ROYAL COMMISSION

ON

INDUSTRIAL TRAINING AND TECHNICAL EDUCATION

REPORT OF THE COMMISSIONERS

Parts I and II

PRINTED BY ORDER OF PARLIAMENT.

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1913

ROYAL COMMISSION ON INDUSTRIAL TRAINING AND TECHNICAL EDUCATION.

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REPORT OF THE COMMISSION ON:

THE ROYAL COMMISSION

CANADA.

GEORGE THE FIFTH, *by the Grace of God, of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas,* KING, *Defender of the Faith, Emperor of India.*

To all to whom these presents shall come, or whom the same may in anywise concern,

GREETING.

WHEREAS in and by an Order of Our Governor General in Council bearing date the first day of June, in the year of Our Lord one thousand nine hundred and ten (a copy of which is hereto annexed), provision has been made for inquiry by Our Commissioners therein and hereinafter named into the needs and present equipment of Our Dominion of Canada respecting industrial training and technical education, and into the systems and methods of technical instruction obtaining in other countries;

NOW KNOW YE that by and with the advice of Our Privy Council for Canada, We do by these presents nominate, constitute and appoint JAMES W. ROBERTSON, C.M.G., LL.D., of the City of Montreal, in the Province of Quebec, Esquire; the Honourable JOHN NEVILLE ARMSTRONG, of North Sydney, in the Province of Nova Scotia, Barrister at Law; the Reverend GEORGE BRYCE, M.A., D.D., LL.D., F.R.S.C., of the City of Winnipeg, in the Province of Manitoba, Minister of the Gospel; GASPARD DE SERRES, of the City of Montreal, in the Province of Quebec, Esquire; GILBERT M. MURRAY, B.A., of the City of Toronto, in the Province of Ontario, Esquire; DAVID FORSYTH, B.A., of Berlin, in the said Province of Ontario, Esquire, and JAMES SIMPSON, of the said City of Toronto, Esquire, to be Our Commissioners to conduct such inquiry.

TO HAVE, hold, exercise and enjoy the said office, place and trust unto the said James W. Robertson, Honourable John Neville Armstrong, George Bryce, Gaspard de Serres, Gilbert M. Murray, David Forsyth, and James Simpson, together with the rights, powers, privileges and emoluments unto the said office, place and trust, of right and by law appertaining during pleasure.

AND WE do further by these presents nominate, constitute and appoint the said James W. Robertson, Chairman of the said Commissioners, and Thomas Bengough, C.S.R., of the said City of Toronto, Secretary and Reporter to the said Commission.

AND WE do hereby under the authority of the Inquiries Act, Part I., Chapter 104 of the Revised Statutes of Canada, 1906, confer upon Our said Commissioners the power of summoning before them any witnesses and of requiring them to give

evidence on oath, or on solemn affirmation if they are persons entitled to affirm in civil matters, and orally or in writing, and to produce such documents and things as Our said Commissioners shall deem requisite to the full investigation of the matters into which they are hereby appointed to examine.

AND WE do hereby require and direct Our said Commissioners to report to Our Minister of Labour the result of their investigation, together with the evidence taken before them, and any opinion they may see fit to express thereon.

IN TESTIMONY whereof We have caused these Our Letters to be made Patent, and the Great Seal of Canada to be hereunto affixed.

Witness: Our Trusty and Well-beloved the Honourable Désiré Girouard, Senior Judge of Our Supreme Court of Canada, and Administrator of the Government of Our Dominion of Canada.

At Our Government House, in Our City of Ottawa, this twenty-second day of June, in the year of Our Lord one thousand nine hundred and ten, and in the first year of Our reign.

By Command,

(Sgd.) THOMAS MULVEY,
Under-Secretary of State.

(Seal)

(Sgd.) GIROUARD,
Administrator.

(Sgd.) A. POWER,
Acting Deputy Minister of Justice, Canada.

P. C. 1133.

CERTIFIED *Copy of a Report of the Committee of the Privy Council, approved by His Excellency the Governor General on the 1st June, 1910.*

On a Memorandum dated May 28, 1910, from the Minister of Labour, stating that industrial efficiency is all important to the development of the Dominion and to the promotion of the home and foreign trade of Canada in competition with other nations and can be best promoted by the adoption in Canada of the most advanced systems and methods of industrial training and technical education.

The Minister further states that the Premiers of the several Provinces of the Dominion have expressed on behalf of the Governments of their respective Provinces, approval of the appointment by the Federal authorities of a Royal Commission on Industrial Training and Technical Education.

The Minister recommends that authority be granted for the appointment of a Royal Commission to inquire into the needs and present equipment of the Dominion as respects industrial training and technical education, and into the systems and methods of technical instruction obtaining in other countries; the said Commission to be appointed pursuant to vote No. 477 of the supplementary estimates for the fiscal period ending March 31, 1910, and to consist of the following gentlemen, viz.:—

James W. Robertson, Esq., C.M.G., LL.D., of Montreal, Que., Chairman.
Hon. John N. Armstrong, Esq., of North Sydney, N.S.
George Bryce, Esq., LL.D., F.R.S.C., of Winnipeg, Man.
M. Gaspard De Serres, of Montreal, Que.
Gilbert M. Murray, Esq., B.A., of Toronto, Ont.
David Forsyth, Esq., M.A., of Berlin, Ont.
James Simpson, Esq., of Toronto, Ont.

The Minister further recommends that the said Commissioners be instructed and empowered to pursue their investigations at such localities as may appear necessary, in the Dominion of Canada, in the United Kingdom of Great Britain and Ireland, the United States of America, France, Germany, and, subject to the approval of the Minister, elsewhere on the continent of Europe; also that the purpose of the Commission shall be that of gathering information, the information when obtained to be carefully compiled, and together with such recommendations as it may seem expedient to the Commission to make, published in a suitable report to be at the disposal of the Provinces and available for general distribution.

The Minister further recommends that the Commissioners be appointed under the provisions of the statute respecting inquiries concerning public matters, and report the results of their investigations together with their recommendations to the Minister of Labour.

The Minister further recommends that Mr. Thomas Bengough, of Toronto, be appointed secretary and reporter to the said Commission.

The Committee submit the same for approval.

(Signed) F. K. BENNETTS,
Asst. Clerk of the Privy Council.

LETTERS FROM PREMIERS OF THE PROVINCES

COPIES OF COMMUNICATIONS INTERCHANGED BETWEEN THE HONOURABLE THE MINISTER OF LABOUR AND THE PREMIERS OF THE SEVERAL PROVINCES OF THE DOMINION.

(From the Minister of Labour to the Premiers of the Several Provinces.)

DEPARTMENT OF LABOUR, CANADA,
OTTAWA, December 13, 1909.

DEAR SIR,—The Dominion government is considering the advisability of appointing a Royal Commission to inquire into the needs and present equipment of the Dominion as respects industrial training and technical education, and into the systems and methods of technical instruction obtaining in other countries, particularly in Great Britain, France, Germany and the United States. It is intended that the commission shall be solely for the purpose of gathering information, the information when obtained to be published in a suitable report to be at the disposal of the provinces and available for general distribution.

I may say that the view of the government is that a commission of the kind suggested might render valuable services to the Dominion as a whole, since it would be in a position to conduct an inquiry on a wider and more comprehensive scale than might be considered desirable or possible in the case of the different provinces, and which if undertaken by the provinces individually must lead inevitably to the duplication and reduplication of energy and expense.

It is recognized, however, that the work of such a commission, to be of national service, should have the hearty endorsation of the governments of the several provinces of the Dominion, and I am, therefore, writing to ask if the appointment by the federal authorities of a commission of the character and scope suggested would meet with the approval of your government, and to inquire, in particular, inasmuch as some doubt has been expressed on the point, whether exception to such a course would be taken on any ground of jurisdiction.

Yours faithfully,
(Signed) W. L. MACKENZIE KING.

NEW BRUNSWICK, PREMIER'S OFFICE.
ST. JOHN, N.B., December 16, 1909.

Hon. W. MACKENZIE KING,
Minister of Labour,
Ottawa, Ont.

DEAR SIR,—I beg to acknowledge receipt of your favour of the 13th instant, informing me that the Dominion Government is considering the advisability of appointing a Royal Commission to inquire into the needs and present equipment of the Dominion as regards industrial training and technical education, and into the system of methods of technical instruction prevailing in other countries, specially in Great Britain, France, Germany and the United States.

I entirely agree with the view of the government to the effect that a commission of this kind might render valuable service to the Dominion as a whole, and I have

no hesitation in saying that the appointment by the federal authorities of a commission of the character and scope suggested in your letter would meet with the approval of my government, and no exception would be taken to such a course on any ground of jurisdiction.

Yours very truly,
(Signed) J. D. HAZEN.

OFFICE OF THE PRIME MINISTER AND PRESIDENT OF THE COUNCIL, ONTARIO,
TORONTO, December 16, 1909.

Hon. W. MACKENZIE KING,
Minister of Labour,
Ottawa, Ont.

DEAR SIR,—I have your letter of the 13th instant.

I understand the object of the proposed commission, to inquire into the needs and present equipment of the Dominion as respects training and technical education and into the system of methods for technical instruction obtaining in other countries, will be solely for the purpose of gathering information. This being so, I see no objection to the creation of the commission, and no exception will be taken to it on the part of the province of Ontario.

Yours very truly,
(Signed) J. P. WHITNEY.

PROVINCE OF MANITOBA, PREMIER'S OFFICE.
WINNIPEG, December 16, 1909.

Hon. W. MACKENZIE KING,
Minister of Labour,
Ottawa, Ont.

SIR,—I have the honour to acknowledge receipt of yours under date of December 13th, regarding the advisability of appointing a Royal Commission to inquire into the industrial training and technical education of Canada.

I appreciate the fact that education is a matter under the constitution entirely vested in the provinces and realize that it is a delicate question on which to give advice such as you solicit.

The matter is an important one and I think, in view of the rapid strides along industrial lines that the Canadian people are making, there is necessity for more attention being given to technical education than what has been the practice or custom in the past.

I shall certainly be pleased to see more interest taken in this matter and our young men better qualified for the opportunities that are offered along industrial lines by having a first-class technical education to qualify them for the responsible and important positions that are awaiting men of that quality.

I have the honour to be, sir,
Your obedient servant,
(Signed) R. P. ROBLIN,
Premier.

PRINCE EDWARD ISLAND, PREMIER'S OFFICE,
CHARLOTTETOWN, December, 18, 1909.

Hon. W. MACKENZIE KING,
Minister of Labour,
Ottawa, Ont.

DEAR SIR,—I beg to acknowledge receipt of your letter of the 13th instant regarding the advisability of the Dominion Government appointing a royal commission to

inquire into the needs and present equipment of the Dominion as respects industrial training and technical education and into the systems and methods of technical education obtaining in other countries, &c., with the request that the matter should be considered and approved of by the government of this province, and whether exception to such a course would be taken on the grounds of jurisdiction.

In reply, I beg to say that your proposal meets with the approval of our government, and I wish to assure you that no exception will be taken upon the grounds of jurisdiction. We believe it would be in the interest of the country at large that such a commission should be appointed, and that all possible information be obtained upon a subject of so much importance.

Yours faithfully,
(Signed) F. L. HASZARD.

EXECUTIVE COUNCIL, SASKATCHEWAN,
REGINA, December 21, 1909.

Hon. W. MACKENZIE KING,
Minister of Labour,
Ottawa, Ont.

DEAR MR. KING,—I have duly received your letter of December 13, on the subject of technical education and the proposal now under consideration by your government for instituting an inquiry by a royal commission and which asks whether the proposal meets with the approval of the Saskatchewan government and whether any exception would be taken by us on the ground of jurisdiction.

I may very readily state that the Saskatchewan government will raise no objection against the proposed inquiry by the Dominion government on any grounds; on the contrary we believe that the federal government is the proper authority to proceed in the matter in the way proposed; that it is a subject which can be more efficiently, economically and effectively dealt with by the central government than by the various provincial governments; and in addition that, inasmuch as industrial training and technical instruction intimately affect trade and commerce, these branches of education ought to be viewed from the national rather than from the provincial standpoint.

Believe me,
Very sincerely yours,
(Signed) WALTER SCOTT.

PREMIER OF NOVA SCOTIA,
HALIFAX, N.S., December 23, 1909.

Hon. W. MACKENZIE KING,
Minister of Labour,
Ottawa, Ont.

DEAR SIR,—I beg to acknowledge the receipt of your letter of the 13th inst., on the subject of the advisability of appointing a royal commission to inquire into the needs of technical education.

I would be delighted to see such a commission appointed by your government; in fact, I have long advocated such a course being taken and you can accept my assurance that such a course, if adopted, will meet with the hearty approbation of the government of Nova Scotia.

Yours truly,
(Signed) G. H. MURRAY.

SESSIONAL PAPER No. 191d

PREMIER'S OFFICE, ALBERTA,
EDMONTON, ALTA., December 28, 1909.

Hon. W. MACKENZIE KING,
Minister of Labour,
Ottawa, Ont.

DEAR SIR,—I am instructed by the Hon. Premier Rutherford to acknowledge receipt of your letter of the 13th in reference to the advisability of the Dominion Government appointing a royal commission to inquire into the needs and present equipment of the Dominion as respects industrial training and technical education.

I am directed by the premier to say that this project mets with the hearty endorsation and approval of his government.

Yours faithfully,
(Signed) M. J. MACLEOD.

(Translation.)
OFFICE OF THE PRIME MINISTER, PROVINCE OF QUEBEC,
QUEBEC, December 30, 1909.

Hon. W. MACKENZIE KING,
Minister of Labour,
Ottawa, Ont.

SIR,—I have submitted to my colleagues of the executive council the letter you were kind enough to write to me on the 13th inst., asking me whether the government of the province of Quebec would approve the appointment by the federal authorities of a commission to make an investigation concerning technical instruction in this country.

We are of the opinion, my colleagues and myself, that anything pertaining to public education—whether the subject be special teaching or general teaching—belongs to the provinces exclusively, and I want to write you so, in order that there may be no misunderstanding on that point. As, on the other hand, you give me the assurance that the federal authorities, in instituting a commission of investigation, would simply do it with a view to help the provincial governments, by having collected information which they would later on put at the disposal of the latter, we see no objection to the appointment of such a commission.

Please accept, sir, the expression of my highest regard,
(Signed) LOMER GOUIN,
Prime Minister.

CABINET DU PREMIER MINISTRE, PROVINCE DE QUÉBEC,
QUÉBEC, 30 décembre 1910.

L'honorable M. W. L. MACKENZIE KING,
Ministre du Travail,
Ottawa.

MONSIEUR LE MINISTRE,—J'ai soumis à mes collègues du conseil exécutif la lettre que vous avez bien voulu m'adresser le treize de ce mois pour demander si le gouvernement de la province de Québec approuverait la nomination, par les autorités fédérales, d'une commission chargée de faire enquête sur l'enseignement technique en ce pays.

Nous sommes d'opinion, mes collègues et moi, que tout ce qui touche à l'instruction publique, qu'il s'agisse d'enseignement spécial ou d'enseignement général est du ressort exclusif des provinces, et je tiens à vous l'écrire afin qu'il n'ait pas de malentendu à ce sujet. D'autre part, comme vous me donnez l'assurance que les autorités fédérales, en instituant une commission d'enquête, n'auraient tout simplement en vue que de prêter leur concours aux gouvernements provinciaux en faisant recueillir des

renseignements qu'elles mettraient ensuite à la disposition de ces derniers, nous ne voyons pas d'objection à la nomination d'une telle commission.

Veuillez agréer, Monsieur le Ministre, l'expression de mes sentiments bien distingués.

Le premier ministre,
(Signé) LOMER GOUIN.

CLERK EXECUTIVE COUNCIL,

GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA, PREMIER'S OFFICE,
VICTORIA, January 15, 1910.

Hon. W. MACKENZIE KING,
Minister of Labour,
Ottawa, Ont.

DEAR SIR,—I beg to confirm my telegram to you of January 10th as follows:—

Owing to absence of Minister of Education with whom I wished to confer, regret being unable to reply sooner to your favour regarding technical education. He has now returned and an answer will be sent you promptly.

Having since then had an opportunity of consulting with the Minister of Education, I beg to state that the appointment of a commission by the Dominion to inquire into the subject of industrial training and technical instruction meets with the approval of this government.

