bullocks and ploughs. Each piece to be treated in *exactly* the same way. Let the boys *consult* their elders.

III. Protecting the growing crops, making hurdles or some other form of fence.

IV. Necessity for using *exactly* the same quantity of seed.

Construction of a balance—a straight piece of bamboo, a hole exactly in the centre, a nail or smooth peg of bamboo for a fulcrum, basket work pans suspended from the ends of the rods. Balance adjusted at the time of weighing by moist earth plastered into the basket work to the necessary extent. Weights can be borrowed but for general work with the balance in school, the boys should make weights with blocks of sundried clay or wood cut to equal a standard weight, and marked.

V. If late paddy is chosen—the preparation of equal and similar seed beds.

VI. Sowing transplanting, weeding and general care. The boys should consult their fathers freely, bearing always in mind that exactly the same treatment in all respects must be given to both crops.

VII. Harvesting and weighing the paddy. Bigger scale pans can be fitted to the balance but the same scrupulous care must be used as before.

VIII. Weighing an equal portion of each paddy and husking it. Weighing the rice resulting.

IX. Boiling equal portions of each rice and sampling it.

As regards details I enclose a copy of a letter from the Deputy Director of Agriculture from which you will see that different sorts of paddy are available. This letter should be translated and handed to each head boy. He and the class must be led to decide in view of the land available which kind of paddy to ask for and what extent of land the experiment will be tried on. The Deputy Director's idea of 1/20 acre should be enough, *i.e.*, 15 yards square but if the full "chain square" is available and the boys chose to work it let them, *i.e.*, 22 yards square. Having decided these points they must each draft a letter to the Deputy Director of Agriculture, Government Farm, Cuttack, and apply for sufficient of the chosen seed to plant their plot. The best of the boys' letters should be posted by the head boy to this address. If he fails to be explicit or omits to give his full and correct postal address he won't get the seed. This letter should be sent not later than June 10th.

You will see that the most pressing problem now is to get on with arrangements for fencing the plots.

Each boy in the class is to keep an *accurate* diary of the experiment with *accurate* observations, and dates. At the end each is to write and send to me a *full* report of the experiment and its result.

Addendum to the above instructions.

A further problem to be faced is the storing of the Cuttack paddy when harvested. Boys are to twist their own straw ropes, make container and store in a safe place. I hope that this paddy will be available for experiments in other schools next year. The boys of these other schools must write to the head boy of the school who has the paddy. He and his classmates will have to face the problem of packing and despatching it. The necessary cost will have to be borne by the State.

Copy of a letter, dated the 7th of May 1927, from the Deputy Director of Agriculture, Government Farm, Cuttack to the Agency Inspector of Schools, Sambalpur (referred to in Appendix B).

I have different varieties of paddies suited to the different classes of lands in the Orissa delta and it is difficult to say which one of these will suit your conditions best.

I can let you have seeds of a fairly early type of paddy suitable for growing on uplands and also a very late variety suitable for the lowest class of lands where paddy is not harvested till late in December.

The area for comparative trials should be at least 1/10th acre (1 chain square) but if this is not available 1/20th acre will do. The paddies should be, preferably transplanted and exactly the same treatment should be given to both our seed and the local variety.

I can let you have sufficient seed, free of cost for trial at 10 different places. Please let me have a list showing where the seed is to be sent and I shall despatch it straight from here.

Publications of the Bureau of Education, India.

Quinquennial Reviews.

- Progress of Education in India, 1892-93 to 1896-97. Third Quinquennial Review. By J. S. Cotton. Rs. 3.
Progress of Education in India, 1897-98 to 1901-02. Fourth Quinquennial Review. By R. Nathan, C.I.E. 2 Vols. Rs. 7.
Progress of Education in India, 1907-12. Sixth Quinquennial Review. By H. W. Orange, C.I.E. 2 Vols. Rs. 5-8-0.
Progress of Education in India, 1907-12. Sixth Quinquennial Review. By H. Sharp, C.I.E. Vol. I, Rs. 4; Vol. II, Rs. 2.
Progress of Education in India, 1912-17. Seventh Quinquennial Review. By H. Sharp, C.S.I., C.I.E. Vol. I, Rs. 3-10; Vol. II, Rs. 2.
Progress of Education in India, 1917-22. Eighth Quinquennial Review. By J. A. Richey, C.I.E. Vol. I, Rs. 1-6; Vol. II, Rs. 1-4.