It is not the intention of the government of this province to take exception to the course you propose on any grounds of jurisdiction.

I might add that this government will gladly afford any facilities in its power to assist in carrying out the object in view.

Yours very truly,
(Signed) RICHARD McBRIDE.

CONTENTS OF PART I.

REPORT OF THE COMMISSIONERS

The Honourable T. W. CROTHERS, K.C., M.P.
Minister of Labour.

SIR,—We, the Commissioners appointed to inquire into the needs and present equipment of the Dominion of Canada respecting Industrial Training and Technical Education, and into the systems and methods of Technical Instruction obtaining in other countries, most respectfully report to you as follows:—

The Report of the Committee of the Privy Council by which provision was made for the inquiry recommends that the "Commissioners be instructed and empowered "to pursue their investigations at such localities as may appear necessary, in the "Dominion of Canada, in the United Kingdom of Great Britain and Ireland, the "United States of America, France, Germany, and, subject to the approval of the "Minister, elsewhere on the Continent of Europe; also that the purpose of the Com-"mission shall be that of gathering information, the information when obtained to be "carefully compiled, and together with such recommendations as it may seem expedient "to the Commission to make, published in a suitable report to be at the disposal of "the Provinces and available for general distribution."

The Report of the Committee of the Privy Council also states "that industrial "efficiency is all-important to the development of the Dominion and to the promotion "of the home and foreign trade of Canada in competition with other nations, and can "be best promoted by the adoption in Canada of the most advanced systems and "methods of Industrial Training and Technical Education."

We think it will be appropriate that we should state concisely what we conceive to be the duties imposed upon us by the terms of the Royal Commission.

I. We are to gather information, by inquiry into the needs and present equipment of Canada respecting Industrial Training and Technical Education.

II. We are to make investigation of the systems and methods of Technical Instruction obtaining in other countries.

III. We are to carefully compile the information obtained.

IV. We are to express any opinion that we may see fit upon the results of our inquiries and investigations.

V. We are to make such recommendations as it may seem expedient to us to make.

VI. We are to report on these matters to the Minister of Labour; all to the end that industrial efficiency may prevail for the development of the Dominion and for the promotion of the home and foreign trade of Canada in competition with other nations.

In pursuing our inquiry in Canada, we had the advantage of carrying on our work with the fullest concurrence and co-operation of all the Provincial Governments.

The Workers and Industries.

The inquiries included a survey of the needs of the workers in,—

1. Manufacturing and other industries such as: building construction; boots and shoes; carriages and wagons; chemicals; clothing; electrical; food stuffs; furniture; leather and rubber; metals, including rolling mills, foundries, machine shops, and machinery in general; printing and publishing; textiles and clothing; wood, and wooden wares; other industries and trades.

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

3. Commerce and transportation.

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

We obtained much information regarding the general conditions of industry and labour in Canada, having regard to, (*a*) the growth of businesses; (*b*) where products are marketed; (*c*) where raw materials are obtained; (*d*) supply of labour, skilled and unskilled and apprentices; (*e*) child labour.

Many witnesses, some of whom had attained eminent and important places in industrial, commercial and agricultural work, gave us valuable information regarding their personal training and education. They freely expressed opinions as to its suitability, or wherein and how it might have been different with benefit to themselves and advantage to the industries and community.

The conditions under which the workers earn their wages and live out their daily lives as citizens are important factors in industrial efficiency, which, to a very considerable extent, is based upon and arises from the way in which the workers spend their leisure hours. Efficiency depends also on whether they work and live under wholesome conditions, or under conditions which depress their physical vitality and leave them less vigorous as workers, less satisfied as citizens and less useful as members of the race.

The Present Equipment.

The inquiry into the present equipment of the Dominion respecting industrial training and technical education was directed to ascertain the facts in relation thereto at or in connection with:—

1. Universities and colleges.

2. Technical schools.

3. Trade schools.

4. Agricultural and extension work.

5. Normal schools and training of teachers.

6. High schools, academies and collegiate institutes, (*a*) elementary science; (*b*) rural science; (*c*) manual training; (*d*) domestic science.

7. Elementary schools, (*a*) manual training; (*b*) domestic science; (*c*) rural science, including school gardens and nature study.

8. Evening schools (*a*) elementary; (*b*) technical.
9. Correspondence courses.
10. Apprentice schools.
11. Organized play and playgrounds.
12. Physical culture and drill.

Attention was given also to the need of and the provision existing for research work.

An interim statement, which contained a summary of our work in Canada, was submitted on March 28, 1911. A copy of it is annexed hereto.

The information gathered in that part of our inquiry was definitely useful in preparing for the work that lay before us in other countries.

The full report of our inquiry into the needs and present equipment of the Dominion is submitted herewith as Part IV of this Report.

Cordiality of Reception in Other Countries.

After completing the investigation in Canada the Commission proceeded to England, Scotland, Ireland, Denmark, France, Germany, Switzerland and the United States to inquire into the systems and methods of technical instruction in those countries.

In the United Kingdom the Rt. Hon. Walter Runciman, President of the Board of Education, Lord Pentland, Secretary of State for Scotland, and the Hon. Thomas Russell, Vice-president of the Department of Agriculture and Technical Education for Ireland, met us and extended every official courtesy, with offers of assistance from the higher officials in their departments. The Commission was greatly indebted to those officials for information as to where and how we could best see and learn what we were required to inquire into.

Among others who rendered us most friendly and valuable help in the United Kingdom, were Sir Robert Morant, Secretary of the Board of Education, and many of the officers of the department, particularly Dr. Frank Heath and Mr. A. E. Twentyman, Librarian. Sir John Struthers, head of the Scottish Education Department, favoured the Commission with a conference on the progress of the efforts for industrial and technical education in Scotland. Mr. Robert Blair, chief Education Officer for the London County Council, gave the Commission valuable and extensive assistance. He arranged for the Commission to be accompanied during its visits to technical institutions in London by inspectors who were fully conversant with what was being attempted. Mr. T. P. Gill, Secretary of the Department of Agriculture and Technical Instruction for Ireland, and other officers of the department, accompanied the Commission during its journeys in Ireland.

By the kindness of Lord Strathcona, the Rt. Hon. Lewis Harcourt, Secretary of State for the Colonies, received us and arranged through the Foreign Office for letters to the Ambassadors and other representatives of the British Government in the countries on the continent. Through them, permission was obtained from the State Education Authorities to visit schools and other institutions. The British representatives at the capitals of foreign countries extended not merely the official and routine formality of introductions, but personal attention in assisting the Commission to

meet men and see institutions with full opportunity to learn from them.

When the Commission returned to the United States it was received at Washington by the Hon. James Wilson, the veteran Secretary of Agriculture, under whose administration great extensions of government work for the improvement of agriculture have been made.

The Commission was fortunate in the conditions under which it pursued its investigations. We were received in all countries and places with the utmost cordiality by the heads of departments, members of education authorities, principals of institutions and teachers, who were frankly communicative. We were not regarded as troublesome travellers to be got rid of as quickly as possible. After official permission to visit a school or other institution had been obtained our difficulty was not to gain admission but rather to tear ourselves away within the time which could be allotted to it. There was so much to see and the director or other teacher had so much to show and tell that the hours and days went all too fast.

Increase of Interest in Education.

We are constrained to record our tribute to the character of the men and women who are responsible for the organization and administration of education and of the head-masters and other teachers who carry on the class work. Courtesy, enthusiasm and ability of a high order were to the front. In them the profession of teaching is being recognized more and more as one of honour and social importance.

New buildings and equipment for technical instruction were found everywhere in evidence. The awakening of interest in this field of education in England has brought out much rivalry between different cities as to which should have the finest institutions for its young people. Nor are the attention and interest mainly devoted to the material equipment; the effort is focussed on the boy or girl, particularly between the ages of 14 and 18.

Throughout the countries visited, Continuation Classes, Technical Classes and Art Classes have become prominent features of the educational work on behalf of most of the children whose attendance at the ordinary school ends with their 14th year. For example, in the city of Halifax, England, 60 per cent of all the boys and girls who leave the Elementary Day Schools continue their education at Evening Vocational Classes and Technical Day Courses. Many other cities in England and Scotland secure attendance almost equal to that attained at Halifax. In the city of Manchester it is claimed that 3·9 per cent of the whole population of the city attend some form of Continuation and Vocational Schools while between the ages of 14 and 18.

In four-fifths of the States of Germany, for the whole State or in some States for only cities of over 10,000 population, attendance at continuation classes of some sort is compulsory between 14 and 17 years of age.

Comparing a German city with one in England or Canada one is struck by the absence from the streets in the evening of the youth of both sexes standing on street corners or wandering aimlessly about. The Vocational Classes for all sorts of workers between the ages of 14 and 17 have evidently given the people generally a liking for and satisfaction from attending classes after the ordinary elementary school days

are over. We were told that when compulsory attendance was first required by Government action there was a good deal of hostility on the part of some employers and on the part of some of the youths themselves. After two years of experience of the classes most of the opposition disappears. Now compulsory participation in some form of educational work during the adolescent age is accepted as part of the country's civilization.

An example: In visiting an apprentices' class in one of the Continuation Schools in Switzerland we asked the lads, who had attended for two years under the compulsory regulations, to vote as to whether they would attend without the compulsory requirement. Out of a class of 31, thirty voted that they would attend voluntarily and only one did not vote. The teachers' opinion was that not more than one-third of those in that particular class would have begun to attend the Continuation School without the compulsory requirement.

Most Advanced Least Satisfied.

Notwithstanding the manifold evidences of progress in this new field of educational effort in England, Scotland and Ireland, one seldom hears any laudation by the people themselves of what they are doing. The refrain of nearly every comment on the educational work in England, by an Englishman, is lamentation at its backwardness compared with that of Germany. The Commission could not fully share that feeling after being over Germany and other European countries.

There was not in Germany, any more than in England, any evidence of brag or self-satisfaction. Capable men explained to the Commission the aims of the several systems and methods which were in use, and pointed out what they regarded as the weaknesses and failures of past efforts, while they dilated upon their hopes and desires for the future. Perhaps in Germany, more than in any other country, we were impressed by the apparent solidarity of the feeling of citizenship and by the fact that education did not seem to be planned or cherished as a means whereby the individual got ahead of other individuals. Education appeared to us to be regarded as a great national service whereby all the individuals are being trained towards ability for their respective occupations in the interest of the State. The personal power and wellbeing of the units of the community are looked after for the sake of the State.

'Conversations' with Leaders in Education.

In all the countries visited by the Commission, men and women who are recognized as great leaders in educational movements discussed with us, with frankness and fulness, not only the systems and methods which at present prevail in their countries, but also the problems which face the different central and local authorities, and the plans and efforts which are being made to meet existing conditions. A feature of the Report that will be of uncommon interest and value is the information obtained and reported on as "Information obtained in 'Conversation' with" these men and women. They had knowledge and ability to express clear opinions which had been ripened out of their endeavours to meet the circumstances and discharge the duties in connection with their own work in the several countries in which they labour.

COMPILATION OF THE INFORMATION.

In compiling the information obtained in other countries, we have been guided to a large extent by what we learnt as to the needs of Canadian workers and Canadian occupations and industries.

An effort has been made, (1) to arrange the information from each country in such a way as to show the relation of Industrial Training and Technical Education to the general system or systems of education in that country, and (2) to report with some fulness of detail upon the systems and methods, the institutions, courses and classes which seem most likely to furnish information that will be useful to Canada.

The result of that part of our inquiry is submitted in Part III of our Report.

The information and considerations on which the opinions and recommendations of the Commission are based are set forth at length in Parts II., III. and IV. of the Report.

The subjects dealt with in the several chapters of Part II. are as follows:—

I. Elementary education in relation to industrial training and technical education.

II. Secondary and higher education in relation to industrial training and technical education.

III. Manual training, nature study, school gardening, household science, vocational education, industrial training and technical education.

IV. Industrial training and technical education in relation to national problems.

V. Industrial training and technical education in relation to the needs, duties and rights of individuals.

VI. Organization and administration of industrial training and technical education for Canada.

Section (1) The practice in different countries.
" (2) The correlation of courses of study to occupations.
" (3) Influence of text-books and examinations.
" (4) Methods of instruction.
" (5) Qualifications and training of industrial and technical teachers.
" (6) Scholarships and fees.
" (7) Correspondence-study courses and travelling instructors.
" (8) Some recommendations regarding organization and administration for Canada.

VII. A Dominion Development Policy, with recommendations of provisions,—
(1) For those who are to continue at school in urban communities;
(2) For those who have gone to work;
(3) For rural communities.

VIII. Industrial training and technical education in relation to apprentices, foremen and leaders.

IX. Education for rural communities.

X. Schools for housekeeping occupations.

XI. Industrial research.

XII. Vocational guidance.

XIII. Wider use of the school plant.

XIV. Compulsory attendance at Continuation Classes after fourteen.

PART I

We think it appropriate and convenient to submit at this place a statement of the principal opinions which the Commission deems it fit to express, and of the recommendations which the Commission makes. We do that by assembling extracts from the aforementioned chapters of Part II. and Chapter IX. of Part III.

EXTRACTS FROM CHAPTER I OF PART II.

ELEMENTARY EDUCATION IN RELATION TO INDUSTRIAL TRAINING AND TECHNICAL EDUCATION.

At many of the places visited the local committee or other representative body, to whom the Commission was indebted for opportunities to learn what was being done in industrial training and technical education, first guided the Commission to an elementary school to show the character of the hand work which was provided for. That was the case more generally in Europe than in Canada. Out of that experience grew the conviction that a report on industrial training and technical education would not represent fairly what was being done unless it included at least a brief statement concerning the pre-vocational or trade-preparatory parts of elementary education.

Some Conclusions.

From the testimony received it appears highly desirable in the interests of vocational efficiency,—

(1) That all children to the age of 14 years should receive the benefits of elementary general education up to at least the standards provided by the school system of the place or province where they live;

(2) That the experiences of the school should tend more directly towards the inculcation and conservation of a love of productive, constructive and conserving labour;

(3) That, after 12 years of age, for the children whose parents expect or desire them to follow manual occupations, the content of the courses, the methods of instruction and the experience from work undertaken at school should have as close relation as practicable to the productive, constructive and conserving occupations to be followed after the children leave school.

The Commission is further of opinion,—

(4) That benefits from such pre-vocational education would accrue (a) from the interest awakened in manual occupations; (b) from the discovery through their

experiences at school to the pupils themselves, and to the teachers and the parents, of the bent of their abilities and aptitudes; and (c) from the taste and preference thus developed leading the children to follow skilled occupations for which they are suited;

(5) That further advantage would result because the interest which this form of education would arouse in the children would dispose them to desire further education after they had begun to work and cause them to keep in touch with educational effort in some form;

(6) That the time and attention devoted to pre-vocational or trade-preparatory work in no way detracts from or hinders progress in general education of a cultural sort.

Important Considerations.

The kind and amount of industrial training and technical education which an individual is able to take up and profit by is determined to a large extent by the previous general education. General education is here taken to mean the formal studies in reading, writing, drawing and arithmetic, together with the experiences got from association with others in work, in play and in social intercourse, which have developed the powers of mind and body and have furnished the knowledge possessed by the individual.

Those who have this elementary general education in hand will best provide for subsequent vocational efficiency by ever bearing in mind the following propositions:—

I. It is important that health should be protected and preserved.

II. It is important that the harmonious growth of the powers of body, mind and spirit should be fostered.

III. It is important that the senses, the avenues of impressions whereby knowledge is acquired in the first instance, should be trained.

IV. It is important that ability and desire to work and play with enjoyment, intelligence, skill and energy should be developed.

V. It is important that good habits should be formed, particularly habits of obedience, courtesy, diligence and thoroughness.

VI. It is important that proper standards of conduct and character should be maintained and that high ideals should be followed.

The schools of Canada accomplish much towards these ends, but in order that their pupils may be prepared to profit to the fullest extent by industrial training and technical education, the evidence which has been received by the Commission requires us to submit the following suggestions regarding general elementary education, for its improvement, extension, enlargement and enrichment.

Provision should be made for,—

1. Training of the senses and muscles.
2. More and better drawing.
3. More physical culture.
4. Nature study and experimental science.
5. Pre-vocational work.
6. More and better singing.
7. Organized and supervised play and games.

Relief of the Time-table.

It is to be remembered that these suggestions do not imply the introduction of any new subjects into the course of study. The relief of the time-table from the pressure of a multiplicity of separate subjects as such is an evident necessity. The work of the school day should gradually be arranged less and less on subjects as such and more and more on occupations, projects and interests, each of which would form a centre for the correlated study of several subjects such as reading, composition, number work, writing and drawing.

These branches of education, which are here recommended, are reported upon as observed in schools in other countries. The branch of Manual Training is mentioned here as illustrative of the influence of all the others.

Manual Training.*

It is now generally admitted that Manual Training work should have a recognized place in the course of study from the Kindergarten until about the 11th or 12th year of age, for cultural or self-realization purposes. After that the 'Manual Training' (the term is used to represent all the others) might be directed more definitely towards discovering aptitudes and tastes and developing skill and ability for some occupation.

The proportion of time devoted to work involving manual activity varies a great deal. No one rule can be adopted with advantage in all schools for all classes of pupils, but the tendency is towards not less than a quarter of the time in school from the Kindergarten up to the age of 12 being devoted to some form of handwork, in correlation with the other studies and subjects.

The arguments which have been used in favour of Manual Training have some resemblance to those which are urged on behalf of Industrial Education. They both plead for a fuller recognition of motive, as it appeals to the pupil in school work, and a better adaptation of the course of study to the large majority of the pupils in the hope of accomplishing thereby the reduction of the numbers who leave school before the completion of the elementary courses and the development of ability for industrial life.

Manual Training, or 'Hand and Eye' training has particular value in the biological function of education. It is a means of developing the sense organs and of training faculties and powers to meet the things and forces of the outer world with intelligent discriminations. Whether this results in an increase of brain power is a question elusive of proof. The evidence, however, is clear that it adds to the happiness of the pupil, causes the knowledge which he acquires to be retained and available for use, and quickens the rate of his progress in other school work.

Further Conclusions.

The Commission is of the opinion,—

(1) That education should have regard to the growth of the powers of the body, mind and spirit concurrently, and that it should have regard to the preparation of

* From chapter III.

the pupil for later life as an individual, as a working earner, as a citizen and as a member of the race;

(2) That education should be provided of a kind suitable to meet the needs arising from the changes in the nature and methods of occupations, the manner of living and the organization of society;

(3) That existing institutions, in so far as necessary, should be modified or altered and have additions made to the courses of study or kinds of work taken up;

(4) That the preparation of teachers for the new and different kind or kinds of education is a first necessity and duty in order that they may be qualified to do the new work successfully;

(5) That such improvement, extension, enlargement and enrichment as have been indicated would let the school experiences become a reasonable preparation for beginning working life and entering upon Industrial Training and Technical Education; and that without such preparation no system of Industrial Training and Technical Education can, to any considerable extent, be permanently successful.

Some Recommendations.

The Commission is of opinion that the teaching of drawing, manual training, nature study, experimental science and pre-vocational work including domestic or household science in elementary schools, is of great importance and value and should be provided for generally.

Having regard to the cost of carrying on these branches in the elementary schools, until teachers are available who themselves have been taught them during their school days, and bearing in mind that such school work was not contemplated as part of public education at the time of Confederation when the Provinces accepted the responsibility of legislating for the maintenance and control of education within their borders, the Commission ventures to recommend that a fund be created from which payments would be made to the provincial governments during a period of ten years.

The Commission suggests that such a fund should receive not less than $350,000 a year for ten years from a Dominion parliamentary grant; and that it should be divided into nine portions, in proportion to the population in each of the nine provinces as determined by the latest census, and allotted to each province accordingly.

The Commission further suggests that there should be paid to each province from said fund (if and when the amount to its credit in said fund is sufficient therefor) an amount not exceeding 75 per cent of the amount which such province had paid, during the immediately preceding fiscal year, for the promotion and support of drawing, manual training, nature study, experimental science, and pre-vocational work, including domestic or household science, but not including the provision of buildings.

It would appear to the Commission that a certificate by the chief education officer of any province, setting forth in detail the places, the work done and the sums paid by the province in furtherance of these branches, should be regarded as satisfactory evidence of the amount earned by said province.

Any portion of the fund allotted to a province which may remain unpaid or unearned at the expiration of any fiscal year should be carried forward and remain in the fund for said province until earned.

EXTRACTS FROM CHAPTER II OF PART II.

SECONDARY AND HIGHER EDUCATION IN RELATION TO INDUSTRIAL TRAINING AND TECHNICAL EDUCATION.

Secondary Schools.

A common criticism levelled against secondary education in Canada has been that the secondary school has tended to give the youths a distaste for manual labour and has dulled any inclination towards skilled handwork from want of opportunity to develop ability in that direction; also that it has been organized and conducted chiefly to prepare for the colleges and learned professions and does not give good preparatory training for the life and occupations of those who have to leave school at about 16 or 18 years of age.

Another criticism has arisen from the fact that the kind of education offered in the secondary schools of Canada has not been such as to appeal to the large number of boys and girls who are rather slow, or have little ability or interest, in exclusively book or theoretical studies or subjects, but who have intellectual interest and power in productive and constructive work. Experience has indicated that many youths, who are negligent, uninterested and unsuccessful in book studies and purely theoretical subjects are attentive, diligent, interested and successful in construction and expression work calling for skill of hand, closeness of observation, exercise of judgment, initiative and co-operation with their fellows.

Secondary education in Canada has been almost entirely of a sort which occupies the whole time of those receiving it. In other countries secondary or supplementary education is carried on while the young people are actively engaged in gainful occupations and following employment or learning a trade which will serve them in mature years. For example in the co-operative industrial schools of the United States, young men from 15 years of age upward attend high school and workshops, where they are employed, week about. In the continuation schools of Germany the young people engaged in gainful occupations attend continuation schools from four to ten hours per week. In several states in Germany the attendance at the school must be over before seven o'clock in the evening. Frequently the employers arrange to let the young workers free to attend the school in the morning or during the forenoon when they are fresh and most able to profit by the opportunities they have.

Industrial Training and Technical Education of College Grade.

The Commission found itself unable to make a complete study of technical education of university and college grade. It directed its inquiries in this respect almost entirely to a study of the effects of the highest forms of technical education upon progress in industry and trade, and did not attempt a thorough examination of the organization of institutions or courses of study. In France, Germany, Switzerland and the United States, the power and influence of technical education of the highest types appeared to be greater than in the United Kingdom or in Canada. In England

the opinion most frequently heard—and it was earnestly urged—was to the effect that hereafter the industries must somehow secure the services of more men of the highest scientific attainments with thorough technical training, or her manufacturers and merchants will not be able to hold their own against foreign competition.

The faculties of applied science of colleges and universities in Canada have the reputation of preparing engineers for professional work in a thorough and satisfactory manner. From what was learned abroad the opinion appears to prevail that students in technical colleges, at some time before they graduate, should have obtained experience with materials, tools, machines and products for the purpose of giving them a clear understanding of principles and a correct knowledge of the conditions of production and construction which prevail in shops and factories. It is not important that they should have enough practice to develop either skill or speed as workmen in manipulative labour.

Some Conclusions.

The Commission is of opinion that:—

(1) Secondary Vocational Education should be provided for those persons who are to follow manual industrial occupations, producing occupations such as agriculture, conserving occupations such as housekeeping, and commercial and business occupations.

(2) Such persons should have opportunities for acquiring secondary education which would be as fully advantageous to them in their vocations as the secondary education provided in the general school system has been advantageous to those who enter the learned professions, other professional occupations, or the leisure class.

(3) Secondary education for those who have gone to work should be provided in day and evening classes in close correlation with their occupations while they are still learners, as apprentices or otherwise, and also when they have become skilled workmen or journeymen, or have come to fill positions as foremen, superintendents or managers.

(4) Technical education for the preparation of technical engineers, and other persons being trained for professional work of a grade and rank similar to theirs, would be improved by further extensions in the directions indicated by the practice in Germany and at the University of Cincinnati. This applies particularly to the education of such men as might become principals and teachers in the middle technical schools and technical high schools in Canada. The Commission commends the consideration of this matter to the authorities of the technical colleges in the belief that they alone are qualified to render a final decision in regard to it.

The universities and colleges are providing technical courses to meet the demands from an increasing number of students. The rapid growth and development of the country, and the further application of science and scientific methods to all forms of production, construction, conservation and administration, will call for still larger numbers of graduates. In consequence the universities and colleges are sure to require increased financial support. The Commission is of opinion that this should be provided from some source without causing the fees required from students to be so high as to exclude suitable young persons who may seek the highest grade of technical instruction.

EXTRACTS FROM CHAPTER IV OF PART II.

INDUSTRIAL TRAINING AND TECHNICAL EDUCATION IN RELATION TO NATIONAL PROBLEMS.

The National Heritage.

Self-governing peoples grow ever stronger when they are animated by some dominant purpose to maintain their ideals by further achievement. The reputation of Canada is a matter of concern; its character is of much greater consequence. Its place of honour, influence and power among the nations is worth caring for; the kinds of training and instruction which determine the abilities and qualifications of its young people for working and living are of supreme importance.

Towards the end of the last century Canadians began to find themselves as a united nation of agricultural, industrial, fishing, mining, commercial and professional workers and home-makers.

Never before in the history of the race did seven millions of people have such a heritage come into their free possession. If the area of Europe is eleven, that of Canada is twelve, and much of it destined to be the setting of good homes of a robust people. Where else can be found a better place for homes for a people moved by the dominant purpose to win their way up by the strength of intelligent labour, justice and good-will, and to bring up with themselves all who may come to them?

The best that Canada has inherited is the quality of her life. The more immediate ancestors of the present generation loved liberty, cherished justice, and prized intelligence. These they had won by courage, by struggle, by patience and by privation. They left them to be improved by education.

Occupations Call for Constructive, Conquering Qualities.

Occupation conserves the best that humanity has achieved. Canada is happy in occupations that minister to greatness in character. A new country needs the constructive and conquering qualities as well as the sedentary, absorbing, remembering capacities.

While the industrial development of Canada has been going on in a recognized and prodigious way in the large cities, there has been a concurrent development in the smaller places. In these latter particularly, the interests of the surrounding rural population, through its surplus of workers and through business and social intercourse, are tied up closely with the industrial progress of the towns.

Better Training Needed.

Adequate training for the young, and appropriate instruction, under opportunities suited to the conditions, are needed and wanted everywhere for all industrial workers and industries.

Making homes is much more than building houses and providing furniture, food, clothing and things. It is creating a temple, not made with hands, as a place of culture for the best in human life.

Teaching and training the young is much more than instructing them in the arts of reading, writing and reckoning—those flexible, useful tools of the intellect. Much of the time of the school has been consumed in these tasks; but one already sees in Canada the dawn of a happier day when those arts will be acquired joyfully by directed educational play instead of painfully, reluctantly and with difficulty as separate school subjects. Then a larger portion of the time and efforts of the teachers may be devoted to caring for the health and the habits and the standards of the pupils while watching and directing the development of their powers of body, mind and spirit.

Canada is Behind the Times.

Until recently Canada was an interested and debating spectator of the movements for industrial efficiency. The training of young workers to deftness in manipulation and technique, and to an understanding of the principles and sciences which lie at the base of all trades and industries, was not provided for in the courses. When manufactured goods were wanted in increasing quantities and variety, and towns and cities were growing by leaps and bounds, it was discovered that there had been practically no organization of means for preparing the hundreds of thousands of young people to become the best qualified artisans, farmers and housekeepers in the world. The country's growing wealth was ample for the cost; but the educational work was becoming bookish in the extreme, and, worse than that, was developing into school systems that had few points of contact with or relation to industrial, agricultural, or housekeeping life. When boys and girls grew restless at prolonged book work, few schools provided anything in the way of tools, materials or time for 'fads,' as manual training, nature study, school gardens and housekeeping subjects were called. The deep of the ages in human life was calling to their complex instincts and aptitudes, but the schools turned a dull ear, and most of the boys left as soon as they could.

The Way of National Progress.

Further advances are to be looked for through such means as these: First, those which lead young people to the achievement of joy through the processes of labour as distinguished from its wages or other rewards. Secondly, those which produce the pleasure of working together for some end believed to be good for all. Pupils and students may work themselves into industrial and social efficiency, by co-operating in productive labour, as well as play themselves into ability by means of team games. Both together are better than twice as much of either alone. Thirdly, those which yield gladness through creative, constructive, conserving work whereby each individual strives to give expression to his own concepts of utility and beauty in concrete things as well as in words and other symbols.

All life is an unceasing struggle. The point is to choose the right objects and means. In the past Canada has been winning all along the line, with an occasional

setback. Her warfare is ever against ignorance, helplessness, poverty, disease, vice and ill-wills. Industrial and technical education is to train individuals for that warfare. Its endeavours are most successful when the experiences, which it provides for each individual, are in themselves a vital part of the hard campaign. It must ever vary its strategy and tactics and weapons, as the field of operations is moved forward. The need of the times is education to qualify all to achieve satisfaction through labour and service and good-will.

General Education Crowned by Industrial Training.

Industrial training and technical education serve to supplement general education and give to it a finishing course of experiences with special reference to the requirements of workers in industries, agriculture, housekeeping, commerce, transportation, mining and other occupations. They are means whereby the individual, the family, the community and the nation seek to develop the powers of the individuals for work, to prepare themselves to meet the conditions of working life, to alter these conditions in directions which seem desirable, and to conserve what is esteemed to be worth while out of the past in knowledge, customs, methods, institutions, standards and ideals.

The State and the Individual.

The interest of the State, as such, is that the individuals who compose it should be healthy, intelligent, capable, animated by goodwill towards their fellows and that they should be able and willing to fill their places in the community, as citizens discharging their duties and preserving their rights, as indviduals in the economy of life, and as earners contributing to the material prosperity of the State.

The problem of finding an occupation suitable to the personality of the individual, and of preparing the individual to follow it with satisfaction and with benefit to the community, is ever present and becoming more complex and difficult.

So far as the individual is concerned, education is required for the preservation of health, the development of powers, the increase of knowledge, the maintenance of justice and liberty, and the strengthening of desire and will-energy to give effect in everyday life to the concepts of duty, truth, beauty and goodness.

The National Depends on the Individual.

Every national problem can be dealt with to the greatest advantage by intelligent and capable men and women. Intelligence and ability are fruits of education limited in extent according to the measure of inherited capacity, personal diligence and accessibility of opportunities. Training and instruction in some form are the chief means for conserving and developing the powers, capacities and characters of individuals.

As the powers and influence of individuals in matters of government—local, provincial and Dominion—become greater it becomes correspondingly necessary that each and all should have the kind and amount of education which will enable and cause them to live and work better because of it than if they had not had it.

Some Conclusions.

In consequence it appears to the Commission that Industrial Training and Technical Education should be provided:—

(1) In order that the interest of boys and girls in their own training and instruction might be increased and an understanding of their relation to working and living might be clearer to themselves from twelve years of age onwards.

(2) In order that the period of authoritative supervision, and of organized education to the extent of at least half a day per week, should be prolonged during adolescence, and that boys and girls should themselves desire those advantages until the age of seventeen or eighteen years.

(3) In order that all might become qualified to the full extent of their capacities to fill their places as individuals, as contributing earners, as citizens and as members of the race.

(4) In order that the nation as a whole might be more intelligent, capable and prosperous, and more united in its efforts to meet national problems and solve them wisely as they come.

The Commission holds that the large inclusive aim of Canada is that her people shall be great in character and ability, even great enough to match the matchless heritage that has come to her in blood and ideals, in possessions and institutions, in opportunities and obligations. The greatness of her composite races will come through the perfecting of the finest of all fine arts—the fine art of living happily and prosperously together *while working with intelligent skill and unfaltering will* for ends believed to be for the common good. Industrial Training and Technical Education are among the means to that end.

EXTRACTS FROM CHAPTER V OF PART II.

INDUSTRIAL TRAINING AND TECHNICAL EDUCATION IN RELATION TO THE NEEDS, DUTIES AND RIGHTS OF INDIVIDUALS.

The Unit in Civilization.

Under modern conditions the term civilization is commonly used as a bland, omnibus word to indicate the forms of organization and effort employed for the achievement of the main aims and ideals which animate and dominate a people for the time being. At present the objects are obstrusively commercial and industrial. The forms themselves are ever changing, while the inner force which uses them persists. The inner power of the people expresses itself progressively in human qualities and social and economic conditions.