Miscellaneous Reports.

- Report on the Conference on the Education of the Domiciled Community in India, July 1912 (1912). Re. 1.
Report on the enquiry to bring Technical Institutions into closer touch and more practical relations with the employers of Labour in India. By Lieutenant-Colonel E. H. deV. Atkinson, R.E., and T. S. Dawson (1912). As. 10.
Papers regarding the Educational Conference, Allahabad, February 1911 (1911). Re. 1-8-0.
The essentials of a University in a Great Centre of Population (1917). As. 6.

Annual Narratives.

- Indian Education in 1913-14. Rs. 1-8-0.
Indian Education in 1914-15. Rs. 2.
Indian Education in 1915-16. As. 8.
Indian Education in 1917-18. As. 12.
Indian Education in 1918-19. Rs. 1-8-0.
Indian Education in 1919-20. Rs. 2-2-0.
Indian Education in 1920-21. Rs. 1-8-0.
Indian Education in 1922-23. As. 8.
Education in India in 1923-24. As. 14.
Education in India in 1924-25. Rs. 1-6.

Occasional Reports.

- No. 1. Rural Schools in the Central Provinces. By H. Sharp (1904). Re. 1.
No. 2. Vernacular Reading Books in the Bombay Presidency. By J. G. Coverton (1906). (*Out of print.*)
No. 3. The Educational System of Japan. By W. H. Sharp (1906). (*Out of print.*)
No. 4. Furlough Studies. By J. Nelson Fraser, H. Sharp and G. W. Kuchler (1906). Rs. 2.
No. 5. Training of Secondary Teachers. By H. R. James, H. Sharp and J. Nelson Fraser (1909). As. 8.
No. 6. Educational Buildings in India (1911). Rs. 5.
No. 7. Methods of School Inspection in England. By H. G. Wyatt (1917). As. 8.
No. 8. The Training of Teachers. By H. S. Duncan and A. H. Mackenzie (1919). As. 8.
No. 9. The Planning and Fitting up of School Laboratories. By W. C. S. A. Rao (1921). Rs. 1-4-0.
No. 10. Adult Education in England and Wales. By J. P. Bulkeley (1922). As. 8.

- No. 11. Rural School Teachers in the United States of America. By H. Wyatt, I.E.S. (1923). As. 8.
 No. 12. Grant-in-aid to Schools in British India. By J. A. Richey, C.I.E. (1923). As. 10.
 No. 13. Bilingualism (with special reference to Bengal). By M. P. Wyatt, I.E.S. (1927). Rs. 2-4-0.
 No. 14. Some Experiments in Indian Education (1927). Rs. 1-2-0.

Bureau of Education Pamphlets.

- No. 1. Drawing and Manual Training in Punjab Schools. By J. Y. Buchan (1918). As. 8.
 No. 2. Education of Factory Children in India (1918). As. 6.
 No. 3. Extracts from the Report of the Committee appointed by the Prime Minister to enquire into the position of Natural Science in the Educational System of Great Britain (1918). As. 4.
 No. 4. Extracts from the Report of the Commissioner of Education, Washington, 1916, regarding Vocational Education (1918). (*Out of print*)
 No. 5. Notes on Vernacular Education in Ceylon. By H. Sharp, C.S.I. C.I.E. (1919). As. 12.
 No. 6. Indian State Scholarships (1919). As. 12.
 No. 7. Facilities for Indian Students in America and Japan. By R. F. Sorabji, M.A., Bar.-at-Law (1920). As. 2.
 No. 8. Libraries in Indian High Schools. By L. T. Watkins, M.A., I.E.S. (1920). As. 4.
 No. 9. State Examinations in Scottish Schools. By A. H. Mackenzie, M.A. (1921). As. 5.
 No. 10. Visual Instruction in Baroda. By D. Swarkar, L.C.E. (1921). One anna.
 No. 11. Education at Jamshedpur. By G. E. Fawcus, M.A., and M. D. Madan, M.L.C. (1921). One anna.
 No. 12. Science Teaching in England. By H. Banister (1922). As. 7.
 No. 13. Question Papers set for the Indian (Imperial) Police Examination (1921). As. 8.
 No. 14. Question Papers set for the Indian (Imperial) Police Examination (1922). As. 8.
 No. 15. Provisional Series of Mental Intelligence Tests for Indian Scholars. By J. A. Richey, C.I.E. (1924). As. 3.
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