In the struggle of modern industry to produce goods cheaply in order to make profits, three elements are of importance—raw materials, labour-saving machinery and organization. These three receive so much attention that sometimes the conditions of and results upon the individual workers are entirely lost sight of. The most im-

portant asset in any State is the value of the individual citizens themselves. While the conservation of natural resources and the promotion of industries are important and the development of trade has possibilities of benefit, the conservation of life and ability in the individual workers is supreme. Next to that comes the provision for conservation of opportunity for satisfactory employment.

More Service Required from the School.

The evolution of the school has been as notable as that of any other institution. The elementary school, which came in first to supplement the training and instruction which the boy and girl received in helping their parents, has been left to accomplish nearly the whole task from six to fourteen. The demand is everywhere insistent that the schools shall meet the larger duties which are now thrown upon them by the changed social and industrial conditions.

Personal Welfare and State Prosperity.

It becomes more and more evident that education must have a vocational aim and result if the industrial activities of the people are to be of benefit to all the individuals and to the State which they constitute. It must be kept in mind that the first and chief object of industrial training and technical education must be the personal welfare of the individuals who are to participate in it; second, the prosperity and strength of the State; and, third, the advancement and improvement of industry as such, and that only as consistent with and subordinate to the other two.

In the organization of this form of education, the attempt must be made to meet all the needs of all the people, with care that none shall be debased by the occupations for which they are prepared, and none shall be debarred from earning satisfaction, as well as satisfactory wages, from labour.

Some Conclusions.

In the opinion of the Commission it is important:—

(1) That workers in factories whose main task is to attend or operate machines should receive instruction and training which would develop some all-round power and skill, widen their knowledge and increase their interests beyond the routine of automatic operations. By such means industrial activity would minister to the development of human life instead of subordinating it to the gain of profits without concern for the well-being and happiness of the individual workers.

(2) That such training should be provided as will conserve and develop occupations wherein skilled handicraft is required,—this for the sake of the workers as well as for the quality and character of products of certain kinds.

(3) That the interests of the rural population should be conserved and promoted as far as possible by Industrial Training and Technical Education suitable to the needs of its workers.

(4) That the needs of girls and women for organized instruction and training in the elements of the sciences and arts, which underlie successful housekeeping and

home-making under modern industrial conditions, should be recognized and provided for. The housekeepers and the homemakers are always the mainstay of advancing civilization.

(5) That increasing attention should be given to opportunities, which now exist or which may be provided, for the conservation of life and health and for the development of human powers to the end that individuals generally may attain happiness, prosperity and contentment through intelligent labour in Canada.

EXTRACTS FROM CHAPTER VI OF PART II.

ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL TRAINING AND TECHNICAL EDUCATION FOR CANADA.

Statement of Aims.

The aims of industrial training and technical education are arranged here in an order of importance for the guidance of those who plan the courses and kinds of work to be done:—

1. The preservation of health and the vigour of life.
2. The formation of good habits.
3. The development of the sense of responsibility and duty.
4. *The preparation of the body, mind and spirit for following some useful occupation.*
5. *The cultivation of the mental powers, the acquisition of knowledge and the development of the scientific spirit with direct reference to the occupation.*
6. The promotion of goodwill and desire and ability to co-operate with others.
7. The maintenance of standards and ideals.
8. As all-inclusive and ultimate, the perfecting of the human spirit, the improvement of the quality of life itself and the betterment of the conditions of labour, leisure and living.

Means Towards Attainment.

The full results of Industrial Training and Technical Education are to be sought through,—

1. The discipline which comes from interest in work and from co-operation with others in educational classes to at least 17 years of age;
2. The conservation of the love of work and of satisfaction in doing it well;
3. The acquisition of technical scientific knowledge, and the development of the scientific spirit;
4. The preservation and strengthening of a spirit of willingness to accept and fill one's place in organised society which implies relative positions and relative degrees of authority.

The acquisition of mere trade or craft skill is only one of the means which in education can be made helpful for reaching the larger ends. General education also

promotes these ends; and there need be no essential difference between the aims of Industrial Training and Technical Education and those of general education. The main distinction is in the narrower field and more direct methods by which Industrial Training and Technical Education seek to provide qualification for the working or earning part of life's activity.

The Ground to be Covered.

In the opinion of the Commission, it is important:—

1. That the needs of the individuals for knowledge, ability and skill in their vocations or occupations should be considered in all the courses of study and methods of education which are provided at public expense;

2. That from 12 years of age and onward the general and cultural education should include adequate vocational education;

3. That while the ultimate or ideal end should be kept in mind the immediate effort should be directed to meet successfully the most pressing needs of existing conditions;

4. That the effort should be directed to provide,—

(*a*) An adequate supply of competent instructors, as well informed and as well trained as practicable, to carry on the work which may be attempted;

(*b*) Courses of study and work in the several classes or institutions which would help the individual workers in connection with their occupations and thereby utilize the interest aroused to keep them in touch with educational effort and influence for development of the more purely mental qualities and moral powers;

(*c*) Such a system as can be most advantageously connected with the existing systems of education and existing institutions, classes and efforts.

The Commission does not recommend that the effort should be directed mainly to make Industrial Training and Technical Education fit in with the existing systems of education, existing institutions or classes, but rather to secure, as far as practicable, the co-operation of all the educational interests, in order to ensure progress in the most effective way in the shortest time and with the greatest benefit to the pupils.

The Commission would regard it as a misfortune if the aims, systems, institutions, classes or methods of different parts of education should be made to clash with each other. So long as the dominant purpose is to direct them all towards the real benefit of the pupil, of the community and of industry, they converge towards or radiate from a common centre and do not lose effectiveness and power by mutual oppositions.

The problem is not to subordinate one to an other, but to provide for all. The special aim of Industrial Training and Technical Education should not be permitted to obscure or dominate the whole aim of education, which for the individual is the perfecting of the spirit and the development of all the powers of body and mind.

The Underlying Principles.

The Commission is of the opinion that, Industrial Training and Technical Education in order to be of greatest benefit to individuals, to industrial development, to localities, to the several provinces and to the Dominion as a whole, should be organized and maintained in accordance with the following principles:—

1. It should be under provincial control and regulation.

2. It should receive financial support from individuals, from local authorities, from provincial governments and from the Dominion.

3. Provision should be made for active participation in its control, management and direction by individuals in the locality who would represent industries as employers and employees, agriculture, women's occupations particularly housekeeping, business and organized education.

4. It should provide educational opportunities for those who have gone to work and also for those who are able to return and devote their time for some months or years, as the case may be, to a course or courses of instruction and training.

5. It should make provision to ensure, as far as practicable, equality of opportunity for all preparing for industrial, agricultural and housekeeping occupations and for workers in such occupations.

6. It should be carried on in cordial co-operation with existing systems of education, and in such a way as to have the advantage of the use of existing buildings, equipment and teaching staff so far as these may be suitable and available.

Efficiency by Free Co-operation.

Any effort at control, by means of a proportion of members of the administrative body, based upon the relative contributions of money from provincial and local sources, could not apply advantageously to work of this kind. The end to be sought is the most efficient and economical and suitable education which can be provided; and also the maintenance of local interest and the utilization of as much as possible of the local talent and the further equipment of that talent by the experience which the individuals would gain only by participating in the administration.

An instance: A statement made in this connection by Sir John Struthers, Secretary of the Scottish Education Department, is illustrative of much that came to the attention of the Commission in the countries visited. In substance he said that the Scottish Education Department would rather have a thousand men and women in Scotland thinking and planning and striving to make the courses of study and the education meet the needs of their own communities than have ten thousand implicitly doing what the department directed.

Experience elsewhere indicates that it will be advantageous to leave the initiative, the control and administration of the general work of the school largely in the hands of the local authority. The central or higher authority should co-operate by putting at the service of the local body the full information which it alone could possess, and the benefit of inspection, counsel and advice by experts whom it only could employ. Supervision and inspection should all be directed to conserving and increasing local interest, and at the same time to maintaining high standards of work in the school, and raising these gradually as the pupils and teachers from experience are able to come up to them.

To Fit in with General Education.

In order that there might be the least amount of waste in pupils passing from the elementary or general schools into the schools or classes for industrial training and technical education, and the greatest economy in the use of buildings, plant and competent teachers already in the service of the place, it would appear desirable that the local authority administering industrial and technical education should be identical with the local authority controlling general education or in close organic association with it. If separate from the other it would seem expedient that it should be appointed either wholly by the local authority or that at least a majority of its members should be so appointed, and that they should be, persons representing industries as employers and employees, business men, in the rural districts farmers, women who are housekeepers, and educators who have practical knowledge of school administration.

The Lay Elements to be Represented.

Experience in all countries indicates that it is highly desirable that the committee which has control of the courses should contain representatives of the employers and employees actively engaged in or connected with the several occupations for which the students are being prepared or in which they are engaged. The co-operation of these persons who are engaged in industry with the professional educators ensures that the courses of study provided, and the kind of work to be carried on in the school, will be such as to meet the needs of the industries, the personal requirements of the young people and also conform to the judgment of the workmen who have had experience as to what is most useful to them. Such co-operation also helps to make the work of the school not merely acceptable to the pupils and satisfactory to the parents but also to keep it in accord with the desires and judgment of the men already engaged in the several occupations.

The provision of opportunities for the development of individuals and for the training of workers for all the occupations can be accomplished only by gradual development. Only in that way can they become an economical part of the public service which contributes to the industrial, economic, intellectual and social progress of the nation.

Equality of Opportunity.

Sometimes an idea prevails that a scheme of education provides equality of opportunity by letting all who desire have access to the same classes. Equality of opportunity, to mean anything real, must have regard to the varying needs, tastes, abilities and after lives of the pupils. To be able to attend schools, whose courses are provided chiefly for those whose education can be continued until 18 or 20 years of age, does not ensure any sort of equality of preparation for occupation or for living to those who are compelled to leave at 14. Equality of opportunity to enter a school designed to prepare leaders, is not what is needed and is not what is wanted by the parents of most of the children. Equality of opportunity, to be sincere and operative, must offer opportunities of education which will serve the pupils not all the same thing, but will serve them all alike in preparing them for the occupations which they are to follow and the lives which they are to lead.

The problem is to unite in well-ordered courses of study what has been proven thoroughly useful in formal education with what has been found really educational in industrial and technical work. The Commission indicates how that may be done in the chapter on Some Provisions in a System of Industrial Training and Technical Education.

Must be Attractive and Adequate.

One of the first considerations is that the classes and courses must be attractive to the young people themselves.

Many different kinds of school work are needed to meet all the requirements of all the young workers. This statement requires to be repeated and again repeated.

The general principles now accepted as essential to the success of industrial and technical continuation schools are:—

1. That the subject matter of every course shall be directly related to the real problems of the daily life and occupation of the pupils.

2. That the pupils shall be arranged into classes so that those in one class will have common aims and purposes.

3. That the teachers shall have had practical experience in the occupations dealt with and be skilful in teaching, enthusiastic and sympathetic.

4. That the continuity of courses shall be maintained for one year at least and where practicable for several years in sequence.

5. That the schools shall be equipped with illustrative and teaching material adequate to meet the practical needs of the pupils and to appeal to their imagination and, so far as possible, to their artistic tastes.

6. That the rooms where the classes are held shall be attractive, comfortable and convenient, that the atmosphere of the place in an intellectual sense shall be encouraging and stimulating and that opportunities shall be provided for the right kind of social intercourse.

To Meet Individual, Industrial and National Needs.

The Commission recommends,—

1. That wherever practicable continuation classes should be constituted on the basis of identity or similarity of interests on the part of the pupils, rather than on the basis of ages, or academic or literary attainments. The best basis to indicate a similarity of interests is that of the occupation followed. In order that none might be excluded by their inability to join in such work as constitutes the course, it is desirable that there should be preparatory classes.

2. That the continuation classes should provide courses for the learners in the industrial, agricultural, commercial and housekeeping occupations of the community.

3. That the courses should be progressive from year to year, and that pupils should be encouraged to attend them for a period of not less than three years.

4. That continuation classes should be provided also for workmen and foremen, workwomen and forewomen, to enable them to extend their knowledge and increase their ability and skill for management and planning.

5. That schools or courses should be provided of the grade of intermediate and secondary industrial and technical education for those who are able to continue at school for from two to four years after the age for elementary education.

6. That middle technical schools or courses (industrial, agricultural and housekeeping) should be provided for those who are able to return to school for periods of from 3 months to 3 years after having been at work until at least 17 years of age.

7. That courses of a suitable sort should be provided for highly skilled foremen and managers. These might take the form of short courses, lasting from ten days up to one month, according to the needs of the particular industry or locality.

8. That existing institutions of college rank should receive whatever additional financial support may be necessary to enable them to fill their place in a national system of industrial training and technical education.

SOURCES OF FINANCIAL SUPPORT.

In the establishment and maintenance of industrial training and technical education in the several countries visited, the proportion of financial support provided by the several authorities was so various that no general statement of a principle can be deduced from the information obtained.

In the case of countries such as England and Scotland, in which substantially the same public authorities share in the control and expense of industrial training and technical education as carry on the work of general education, the proportion contributed by the central authority is sometimes more and sometimes less than in the case of its grants towards the support of general education.

In Germany the imperial and federal government does not contribute towards the maintenance of education or exercise any control in regard to it with the exception of indicating the standard, which qualifies those who pass the examination, to enjoy the right to give one year instead of two of military service, which qualification can be attained by boys at about their 16th year.

The proportion of the cost provided by the several authorities varies in the different states of the Empire, and also in the several cities, and sometimes in the one city in the case of each institution or kind of school. In the higher or more expensive forms of industrial or technical instruction the state, being the larger and financially the stronger authority, pays the largest proportion. The reason for that lies in the fact that those who receive the higher forms of technical instruction are best qualified to serve the state and advance its interests as a whole rather than those of any particular community.

In the United States public education is provided and maintained by the organized action of communities, county or district areas and the several states. The federal government exercises no control over and contributes nothing to the support of general education. In several Acts the federal government has provided substantial financial assistance for the establishment and maintenance of state colleges of agriculture and mechanic arts.

The United States and Switzerland are the two countries visited by the Commission in which the federal government does contribute substantially towards the establishment and maintenance of industrial training and technical education. In Switzerland the maintenance of general public education is wholly a question for the Communes and Cantons, although the federal authority has begun in recent years to give grants for the maintenance of general education in needy localities. The

federal parliament (the Bund) gives substantial grants for the maintenance of technical education and maintains the renowned Polytechnic at Zurich.

Considerations to be Kept in Mind.

The Commission is of opinion that the following considerations, and others of a minor character, indicate that individuals, corporations, associations, municipalities, the provinces and the Dominion should co-operate in providing financial support for a system of industrial training and technical education for Canada. The Commission has endeavoured to outline a plan whereby that may be done, with advantage to all interests concerned and injury to none, in the chapter on A Development Policy for Canada. The considerations referred to above are as follows:—

1. Since industrial training and technical education have everywhere proved advantageous to the community and the nation, it follows as expedient and proper that the state and the community should assist in providing the means of such education. Moreover since such education is of immediate benefit to the individual it may be claimed that the individual or his parents should meet part of the expense. However the interests of the community and the province predominate so much that in order to prevent any disability which the charging of relatively high fees might impose, public elementary and secondary education is substantially free to the individual. There are exceptions, but the trend is in the direction of the school, without fees, maintained by public funds. Although some of the universities and colleges charge high fees, in their case a considerable share of the total cost of education is provided either by grants from the provincial governments, revenues from endowments, or contributions from philanthropic sources.

2. The incidence of the charge for the cost of schools should have regard to the ability to pay as well as to the advantage that will result from the education. This principle should be applied in seeking a basis, which would be equitable, from which to obtain revenues to maintain industrial training and technical education. It may be assumed that the fees from pupils should not be considered as a main or important source of revenue, but should be rather for the sake of the effect on the attitude, earnestness and regularity of attendance of the pupils.

3. The cities derive the most immediate benefit from the maintenance of industrial training and technical education, and are financially better able to support it than the small communities in towns and villages and in rural districts. For both reasons a larger proportion of the total cost of industrial training and technical education might and should be borne by cities than by the smaller towns and rural communities.

4. The industrial efficiency of the individual worker is of value not merely to himself, to the particular trade at which he works, to the community in which he lives, but also to the nation as a whole. Moreover the facilities for travel and the frequent change of residence indicate that while the individual would obtain the benefit of industrial training and technical education in one locality he might follow his occupation in another that might be far distant. That would be the more common and likely because of the large and rapid growth and development of Canada.

5. The very considerable increase in the population of Canada by immigration is throwing additional burdens for elementary education upon the communities and the provinces. The enhanced public revenues due to growth by immigration goes in a large measure into the Dominion exchequer. The increase of the volume of trade brings in larger amounts through the customs offices. This would indicate that the new financial responsibility and burdens for industrial training and technical education, on a scale large enough and generous enough to be available to all the people between the ages of 14 and 18, should be sustained in large measure by funds from the Dominion Government.

6. The work carried on by the Dominion Experimental Farms, while mostly devoted to research work by experiment, is similar to some of the technical instruction provided in other countries as a part of the educational system. The many and valuable bulletins issued, the frequent and useful addresses by members of the staff at meetings of farmers and others and the visits of thousands of farmers to the experimental farms, are all definitely intended as a means to educate the farmers into a wider knowledge of the systems and methods of farming and the principles which underlie them.

7. The work of the Dairy and Cold Storage Commissioner, the Live Stock Commissioner and the Seed Commissioner are also in very deed educational, although not nominally so.

8. Those institutions and offices, and the activities of the officers themselves, are intended to have educational results, affecting the knowledge and ability of the farming community, affecting the methods whereby their work is being carried on, and in general developing the power of the workers through intelligence and increased skill in the management of their business. That they have so affected them is written large on the progress of agriculture and the education of farmers during the past quarter of a century.

9. A Dominion Act for the granting of aid for the advancement of Agricultural Instruction in the Provinces was assented to at the session of Parliament 1912-13. Section 3 of that Act (*The Agricultural Instruction Act*) is as follows:

> **3.** For the purpose of aiding and advancing the farming industry by instruction in agriculture, and for the purposes authorized by this Act, the following sums, aggregating ten million dollars, shall be appropriated and paid out of the Consolidated Revenue Fund of Canada during each fiscal year for the period of ten years beginning with the year ending the thirty-first day of March, one thousand nine hundred and fourteen, namely:—
>
> During the fiscal year ending the thirty-first day of March, one thousand nine hundred and fourteen, the sum of seven hundred thousand dollars;
>
> During the fiscal year ending the thirty-first day of March, one thousand nine hundred and fifteen, the sum of eight hundred thousand dollars;
>
> During the fiscal year ending the thirty-first day of March, one thousand nine hundred and sixteen, the sum of nine hundred thousand dollars;
>
> During the fiscal year ending the thirty-first day of March, one thousand nine hundred and seventeen, the sum of one million dollars;
>
> During the fiscal year ending the thirty-first day of March, one thousand nine hundred and eighteen, the sum of one million one hundred thousand dollars; and the like sum of one million one hundred thousand dollars during each of the

succeeding fiscal years until the expiration of the fiscal year ending the thirty-first day of March, one thousand nine hundred and twenty three; provided that any portion of any of the above sums which may remain unearned or unpaid at the expiration of any of the said fiscal years previous to the last shall be carried forward and remain available according to its apportionment for the purposes of this Act during any one or more of the succeeding years.

Restatement of Some Principles.

The Commission is of opinion,—

1. That financial support should be provided by public authorities and by individuals, corporations and associations who are directly concerned and who would be likely to profit by the results to be obtained.

2. That the relative measure of support should be in some equitable proportion to the interest in the results, and the ability to pay, of the four possible classes of contributors, viz,—(*a*) the individuals, corporations and associations, (*b*) the local community such as town, city or county, (*c*) the province and (*d*) the Dominion.

3. That in determining the proportion of cost of industrial training and technical education, to be contributed by different public authorities, regard should be had not only to the benefit to the local community to be expected from industrial training and technical education, but also to the ability of the community, and to some extent to its willingness, to provide the education of an adequate kind and to a sufficient extent.

4. That it is reasonable and desirable that the public authority with the larger financial resources should meet the largest proportion of the cost for the communities where population is most sparse and the amount of taxable property per head of pupils to be educated is lowest.

5. That the prevention of progress in a locality and the lack of development in individuals, which might result from delay in providing suitable education until the local community was both able and willing to provide it in full or in a large measure, would be felt not only by the community itself but by the province and Dominion as a whole. In consequence, on economic as well as other grounds, the larger public authority, provincial or Dominion, which is able to give a large measure of financial assistance to a community weak in resources would find such a course to be an excellent investment. The development of industrial training and technical education in such a community would bring it forward into ability to take a larger share for itself in maintaining the cost of such education and other public services.

6. That the authorities by whom financial support is furnished should have sufficient cognizance of the results from it to be able to pass intelligent and fair judgment on the question of continuing or lessening or increasing the amount of support to be given.

7. That the financial support should be arranged for under such legislation as would warrant individuals and communities in deciding to devote a considerable period of time and amount of money to the evolution of industrial training and technical education. In order that plans might be made with reasonable confidence in the permanence of the undertaking, it is highly important that such provision

should be made as would give reasonable assurance to the teachers and instructors, who become qualified to carry out the work, that satisfactory remuneration would be paid to them, and continued employment provided for them.

8. That the financial support provided from Provincial or Dominion sources as grants to local authorities, should be devoted mainly if not wholly to the payment of a proportion of teachers' salaries and of the cost of equipment for instruction.

ORDER OF PROCEDURE IN LOCALITIES.

The Commission is of opinion:—

1. That in smaller towns the provision at first should be in the nature of courses in industrial science, drawing and calculation, with opportunities for constructive work in wood, metals, textiles, foods or other materials appropriate to the larger industries of the neighbourhood. Out of such courses would grow classes or courses specifically appropriate for the workers in the various industries.

2. That in the larger places it would be expedient to provide courses appropriate for the groups of fundamental industrial occupations such as the building trades, metal and machine trades, woodworking trades, electric trades, textile trades, clothing trades, boot and shoe trades, printing and lithographing trades, leather, glove and harness trades, paper making, and art trades.

3. That when classes or courses for these grouped trades have been carried on, classes or courses for the particular trades could be evolved. For example for the building trades, there would be classes or courses for masons, bricklayers, carpenters, painters, etc. In like manner there would be developed for the metal and machine trades, particular classes or courses for machinists, moulders, blacksmiths, etc. In a similar manner out of the woodworking trades would come classes or courses for cabinet makers, furniture makers, pattern makers, wooden utensil and tool makers, etc. Out of the general school for the textile trades, special classes for spinners, weavers, lace makers and the makers of embroidery would be arranged.

4. That in every case a Local Development Board or other local authority should make or cause to be made, a plotted survey of the needs of the population by numbers, ages and occupations and another plotted survey of the provision (if any) which exists in buildings equipment and teaching force suitable and available for use. When the one plotted survey is placed over the other, the situation can be studied with the greatest advantage to all interests. In this connection consideration should be given to what was done at Leeds and Edinburgh.

5. That the training of teachers and executive workers for service in industrial and technical schools should be advanced as soon as practicable.

6. That classes for foremen and workmen who are both intelligent and highly skilled should be undertaken for the first object of giving such men greater qualifications for their own occupations. Such classes would primarily be for the benefit of those who attended them. Out of those who attended, doubtless a number would be revealed who would have some natural aptitude for teaching, and who during the following years would be disposed to teach in the continuation classes and to teach to some extent after the method by which they themselves had been instructed. To begin these classes it would be necessary to secure the services of a few highly efficient teachers who had had successful experience in such work.

7. That inducements should be offered to professional teachers, who already had a knowledge of and a taste for industrial and technical work, to spend some time in practical work in workshops or factories similar to those of the place in which they would afterwards teach.

8. That by a combination of these two methods, in a short time, it would be possible to secure a local supply of men competent to conduct continuation classes and the trade classes in day technical institutes. Men with more systematic and thorough training would be required for the higher places in technical institutes and middle technical schools.

There is no short cut by which a sufficient body of teachers for industrial education for all the industries, and for all the people in the various levels of service, can be obtained. Perhaps the best course of preparation is one whereby the teacher or the prospective teacher, during the whole period of education from the elementary classes onward, has been taught the subjects and the work which he will be required to teach and has been taught by such methods and in such a way as he would be expected to teach. Many persons will rely upon the recollection of how they were taught to a greater extent than they will depend on their own ability to translate into practice the principles of teaching according to which they were told to teach.

EXTRACTS FROM CHAPTER VII OF PART II.

A DOMINION DEVELOPMENT POLICY.

General Considerations.

1. It is important to adopt a plan which will secure the largest degree of *public confidence* and maintain the largest measure of *public interest and co-operation.*

2. It is important to adopt a plan which will preserve *Provincial control,* encourage *local initiative* and develop *local responsibility.*

3. It is important that there should be a *large number of persons* representing Manufacturing Industries, Trades, Commerce, Transportation, Agriculture, Forestry, Mining, Fisheries, Housekeeping and Education, *ready to take the initiative* in local undertakings and *able to co-operate* in making effective application to the needs of localities of financial grants and any other assistance. In the opinion of the Commission, a policy which would be applied wholly or mainly by directive authority from headquarters, leaving to local centres little initiative or responsibility, would not accomplish much for a long time.

4. It is important that there should be in each Province *a Central Body or Authority,* which could bring to bear on all proposals from local centres the wide knowledge and practical experience of *capable men and women* familiar with education and with industrial, agricultural and housekeeping problems. Such a Central Body would be able to supply information for the guidance of Local Authorities at the beginning of their work, and to furnish advisory assistance through experts of high ability. Through the meetings and discussions of such a Central Body the permanent officials charged with the administration would be kept in touch with public opinion as to the particular needs of localities, as to the *suitability and acceptability* of schemes proposed, and as to the practicability of having such schemes supported and carried out. The Central Body would also serve the purpose of *a clearing house* through which an intimate knowledge of the results from experience in one locality would be made available to other communities.

5. It is important to adopt a plan whereby the Dominion, the Provinces, the Localities and Individuals will *co-operate and each contribute* in some well-considered and equitable proportion *to the cost* of development undertakings. A plan of organization which provides for the financial support from Communities being properly articulated with financial grants from Central Authorities would tend to bring about *efficiency and stability.* A long time is required to realize upon educational work; and continuity of effort to meet recognized needs is essential. The plan should be such as would ensure concurrent progressive action in the same direction by the Central and Local Bodies. Provision should be made for *Efficiency Audits,* in order that each Contributing Authority may be assured that the money is being used for the purpose for which it is granted, and that the work is being well done.

6. It is important to adopt a plan which will ensure that the *national interests* as well as the local points of view will be considered.

7. It is important that there should be a *Dominion Consultative Body,* through which the widest knowledge and experience could be put at the service of all the Provinces and thus be brought to bear on problems and undertakings of consequence to them all.

8. It is important that there should be *a Dominion Authority* competent to co-operate with Provincial Authorities, to provide *expert counsel* to any Province which might not be adequately organized or staffed to render service in that respect to all localities and industries within its borders, and to promote *scientific industrial research* and the diffusion of knowledge resulting therefrom.

The Commission's Recommendations.

The Commission recommends that Local and Provincial Development Bodies be constituted as follows:—

I.—Local Urban Industrial Development Boards.

II.—Local Rural Development Boards.

III.—Provincial Development Councils.

IV.—Provincial Development Commissions.

The Commission further recommends the constitution of,—

V.—A Dominion Development Conference.

VI.—A Dominion Development Commission.

VII.—A Dominion Development Fund.

I.—Local Urban Industrial Development Boards.

Duties—

1. To consider by what means Industrial Training and Technical Education may be applied most advantageously to the development and improvement of workers, industries and occupations within the areas served by them severally.

2. To make proposals, applications or recommendations to a Provincial Development Council, or any other authority constituted by the Provincial Government as competent to deal with such proposals.

3. To provide and maintain Industrial Training and Technical Education by means of institutions, classes, courses or otherwise, subject to the regulations of the Government of the Province.

4. To provide Vocational Guidance for the youth of the area by such means as they may think fit.

5. To administer any Grants received for any of the aforesaid objects.

Constitution—

As provided for by each Province by Order in Council or by legislation.

Suggestions—

Each Board to be appointed preferably by the local education or municipal Authority; or if not wholly so appointed, then to the extent of two-thirds by the local Authority or Authorities, with one-third appointed by the Provincial Authority for Industrial Training and Technical Education.

Each Board to include one or more members of the Local Education Authority and to represent:—

(1) Employers and employees in manufacturing industries, trades, commerce, mining, fisheries and transportation;

(2) Housekeeping;

(3) Education.

Having regard to the desirability of continuity of policy, appointments to be made preferably for a term of years, a proportion of the members retiring every year, and being eligible for re-appointment.

It would likely be found expedient for each Board to constitute Committees for the more effective carrying on of its work. The main divisions would obviously be industrial, housekeeping, and vocational guidance, with such further divisions or subdivisions as might be thought desirable.

II.—Local Rural Development Boards.

Duties—

1. To consider by what means Industrial Training and Technical Education may be applied most advantageously to the development and improvement of workers, of agriculture, rural industries, housekeeping and occupations in rural communities, within the county or other area served by them severally.

2. To make proposals, applications, or recommendations to the Provincial Development Council or any other authority constituted by the Provincial Government as competent to deal with such proposals.

3. To provide and maintain Industrial Training and Technical ducation by means of institutions, classes, courses or otherwise, subject to the regulations of the Government of the Province.

4. To administer any grants received for any of the aforesaid objects.

Constitution—

As provided for by the Province by Order in Council or by legislation.

Suggestions—

It would appear to be desirable, where local conditions permit, that a county area should be the area served by the Local Rural Development Board. In some case it might be found expedient to combine one county with another, or with part of one or more other counties.

Each Board to be appointed, preferably two-thirds by the education authorities or the municipal councils of the area served, with one-third appointed by the Provincial Authority for Industrial Training and Technical Education.

Each Board to represent:—

(1) Agriculture;

(2) Industries;

(3) Housekeeping;

(4) Education.

Having regard to the desirability of continuity of policy, appointments to be made for a term of years, a proportion of the members retiring every year and being eligible for re-appointment.

It would likely be found expedient for each Board to constitute Committees for the more effective carrying on of its work. The main divisions would obviously be:

agricultural, rural industries, and housekeeping with such further divisions or subdivisions as might be thought desirable.

III.—Provincial Development Councils.

Duties—

1. To consider systems and schemes of Industrial Training and Technical Education for the development and improvement of workers, industries, agriculture, housekeeping and occupations within the province.

2. To make recommendations to the Provincial Development Commission or to the government of the province in that connection.

3. To do such other things as may be required by the government of the province in relation to Industrial Training and Technical Education.

4. To make recommendations to the Dominion Development Commission.

Constitution—

As provided for by the Province by Order in Council or by legislation.

Suggestions—

Two-thirds of the members might be elected by local development boards, and one-third appointed by the Provincial Government to represent:—

(1) Manufacturing industries, trades, commerce, mining, fisheries and transportation (employers and employees);
(2) Agriculture and forestry;
(3) Housekeeping;
(4) Education.

Or

Members might be all appointed by the Provincial Government to represent interests as aforesaid.

Appointments or elections to be preferably for a term of not less than six years, a proportion of the members retiring every two years, and being eligible for re-appointment or re-election.

A Provincial Development Council would doubtless find it expedient to forward its work by means of committees such as industrial committee, agricultural committee, and housekeeping committee, with such further divisions or subdivisions as might be found desirable.

IV.—Provincial Development Commissions.

Duties—

1. To consider what may be necessary for or advantageous to the development and improvement of workers, industries, agriculture, housekeeping and other occupations within the province by means of Industrial Training and Technical Education.

2. To co-operate with the Provincial Department of Education and with other authorities within the province for the organization, administration, and maintenance of Industrial Training and Technical Education within the Province.

3. To provide the service of experts for advising with local authorities and for other purposes as might be expedient.

4. To inspect and report upon the work of all classes, schools and institutions in respect to which any grant is made from public funds for Industrial Training and Technical Education; and to make recommendations to the Provincial Government in respect to the administration of any grants or other assistance in aid of Industrial Training and Technical Education.

Constitution—

Members to be appointed by the Lieutenant Governor in Council.

V.—A Dominion Development Conference.

Duties—

1. To consider questions of Industrial Training and Technical Education for the development of the Dominion in respect to workers, industries, agriculture, housekeeping, and occupations, referred to it by Provincial Development Councils, or any other authorities constituted by Provincial Governments in this relation, and to advise each provincial authority in regard to such questions.

2. To consider and report upon questions referred to it by the Dominion Development Commission.

Constitution—

Representative members:—

(*a*) Elected representatives of Provincial Development Councils.

Suggested basis of representation: 3 members from each Provincial Council, plus one member for each 300,000 population or fraction thereof above 300,000 in the province as determined by the latest decennial census.

Official members:—

(*b*) One member of each Provincial Government or a deputy accredited by him.

(*c*) One member of each Provincial Development Commission.

(*d*) Members of the Dominion Development Commission.

VI.—A Dominion Development Commission.

Duties—

1. To co-operate with provincial and local authorities, such as provincial development commissions and councils, local development boards and any other authority constituted by a provincial government for the development and improvement of industries, agriculture, housekeeping and occupations by means of Industrial Training and Technical Education.

2. To provide experts, whose services for counsel would be available to provincial and local authorities.

3. To promote scientific industrial research and the diffusion of knowledge resulting therefrom.

4. To provide and maintain and to assist in providing and maintaining central institutions to supplement the work carried on by the provincial and local development authorities, if and when such central institutions are approved by the Dominion Development Conference.

5. To make recommendations for the administration of the Dominion Development Fund.

6. To report to the Governor General in Council, or to a Department of the Dominion Government.

Constitution—

Members to be appointed by the Governor General in Council.

PROVISIONS IN A SYSTEM FOR INDUSTRIAL TRAINING AND TECHNICAL EDUCATION.

The Commission considers that the provisions which are indicated hereafter under the names of classes, courses, schools, institutes and colleges, are necessary in a system or systems of industrial training and technical education for Canada.

The plan of statement by classes (or schools) is adopted because it is believed that by this means local authorities and provincial authorities will be helped in the best way to co-ordinate the provisions which now exist with what is to be provided, in so far as that is desirable, and vice versa.

The provisions have been arranged under three main headings:—

For those who are to continue at school in urban communities;
For those who have gone to work in urban communities;
For rural communities.

The provisions recommended are as follows:—

For Those who are to Continue at School in Urban Communities.

Division I. Intermediate industrial classes (or schools).
" II. Co-ordinated technical classes (or schools).
" III. Technical high schools.
" IV. Apprentices' schools.
" V. Industrial and technical institutes.
" VI. Technical, home economics and fine arts colleges.

For Those who have Gone to Work in Urban Communities.

Division I. Continuation classes (or schools).
" II. Co-ordinated technical classes (or schools).
" III. Middle technical classes (or schools).
" IV. Apprentices' classes (or schools) in workshops.
" V. Industrial and technical institutes.
" VI. Extension Lectures and Correspondence-study courses.

For Rural Communities.

Division I. Intermediate rural classes (or schools).
" II. Rural high schools.
" III. Continuation agricultural classes (or schools) under resident or travelling district instructors.
" IV. Continuation housekeeping classes (or schools) under resident or travelling district instructresses.
" V. County or district agricultural and housekeeping schools.
" VI. Young people's social service schools.
" VII. Schools for agricultural apprentices.
" VIII. Agricultural and home economics colleges.
" IX. Correspondence-study courses.

MAKING THE MOST OF EXISTING PROVISIONS.

Some of the provisions recommended herein already exist in more or less developed and organized form in some places. In the matter of the highest institutions, such as Technical Colleges, Colleges of Agriculture and Schools of Domestic or Household Science, Canada appears to be well equipped in numbers. They could all be used to their utmost capacity and to great advantage in connection with the education of teachers and other leaders in all departments of Industrial Training and Technical Education.

It is not to be inferred that the classes (or schools) of any division require buildings, equipment or staff for themselves, wholly separate from what is required for the classes (or schools) in other divisions. Whether an institution should have accommodation and facilities for more than one kind of classes (or schools) is a matter to be decided according to local conditions. There are undoubted advantages from having classes of the different divisions (and of different kinds in the same division) in one institution, and there are advantages from having the more elementary classes in a building or buildings convenient to the homes of the pupils. Local needs, conditions and resources furnish the only adequate data for guidance in that respect.

The Commission counsels energetic action in all the provinces in arranging for the classes, and advises prudent consideration before deciding upon new and permanent buildings. A year or two of experience in provisional quarters would enable the local authority to avoid serious mistakes. Expert counsel and criticism which should be available from headquarters, would assist it to provide for its needs economically, adequately and effectively. For example, in the city of Belfast six years of creditable work were accomplished before the Municipal Technical Institute was completed. By that time its arrangements and equipment provided just the right kind of facilities. They have become a tribute to the wisdom and ability of those in charge and a model for other towns and cities.

A DOMINION DEVELOPMENT FUND.

The Commission recommends that the sum of $3,000,000 be provided annually for a period of ten years by the Parliament of Canada and paid annually into a Dominion Development Fund.

NOTES:—

1. Not less than 75 per cent of the amount paid each year into the Dominion Development Fund, from the above source, to be divided into nine portions, in proportion to the population in each of the nine provinces as determined by the latest census, and alloted to each province accordingly for development undertakings therein. Each of the said nine portions of the fund to be administered as the, '(name of the province) Account of the Dominion Development Fund'; and the remainder of the fund to be administered as the 'General Account of the Dominion Development Fund.'

2. Any portion of the Fund allotted to a province which may remain unearned or unpaid at the expiration of any fiscal year, to be carried forward and remain in the Account of the province until required for development work within such province.

3. Any portion of the Fund in the 'General Account' which may remain unexpended at the expiration of any fiscal year to be carried forward and remain in the 'General Account' until required for development work upon the recommendation of the Dominion Development Commission.

4. Payments to be made to development authorities in any province from the funds in the account of such province and from the funds in the 'General Account' only upon the recommendation of the Dominion Development Commission.

5. In order that a provincial government or local development authority may be entitled to receive a payment from the funds in a provincial account of the Dominion Development Fund, it will be necessary:—

(*a*) That the *Service* (that is the development undertaking proposed by a development authority) and the *Budget*, for the fiscal year for which the payment is intended, shall have been approved by a Provincial Development Commission or other authority constituted by the provincial government for that purpose; and that a copy of said *Budget* and a copy of a certificate of approval by the provincial authority of the proposed *Service* shall have been received by the Dominion Development Commission.

(*b*) That such a certificate shall have been issued by a Provincial Development Commission or other authority recognized by the provincial government as competent to make an efficiency audit, to the effect that the said development authority is administering the *Service* adequately and efficiently and in accordance with the authoritative regulations; and that a copy of said Certificate of the Efficiency Audit shall have been received by the Dominion Development Commission.

6. In any case where a development authority has not maintained and carried out the *Service* (that is the development undertaking provided for in the *Budget*), adequately and with reasonable efficiency, the Certificate of the Efficiency Audit shall state the extent to which the undertaking was not maintained and carried out in an efficient and satisfactory manner; and the certificate shall also state whether the development authority is taking any steps to remedy any such deficiencies as exist.

7. If the Dominion Development Commission is not satisfied that the development authority is maintaining and carrying out the service adequately and with reasonable efficiency, it may at its discretion deduct such amount as it thinks fit from the amount of the grant from the Dominion Development Fund that would otherwise be payable, and give a certificate declaring its dissatisfaction and the amount of such deduction, and in that case only the amount of the grant so reduced shall be payable to the development authority in question.

8. Before a payment can be made for a development *Service* in the second or any subsequent year of its progress, a duly audited statement in detail of the receipts from all sources for the maintenance of the said *Service* and of the actual expenditure upon said *Service*, for the preceding fiscal year, shall have been received by the Dominion Development Commission.

9. The treasury may accept gifts into the Dominion Development Fund for all or any of the purposes for which payments may be made from the accounts of the provinces or the general account.

SUMMARY OF THE USES OF THE FUND.

Payments should be directed to secure as speedily as is practicable:—

1. The service in each province of an adequate supply of persons (teachers, instructors, demonstrators, executive officers) properly qualified to carry on Industrial Training and Technical Education.

SUGGESTION.—Seventy-five per cent of the cost of training, or of securing otherwise, might be paid.

2. The establishment or extension and maintenance of classes, courses, schools or other institutions or means for Industrial Training and Technical Education.

SUGGESTION.—A proportion of the salaries of teachers, instructors, demonstrators and executive workers, according to approved *Budgets*, might be paid, varying from one-half in cities, to two-thirds in towns, and three-quarters in villages and rural districts.

3. The provision of suitable and adequate appliances, apparatus and equipment for teaching purposes, but not including school buildings furniture or consumable supplies.

SUGGESTION.—Seventy-five per cent of approved *Budgets* might be paid.

4. The provision of scholarships to equalize opportunities to young people and other workers to profit by classes, courses, schools or other institutions.

5. The provision of experts with experience in Industrial Training and Technical Education whose services for counsel would be available to provincial and local authorities.

6. The service of central institutions when and where required to supplement the work carried on by the several provincial and local development authorities either by providing and maintaining or by assisting in providing and maintaining such central institutions.

7. The promotion of scientific industrial and housekeeping research and the diffusion of knowledge therefrom.

EXTRACTS FROM CHAPTER IX OF PART II.

EDUCATION FOR RURAL COMMUNITIES.

INTRODUCTORY.

Canada is not wholly free from anxiety regarding the movement of population from the open country into towns and cities.

The total population increased from 5,371,315 in 1901 to 7,204,838 in 1911, or 34 per cent. From 1901 to 1911 the urban population increased from 2,021,799 to 3,280,444 or 62 per cent; the rural population in the same period increased from 3,259,516 to 3,924,394 or 20 per cent. That is to say, notwithstanding the opening

up and occupation of vast areas of virgin land in the western provinces, the total rural population of Canada increased during ten years by 664,878 while during the same period the urban population increased by 1,258,645.

A similar movement of population from the country to the towns is going on in the other countries visited, with the exception of Denmark.

Among the undisputed factors which cause a flow of population from agriculture to other occupations are: (1) the use of improved machinery, whereby the number of units of human labour required on land to produce a given quantity of food is less than formerly; (2) the desire of some farmers to leave the rural parts for towns and cities to obtain what they think to be a better chance for the education of the children; (3) the fact that money circulates more freely in towns than in the country; (4) the attractiveness to young people of the amusements and excitements afforded by town and city life.

Qualities of Country Life and Agriculture.

Difference of opinion may exist as to remedies, but there is substantial agreement as to the desirability of having a large percentage of the population living in the country, engaged in agriculture and other rural occupations. Four chief considerations are urged in that behalf:

(1) Country life contributes to the virility of the race in body, mind and morals.

(2) Agriculture is a means of creating wealth annually out of the resources of nature without consequent exhaustion of the fertility of the soil. Countries where agriculture is centuries old, such as England, Scotland, France and Germany, report yields of crops higher on the average per acre than at any previous time in their history.

(3) Successful farming maintains a basis for prosperity in manufacturing, transportation and other businesses; and affords stable support to all prudent national undertakings.

(4) The increased cost of living in towns and cities is a pressing problem. A larger production of food in Canada might not at once reduce materially the retail prices; but the further organization of producers and consumers, for doing business closer together, would reduce the amounts which are absorbed during the progress of the food products from the farm to the consumer's table.

The chief forms of satisfaction which any worker seeks to obtain by labour are possession of material things, opportunity for social enjoyments, and pleasure from doing the work itself in addition to the wages or money returns from the product. Whatever enables the rural population to obtain worthy satisfaction in these respects is to be sought for their benefit, and likewise for the advantage of the country as a whole.

Nothing can be done by legislation to compel people to stay in the country, but much may be done by education to cause them to prefer to stay there. The saying: 'Where there is no vision the people perish' was never truer than at present in its application to the movement from the country and the attenuation of rural life in Canada.

Education by Self-Help.

Whether the movement of population, at present flowing from rural to urban areas, goes on ceases or takes an opposite direction, the rural communities for their own sakes are entitled to and must have education suited to the needs of all their members. Education cannot be conferred upon them; it may not be beneficially imposed upon them; it must be evolved by themselves by selp-help, and if need be by some measure of self-sacrifice, with the co-operating assistance of governments.

The conservation of a vigorous, intelligent and prosperous population in the country stands out among the foremost duties of the whole nation; and any neces sary burden of expense for that purpose might well be undertaken as a wise national investment. The practical ends to be aimed at, as likely to be effective for the accomplishment of the national objects, are summed up in the words attributed to Sir Horace Plunkett: "Better farming, better business, better living." Acceptable instruction, adequate education, capable leadership and hearty co-operation are necessary means.

In all progressive countries education is being adjusted to meet the needs of the children of the rural population, to interest them in rural life and to qualify them to follow it with advantage; and keen attention is being directed to means for the instruction and guidance of the adult population. France, Germany and Denmark are noteworthy examples of what has been done in that respect. More recently Ireland and England are bending their energies, in some measure successfully, towards the same end. The question is significantly prominent in the United States.

Teacher Should be Permanent.

The Commission is aware that to carry on the Rural School in the manner suggested would require a teacher of ability, a teacher who might reasonably be expected to continue in the service of the one school for a considerable number of years. Whatever would help to bring about that condition would be entirely advantageous and wholly desirable.

Particularly in technical schools of the highest order, such as the Industrial Art Schools, and also in other technical schools abroad, not only are instructors given permission to follow the occupation or art in connection with which they teach, and to earn remuneration for themselves thereby, but they are encouraged to do so, in order that they may be kept in direct and active touch with the practical and business side of the industry or art. If a good farmer properly trained and qualified could at the same time be a teacher of the rural school, particularly the rural high school, his efficiency as a teacher and his force and influence as a leader in the locality would be increased rather than diminished. Whatever would help towards the permanency of his tenure and service as a teacher in a locality would be advantageous.

Salaries and Residence.

If the salaries which the people of the locality are willing to pay are not adequate to secure that end it is wise to consider what other inducements, attractions, remunerations or satisfactions might be provided for the teacher. A school residence and

grounds, part of which might be used for garden purposes as in France, would help to retain the teacher and dispose capable young men to select teaching in the country as a permanent occupation. Particularly in the case of rural high schools, residences are an essential part of the educational equipment for rural communities, and under present conditions in Canada their erection and maintenance would be development work of great value and benefit to the state—doubtless more than development work which concerns itself only or chiefly with material resources and results from them.

The permanency of the service of teachers in Germany impressed the Commission as one of the strongest factors in what has brought about the efficiency of their schools. Whatever cost would be necessary to ensure the training of the young people into ability for rural life and towards a liking for it might be counted as a profitable investment on the part of the community and the state. Fortunate are the people who learn to use, and choose to use, their material wealth for the enrichment of life itself and the improvement of opportunities for boys and girls in the country.

The Other Interests to be Considered.

It is not enough that the adult population should be given assistance in matters directly concerned with their schools and occupations only. The experience of other countries reveals the distinction between the development of agriculture and the uplift of rural life. Every department of rural life must be taken into account.

The problems of the farm itself in regard to crops, fertility, weeds, labour and profits are foremost. Close beside them are the problems of the farm home. More than any other calling, farming is a mode of life as well as an occupation. Here the home plays an important part in the occupation as well as in the domestic and social life of the community.

The rural school is capable of immensely greater service in ministering to the intellectual, social and spiritual needs of the population; and the instruction and training of the adolescent youth towards efficiency for rural life under educated, acceptable and capable leadership is an obligation of urgency and highest importance.

Greater facilities for, and a better public spirit towards, wholesome recreations are necessary. It is eminently important that the farming operations should be profitable; but that is not enough. It is necessary that rural life should be interesting and satisfying to young people. The exciting and even sensational entertainments and amusements of the town are a strong magnet on many natures. Competition in kind by the country in this field of distraction is neither possible nor desirable. Finer music is ever the attraction which prevails over the call of the sirens. And the taste for the pleasures of playing, working and living in the country, the capacity for helping to provide them, and the preference for staying there to enjoy them, are to be conserved and developed in youth.

Co-operation is Wholly Beneficial.

Organized co-operation in business has been found beneficial financially, intellectually and socially. Men and women, who associate themselves for business purposes to accomplish ends for their common good, gain respect for and confidence

in each other as they come together. The natural leaders find their place of willing service for the community. The benefits to the locality are not opposed to personal advantage. Individual effort finds its best opportunity in the prosperous neighbourhood; and prosperity which is shared adds to the richness of living as well as to the wealth which is possessed.

It is high time for Canada to recognize the difference between the primitive conditions of the undeveloped country and the complexities of advanced rural life in a democratic civilization. The way to satisfaction and success in rural life is by pooling the intelligence, the business ability and the social spirit of the neighbourhood, and then, with local, provincial and Dominion assistance, to organize that illimitable fund of self-help for application to the community.

The problems and needs of one neighbourhood are in their essence substantially the same as those of a township, a county, a province and the nation. The national problem is so large that it seems beyond the capacity of any individual or organization. On the other hand the betterment of the situation in one neighbourhood is within the power of those who live there. That may be advanced by community effort, competent leadership, financial assistance, and the enthusiasm which finds from something accomplished something done, new confidence and strength for wider tasks unto the perfect day.

WHAT THE COMMISSION RECOMMENDS FOR CANADA.

Rural Elementary Schools.

The question of prime importance is to get the teachers and courses of the rural elementary schools faced aright. A good deal is being done in several provinces, notably those which have agricultural colleges and provide special courses for rural teachers, but years of time will be required.

Intermediate Rural and Rural High Schools.

Early efforts should be made to establish or extend intermediate rural classes (or schools) and suitable rural high schools for pupils of both sexes from thirteen years of age upwards.

Intermediate Rural Classes or Schools.

In general the training at these schools would prepare pupils for engaging in farming and housekeeping occupations and for admission to the third year of rural high schools.

The qualifications for admission should be thirteen years of age and over and the completion of the work of the elementary school or ability to write, read, draw, and calculate to the satisfaction of the principal or committee on admission. Some of the classes would be separate for boys and girls. The courses would continue two years of five to seven months each at the school, and the rest of the year at the farm or home according to local conditions.

The kind of work to be done at the school would provide for series of experiences in proper sequence and have regard to the conditions of farming and housekeeping in the locality.

Chief Objects of the Course.

The object of the school would be the preparation for general farming and successful life in a rural community. The courses of work should be provided with that in view, and the methods of instruction to be followed should be subordinate to that chief aim. Too often the method of instruction in rural and other schools has been the one which seemed the best adapted to preparing pupils to pass examinations for which the chief qualification has been the possession and exercise of an excellent verbal memory. There should be the maximum of practical work arranged in proper sequence for the development of the pupil and, consistent with that, the use of books. So far as the benefit to the pupil is concerned, this minimum of time on books would likely result in the use of books in such a way as to render the student the maximum of service.

Throughout the whole course, and in all the work and study, due regard should be had to the development of a spirit and habit of good citizenship. That may best accomplished by the student participating in forms of activity which are part of the social life of the community and of the social and intellectual life of the school as an institution.

Rural High Schools.

The rural high school, with its four year course, would give a wide basis of general training and knowledge upon which to base further study and work. It is an institution which should give an excellent and suitable education for rural life and should prepare students for admission to an agricultural college.

The course would be four years. During the first two years the work to be done would be similar to that in the intermediate rural school with the difference that the high school might continue longer each year.

Science subjects should be taught particularly in the relation of their application to rural work, rural problems and the principles underlying the systems, methods and operations of farming and housekeeping.

On the literary social and cultural side, special attention should be given to language, literature, history, physical culture, singing and such experiences as make for the enrichment and efficiency of intellectual and social life in rural districts.

In general the training at this school would prepare pupils for engaging in rural occupations and housekeeping and for admission to agricultural housekeeping and arts colleges.

Some of the Advantages.

Where no provision has existed for the carrying on of systematic productive work, in connection with the organized studies at the school, the pupil has been unable to bring the different elements together for his growth in either intelligence or ability. When the subject-study has been carried on by itself, unrelated at the time to practical or manipulative work in connection with it, only a few pupils are usually able to profit by the information thus acquired When both are carried on

together and the pupil writes up a record of what he has observed, what he has planned or reasoned and what he has done, the record itself is both a means toward and an evidence of clear and consecutive thinking on the part of the pupil. The habit of putting ideas into written form is in itself good mental training and also puts the ideas thus expressed better within the command of the pupil.

The progress to be expected in the boy himself would be, in the main, along five lines:

(1). The development of the habit of observing and learning by trying to accomplish a definite useful piece of work in which his interest was keen and continuous.

(2). The development of practical ability from trial and experience in carrying out processes necessary to give effect to his plans; the development of skill in work and of power in managing himself with the least waste of time and strength, and in managing tools, machinery and materials to the greatest advantage.

(3). The formation of the habit of seeking information which could be depended upon to enable him to understand the principles underlying what he was planning to do and trying to do. That would be fostered by discussion with his father, the teacher and others as to how best to accomplish the desired ends, by conferences and discussions with other boys who were carrying on farming-projects, and by the study-project of reading and study arranged in proper sequence to give him a wider range of knowledge of use to him in the definite farming-project which he had in hand.

(4). The establishment of habits of forming reasoned judgments and opinions upon situations, conditions, theories, principles and methods of farm work and management.

(5). The development of will-energy to give effect to his decisions and of desire and ability to co-operate with others in useful undertakings.

Resident or Travelling Instructors and Instructresses.

Resident or travelling county or district instructors for farming and housekeeping should be provided as soon as as is practicable. These instructors would carry on work similar to much of what is undertaken at present by district agricultural representatives in Ontario and Quebec. The character and extent of the work would be adapted to the conditions of the district and should follow along the lines indicated hereafter. As soon as provision is made for intermediate rural schools or rural high schools the instructors should be associated with them; they would be particularly useful in helping to co-ordinate work on the farms with the work at the schools—the agricultural projects with the educational projects.

It would be an advantage, and it has almost become a necessity, for the county or district instructor to have both suitable headquarters and an assisting staff adequate in numbers and efficient in qualifications.

As soon as the county or district instructors could be associated with Illustration Farms such as those arranged for by the Committee on Lands of the Commission of Conservation, it would be feasible to develop the various divisions of the work to much greater advantage. The Neighbourhood Improvement Associations, which co-operate with the expert in the development of the Illustration Farms, would be good local bodies with which to work.

Different kinds of work are undertaken by the district representatives in different areas to meet local conditions and local needs. The duties of the district representative are as various as the conditions of rural life in the place. At one time the representative is required to give one or more lectures, then to carry on practical demonstrations, and again to offer practical advice on some particular farming problem. It does not seem feasible for one individual to carry on these multitudinous duties satisfactorily and effectively, particularly as in each division more and more will be expected and more and more is required.

Outline of Work for a County.

The matters of first importance to be provided for in Canada at the present time are:—

(1) Visits of inspection and instruction and advice to the individual farmers on their own places.

(2) Holding field meetings with farmers in connection with field crops, fruit culture, live stock, etc.

(3) Interesting the rural teachers in rural elementary education so conducted as to serve agricultural and rural life.

(4) Arranging for and taking part in courses of instruction in elementary agriculture and school gardening for rural teachers at convenient centres.

(5) Arranging annual gatherings and exhibitions to illustrate the year's work and progress in agricultural education.

(6) Arranging for short courses of from two to four days' duration at convenient centres throughout the county or district.

(7) Arranging for longer courses of systematic instruction during four months of winter. These may take the form of the Irish short courses, being held two half days a week at each place, classes at three centres being carried on each week.

(8) Arranging and giving lectures to farmers' clubs, farmers' institutes and other local organizations.

(9) Advising by correspondence and reporting on specimens of insect pests, weeds, soils, etc., sent in for examination.

(10) Distributing bulletins and other printed matter from the Departments of Agriculture and Education.

(11) In general these instructors would carry on work similar to some of that undertaken by district representatives in Ontario and Quebec. It would be extended according to the conditions of the districts.

Schools for Agricultural Apprentices.

Such schools on the continent of Europe, in Ireland, and to a limited extent in England, pay particular attention to the training of pupils in manual dexterity and familiarity with the ordinary operations of farm work, such as ploughing, seeding, stacking, threshing, etc.

Only in the portions of Canada where settlement is comparatively new are farm schools for the purpose of teaching the ordinary farming operations necessary. In

the older districts, before a pupil is admitted to the county or district agricultural school, he should have spent long enough at practical farm work to have learned all the operations thoroughly. At the same time it is to be remembered that the actual practice of farm work in many parts of Canada is greatly below the standard of ordinary practice in England, Scotland, Germany, France and Denmark. The remedy for this state of affairs can only be gradual and comparatively slow. It may perhaps best be brought about through the co-ordinated farming-projects in connection with the intermediate rural schools and the rural high schools. The influence and instruction of the travelling instructors would doubtless also have a marked effect on the skill and effectiveness with which the farm work is done.

Farm Schools.

The proper place at which to learn farming is a farm, managed as a business concern to provide a living and competence for the owner or worker. Farm schools, where young men would learn how to do the work of farming and the methods of management, would be advantageous for people who have come to Canada from other countries without any experience of farm work under conditions similar to those of Canada or with implements and tools like those used in Canada. Particularly in the districts which are being settled by those who come from countries whose climatic or soil conditions and farming methods are different from those of Canada, it would be advantageous if a farm such as an 'Illustration Farm' could be designated to receive such people for short courses, lasting from a week at a time up to a longer period, according to their needs.

The Commission recommends for such districts an Illustration Farm on a plan somewhat similar to those arranged for by the Committee on Lands of the Commission of Conservation. It might be the headquarters of a travelling instructor. To supplement the information and advice which such an instructor could give on their own farms, he could meet the newcomers in groups from time to time at the Illustration Farm to give illustration and demonstration of the operations and methods of farming suitable to the district and to the resources of those who are settling in it. The waste of time which often occurs, the loss of crop which sometimes ensues, and the disappointment for a period of one or more years which frequently comes to the beginner, might be in a large measure prevented. Whatever would accomplish that would be of economic advantage to the whole community, not merely from the immediate saving and prevention of loss, but from the ability, knowledge and spirit resultant in these new settlers. The benefit would be to the individuals themselves, to their community, and to the business and transportation interests.

County Agricultural and Housekeeping Schools.

Concurrently, a beginning should be made in the establishment of county or district agricultural and housekeeping schools for young men and women from 17 years of age onwards. These would be somewhat similar in purpose and organization to the Danish agricultural schools, and the county, district or state agricultural schools of the United States. Of these latter there are now more than 100, located in 17 different states, which support them in whole or in part. They are distinct

from the agricultural colleges. Two features distinguish these county or district agricultural and housekeeping schools. The courses are short, each is complete in itself and directly and specifically vocational for those who have already had a few years of experience in practical work; and the schools are residential.

Agricultural Colleges.

The agricultural colleges in Europe do not differ from Canadian agricultural colleges in such a way as to make it necessary or useful to give outlines of their courses in detail. One outstanding difference inheres in the fact that the Canadian agricultural colleges have professedly aimed to educate young men to go back to the farms to carry on farming there Then claim credit for the extent to which they have accomplished that. On the other hand, the agricultural colleges of Europe definitely profess to train young men for professional service in connection with agricultural and rural life.

It appears to the Commission that the time has arrived when a similar aim and course should be followed at the agricultural colleges in Canada. The need for capable and thoroughly trained men is already so great that the present capacity of the agricultural colleges would not suffice to meet it for several years to come.

To Train Public Servants.

To meet that need, it appears to the Commission that the agricultural colleges maintained by public funds should devote themselves chiefly to the education of those who would serve the rural community. Under present conditions it does not seem probable that any large percentage of the working farmers can be spared from their occupations or can have opportunity to take a full course at an agricultural college. The helpfulness of the agricultural college can be carried to every community through the labours, knowledge and character of men and women who are trained at the college for professional service; and it can best serve the rural population through the education of such men and women.

The training and the education of the practical working farmer should be provided for in the elementary school, the intermediate rural classes, the rural high school, the county agricultural school, and by short courses at district centres, all of which should be easily accessible to him. The advantage to the practical working farmer, who can take a full course at an agricultural college, will be largely of a personal character for his own benefit.

This is all in line with the systems of industrial and technical education for industrial and technical workers in Germany and other countries. The working mechanic and also the foreman, in the workshop or factory, receive their education at the continuation schools, and at the lower and middle technical schools. Only those who are to become foremost leaders and directors of industry in a large way, and those who are to teach, take the full course in a technical college.

This is also in accord with the methods followed in Denmark and Germany for the education of farmers and rural communities.

Real Scarcity of Trained Men.

At the present time the supply of competent men obtainable as instructors in agriculture is entirely inadequate to meet the demand. It is important that thoroughly trained men should be available. Men for this educational work need liberal education and practical experience of work similar to that of the department which they are to direct. Their general education should give them a good grounding in the natural sciences, particularly in their relation to the science and art of agriculture. They should have a good knowledge of technical and practical agricultural and farm practice, and have sound acquaintance with the important questions in economics and sociology, as applicable to rural communities. It is also important that they should have a good knowledge of the art of teaching and the underlying principles of it.

It would seem necessary that the district instructor should be a graduate of an agricultural college or have the education of a rural high school and be a graduate of the science department of an arts college. The qualification for a teacher in a rural high school or a county or district agricultural school should not be less thorough and wide.

The First Duty of Agricultural Colleges.

When the agricultural colleges devote far more attention to the training of men and women who will become teachers, instructors and executive officers in connection with the organized system of agricultural education, it will not be necessary and it may not be advantageous for them to give up their 2-year courses and shorter courses.

The holding of short courses in each agricultural college would continue to attract to the college large numbers who might not attend short courses in their own locality, and others for whom more advanced instruction could be provided at the headquarters.

It is not suggested that the agricultural colleges should drop any of the work they have been doing, but that each college should as a first duty direct its efforts to provide suitable courses for men and women required to fill the professional or official positions in connection with the further development of agriculture and agricultural education.

It would seem desirable that the 4-year courses should be specially for those who are being educated to render professional and continuous service in some public capacity; that the 2-year courses should qualify men and women for public work and also serve some who desire to return to their farms and homes; that the 1-year courses should serve also for those who are to occupy positions requiring long practical experience and acquaintance with farm management and less scientific knowledge in connection with county work and illustration farms.

Training of Experts.

Particularly from the action of Germany, France, England, Ireland and the United States, it is evident that the state as a whole regards a supply of thoroughly trained and competent teachers, specialists and leaders as a prime necessity for the promotion of agricultural education and the continuous betterment of agriculture and rural conditions.

While the Commission recognizes the excellence of the work being done at the several agricultural colleges in Canada at the present time, it is of opinion that extensions of their work are required to meet the growing needs of the agricultural population, and to be ready for the provisions recommended for education for rural communities. These extensions should be provided for at once in the following directions:—

1. Courses for the preparation of teachers qualified to carry on the science work and practical work in connection with intermediate rural schools, rural high schools and county or district agricultural schools.

2. Courses for the purpose of preparing district instructors who, in addition to technical and practical instruction in agricultural work, would receive training in the art of teaching and in the administration of affairs in rural communities.

Organization of Local Rural Development Boards.

While these matters are in progress for the training of suitable men in sufficient numbers at the agricultural colleges and elsewhere for directive positions and as teachers and instructors, the organization of local rural development boards should be gone on with.

The first steps to be taken in a county, after the formation of a local rural development board, would be the making of a census survey of the numbers, ages and previous education of the young people needing further education. Early in its work of investigating and planning, the local development board should obtain the advice of an expert or experts, preferably by personal conference after having gone over the ground.

Then a statement of a proposed plan of the development service with the budget could be sent on to the provincial authority. After that, experience, discussion, counsel and co-operation would make the path to follow plain and clear.

In this way Canada could bring into full operation a system of instruction for the whole rural population more complete than has been found in any one country, but not less thorough than is required by Canadian conditions. Canada has need for it and Canada has the means and the men and women to make it effective.

EXTRACTS FROM CHAPTER X OF PART II.

EDUCATION FOR HOUSEKEEPING OCCUPATIONS.

It cannot be insisted upon too much that the occupations of the people have a far-reaching influence and effect on the quality of the national life. The homes are the units on which civilization is based and out of which it grows. For every reason it is important that the girls and young women should be given a chance to develop vocational ability for housekeeping and homemaking.

The influence of the homes on the children is direct and continuous. Good homes minister to the welfare of the people by ensuring conditions under which the

children may be healthy, wholesome and happy, and be directed towards the exercise of right ambitions and aspirations. The effect of the homes on the level of the community is like the influence of the moon on the level of the sea. While individual achievement in any one direction may raise the person to the top, the crest of the wave is only a little above the general level ordained by gravitation and the tide. Good homes well kept keep the tide of life high for the whole of the community and the state.

Other Countries are Doing Much.

In European countries much attention has been given in recent years to the question of the vocational education of women, particularly for housekeeping and homemaking.

A statement of some of the provisions in Germany is given in the report on that country. In the kingdom of Prussia alone there are 50 stationary housekeeping schools, 41 itinerant housekeeping schools, and 3,781 rural continuation schools where housekeeping is taught.

In England, lessons in domestic subjects are provided for in elementary and secondary schools, and also in a number of special polytechnics, particularly for the training of teachers and leaders.

In Ireland much attention has been paid to this branch of vocational education by the Department of Agriculture and Technical Instruction.

The United States has been regarded for many years as leading in the matter of the vocational education of women. If there be any respect in which a comparison of merits might be made to the credit of Europe, it is in regard to the training and qualification of those who are appointed as teachers. The European countries follow the practice of a prolonged and thorough training of those who are to teach, whereas in the United States, as in Canada, a good deal of importance is attached to resourcefulness and ability to make a good showing to the public.

The National Council of Women.

In all countries voluntary associations of women have taken the lead in pressing for improvements and advances in the education of girls and women, and have thereby accomplished much. Their efforts have led to the maintenance of special classes and schools by public authorities. Most of the progress in Germany was due to the work of voluntary associations. Reference has been made in the report on Germany to the Lette-Verein and to the Swabian Women's Society and the Women's Society of Frankfurt.

In Canada several associations of women, notably the National Council of Women, have been active in seeking for the inclusion of provision for the training of girls for housekeeping and home-making in the elementary and secondary schools. Mrs. Lyle appeared before the Commission at Hamilton, Ont., with others representing the Hamilton Local Council of Women. Her statements may be taken as representative of the attitude and desire of other women who testified before the Commission.

Some of the main features of her evidence are as follows:—

In a city like Hamilton, if the early training of the schools is to be fruitful of good results, there should be classes where girls, who do not go to the Collegiate Institute and who are obliged to earn their living, could have further instruction.

A large proportion of the girls leave school at 14 years of age when their public school course is ended, many of them going into factories and stores. The Local Council of Women would like to see day and evening classes established in the Technical School whereby girls would be enabled to continue their studies until they were qualified to enter a higher class, such as a housekeeper's course embracing every phase of work necessary in a well-ordered home. These classes should be open to the children of the well-to-do equally with the girl who works to earn her living; the former needs to supplement her school training as well as the latter.

The present difficulties in Hamilton are two:—

1. Many of the pupils, owing to various circumstances, never enter the Collegiate Institute. They are thus prevented from receiving the instruction given there.

2. The lack of training in domestic subjects prevents them from going to Macdonald Institute or Macdonald College.

The Local Council of Women would like to see service in the home lifted to the same plane as the profession of nursing. The Council does not believe the home should continue to be the only place for which special training is not regarded as necessary.

Elementary Schools.

The Commission is of opinion that preparation for housekeeping should be provided for in all the courses for girls from the age of 11 or 12 onwards. Such part of the courses would be in the nature of pre-vocational education for housekeeping. Such courses are at present provided in many of the elementary schools in all the provinces of Canada. They are provided in the supplementary courses of the public schools in Scotland, at many of the elementary schools throughout England and France.

Two departures from the usual form of organization may be mentioned: in Aberdeen the girls devoted three weeks continuously, before they left the elementary school, to practice and training in domestic subjects. Another example was a residential school maintained by the county education committee at Northampton, England. In this instance, girls in the rural elementary schools might win scholarships. These entitled them to a course of three months' practical training in the county residential school for domestic science. The whole cost to the county education committee, not including charges on capital account, was reported to amount to less than $2 per week per pupil. The school had about 30 pupils in attendance. Other county education authorities in England have similar centres.

Secondary Schools.

The Commission is of opinion that it is desirable to provide secondary education for girls with particular regard to instruction and training in, the preparation and serving of foods, the preparation cleansing and use of clothing, housekeeping includ-

ing ventilation, heating, lighting and sanitary administration. This might be done at the housekeeping department of a technical high school or at a rural high school, with some co-ordination between the home and school work.

Continuation Classes.

The Commission is of opinion that continuation classes for young women, devoted to instruction and training for housekeeping occupations, should be provided in all cities and towns. Attendance at these during at least one period per week should be continued until 18 years of age, unless the girl is receiving some other form of education. These might be arranged for in connection with, (*a*) the public school system, (*b*) a technical institute or (*c*) a separate school such as a middle housekeeping school.

Middle Housekeeping Classes (or Schools).

The Commission recommends that classes be provided for:—

(*a*) Housekeepers who can devote one or more periods per week for a term of three months.

(*b*) Young girls who have left school and who desire training as house-workers and home-helpers.

(*c*) Women in domestic service or seeking to qualify for domestic service.

(*d*) Women employed at industrial and business occupations during the day.

Courses for those who had had experience in housekeeping would be chiefly by demonstrations, instructions, lectures and reading. Particular attention should be given, as in the German schools, to the study of costs and values, to analysis and allotment of income to different classes of expenditure, and to simple bookkeeping.

The courses for those who require it should provide enough practice in cooking, sewing, millinery and housekeeping to enable them to profit in a practical way by attendance.

For those to whom it was practicable, housekeeping projects in the daily work of the home could with advantage form part of the school course.

This school might form part of a middle technical school; but it would appear desirable to aim for a separate institution under separate management.

In carrying on the work of the school a good plan might be to devote forenoons for mistresses in charge of their own homes, afternoons for young girls and for house servants and girls preparing for service, and evenings for those employed at industrial and business occupations during the day.

The Training of House-workers.

The Commission is of opinion that general provision should be made for the instruction and training of those who desire to qualify for service for wages in the homes of the people. Testimony was brought before the Commission from various quarters, to the effect that competent young women are unwilling to accept places as workers in homes because the terms 'domestic,' 'hired girl' and 'house servant' have come to be regarded as indicating a condition of social inferiority which they are unwilling to accept. It appears desirable in the interest of good citizenship to

remove the prejudice which has thus been created, and at the same time to give the house-workers an opportunity for thorough qualification for their duties.

The Commission recommends that short courses of instruction and training in housework and housekeeping should be provided. These might be of from one to six months' duration. The pupil taking a course satisfactorily would upon examination be entitled to receive a certificate of competence as a 'home-helper' or 'house-worker' of the first, second or third class.

It is a trite saying that people are moved more by instincts, prejudice and fashion than by judgment. The harmful notion has spread and is spreading throughout Canada that the doing of housework, and serving as a home helper for pay, is less appropriate for and worthy of young women than serving as office, shop or factory workers. To eradicate that should engage the efforts of women and men who all are directly concerned with home-making and housekeeping.

Resident or Travelling District Instructresses for Housekeeping.

The Commission recommends the employment of instructresses to carry on, for the housekeeping interests of rural districts, work similar to that undertaken by the resident or travelling district instructors for farming.

1. As a beginning, a travelling instructress in housekeeping might meet a class of women, arranged for by a Women's Institute or other similar organization in the locality, one half day per week for a term of 20 weeks.

The other half of the same day the travelling instructress might carry on work with the girls and teacher in the school (elementary, intermediate or high) of the locality.

2. They should be associated when necessary, in the capacity of co-ordinators, with the housekeeping projects carried on at home by pupils attending the intermediate rural schools and the rural high school.

3. These instructresses should provide demonstration lectures in cooking and housekeeping work, chiefly as a means of directing public attention towards channels along which systematic educational work could be conducted.

4. As soon as practicable, they should be associated with the short courses of a county or district school or a middle housekeeping school.

As soon as practicable, they should be associated with the work of a Neighbourhood Improvement Association and an illustration farm for the locality, similar to those arranged for by the Committee on Lands of the Commission of Conservation.

Training Teachers and Leaders.

The Commission is of opinion that advanced education for the purpose of training teachers, instructors and leaders to serve in professional capacities, should be provided in the Colleges of Household Science and Home Economics. Such colleges, by means of short and long courses, would prepare the teachers and instructors for the work of housekeeping education in cities and towns, and also educate travelling instructresses required in connection with the adult population in rural communities. Such courses would be similar to those already provided at some of the Normal

Schools, at Macdonald Institute in connection with the O.A.C., Guelph, Ont., and at Macdonald College, Que.

In this connection it would be worth looking into the organization and courses of study at the Munster Institute, Cork, and the Central Training School of Domestic Economy, at St. Kevin's Park, Dublin. There would be advantage from a study of the courses provided and the work done at the Margaret Morrison Carnegie School at Pittsburgh, Pa. Useful information would be found also from a study of the Domestic Science, Domestic Art and Domestic Industries School in connection with Teachers' College, New York. And the highest form of training, that in the Faculty of Household Science of the University of Toronto, should not be overlooked.

EXTRACTS FROM CHAPTER IX OF PART III.

SCHOOLS FOR FISHERMEN AND SCHOOLS OF NAVIGATION.

Introductory.

The fishery interests of Canada are important, not only because of the annual value of the catch and of the by-products, but because of the large number of men employed in them and of the population depending upon revenues from them. As illustrative of this, the following quotation is made from the testimony before the Commission of Mr. John Sinclair, M.P., and at that time Chairman of the Parliamentary Committee on Fisheries:—

No system of technical education in Nova Scotia would be complete if it did not deal in some way with the fishery industry which annually produces some eight millions. Nova Scotia stands first in all the provinces of Canada as a fishing province employing about 23,000 men, who represent 125,000, or about a quarter of the population of the province. The fishermen are scattered all along the coast in villages on the Atlantic, the Gulf, and the Bay of Fundy. The business has changed of late years by the introduction of motor boats, and it is necessary that fishermen should understand the machinery of them, and also build their own boats, as well as market and pack their catch.

That there is great room for improvement, and need of improvement, in the way in which the curing and other preparation of fish for the market is carried on, is made evident by the testimony before the Commission of Mr. Howard H. Smith of Halifax. The following are taken from his statements:—

The government should collect and distribute more intelligent information with regard to habits and movements of mackerel, herrings, cod, &c. The prevailing winds, currents, and temperature of the water all affect the bait fishes, and govern the movements of the food fishes. Our fishermen are quite ignorant of the known fact that fish are only obtainable in water of a certain known temperature, and that it is wasting time to try for them otherwise.

The Norwegian government takes a fatherly interest in the industry there and by technical education and practical demonstration secures best results for its men. Norwegians never think of setting nets for mackerel, herring, &c., without testing the temperature of the water. They split their pickled fish a few hours after capture, and wash it in running water, thereby extracting all blood, and making the flesh perfectly white; then pack immediately in export packages, keeping the original pickle on the fish and conserving its pristine flavour. Result:—Norway mackerel commands 100 per cent more money than equally fat and exactly similar (out of the water) Nova Scotia cure.

Our fishermen put mackerel in puncheons to soak in bloody water, and pack weeks afterwards, losing the entire flavour of the fish. They *economize* by buying a cheap barrel which will not hold pickle. Result:—rusty, discoloured fish, worth $6 a barrel instead of $13. It sounds strange, but is absolutely true.

Listen to this also. A Lunenburg banker will wash, 1,000 qtls. of green fish in the same water, in order to save a few barrels of refuse for fertilizing;—value, 50c. per barrel, total

$2 50; and deteriorate value of catch 50c. per quintal, total, $500; nett loss, $497.50. I can prove the absolute truth of this happening time and again. The old fishermen refuse to change their antiquated methods; the government will have to educate the young by training several brainy, enthusiastic young men who will devote their time to teaching up-to-date methods to the fishermen and their children.

The same question as applied to another kind of fish was touched upon in the testimony of Dr. Edward Prince, Dominion Commissioner of Fisheries. In reference to herring he said that several schemes had been attempted by the government for the improvement of the curing and packing of them.

One was to improve the salt sea herring of Canada, packed in barrels which only brought $3 or $4 a barrel while Scotch cured herring realized from $10 to $15 a barrel. When the question was put as to why Canadian herring were so low in price and so little esteemed, it was said that they were inferior fish; that our Canadian herring are not equal to Scotch herring when in the sea; that the fresh Scotch herring is a better fish. On my suggestion to the Minister of Marine and Fisheries, it was arranged to bring out an expert curer and cooper to make barrels, and six or eight curers who gut the herring—what we call 'gutters' in Scotland—and they were stationed at Canso and down at Clark's Harbour. They also went out to British Columbia and different points. They fixed up a small curing establishment and put up herring. A great many fishermen went there and saw this, and the result of the experiment was that herring quite equal to any cured herring in the world were produced out of our Canadian herring. Good barrels of herring were put up and shipped away to New York, some to St. Petersburg, etc.

Some Conclusions.

From the testimony submitted to the Commission, the needs of those directly engaged in fisheries appear to be of two kinds. One is connected with the catching, curing, packing and marketing of fish, and the other with the managing of engines or other machinery used in modern vessels and having sufficient knowledge of navigation.

The Commission is of opinion that, in the interests of the fishermen and the fisheries of Canada, further improvements and extensions of what at present is being done should be made by the following means:—

1. The issuing of simple and well illustrated bulletins for the service of fishermen, similar in plan to those issued by the experimental farms and agricultural colleges.

2. The employment of travelling instructors to give short courses of demonstrations suitable for fishermen at centres easily accessible to them.

3. The provision of short courses of from one to two weeks' duration similar to those which are described as being given at Piel, near Barrow-in-Furness, England, and at Aberdeen, Scotland.

4. The inclusion of nature study, in connection with marine life and fishing, and some suitable practical work for the pupils in the elementary and secondary schools in fishing communities.

5. The provision of winter schools for fishermen having courses of instruction of two kinds, one kind dealing chiefly with the life and habits of fish, methods of catching, curing, packing and marketing; the other kind dealing with matters of navigation, and including courses of instruction in the use of engines, machinery and mechanical plant used in the industry.

6. The establishment of one or more central schools (*a*) for the maritime provinces, (*b*) for the St. Lawrence, (*c*) for the Great Lakes, (*d*) for the Pacific Coast,

to provide courses of instruction similar to the winter schools, but more advanced in character.

After a time one or more of these central schools might provide the highest forms of scientific instruction for those who would be required as technical experts. Either the winter schools or these central schools, if located near a fish hatchery, could be used for the technical and scientific instruction of hatchery officers.

ACKNOWLEDGMENTS.

We have already stated that we had 'conversations' with many men and women, eminent and wise in educational affairs, in the several countries visited. We appreciate most heartily the service they rendered us and we venture to hope that, by means of the publicity given to the information contained in the report of these 'conversations,' they may render useful service to very many persons in our country and perhaps even wider service in their own. We recognize that their contributions form one of the most valuable of the constituent elements of the whole Report.

We regret that one member of the Commission, M. Gaspard de Serres, of Montreal, was unable to accompany the Commission during its inquiries in Europe and the United States. During such periods his place was filled by Mr. Ernest Belanger, B.A. Sc., of Montreal. We desire to record our appreciation of the diligence, thoroughness and ability with which Mr. Belanger assisted the Commission in the discharge of its duties. He rendered valuable help in preparing the report of the inquiry in France.

During part of the inquiry in the United Kingdom and on the continent of Europe the Commission was accompanied by Mr. Frederic H. Sexton, Director of Technical Education and Principal of the Nova Scotia Technical College. Principal Sexton was sent abroad by the Government of Nova Scotia and his expenses were paid by that Government. He made application to be permitted to accompany the Commission. That was granted on the understanding that it would continue and extend only so far as it would not hinder, or interfere in any way with, the work of the Commission. As a matter of fact the company of Professor Sexton, during the whole period his time permitted him to be with us, was a distinct advantage and benefit to the Commission, particularly during the inquiry in Germany. We wish to record our appreciation of Professor Sexton's professional ability and his helpfulness and geniality.

We cannot speak too highly of the diligence and the good service rendered continuously by Mr. Thomas Bengough, C.S.R., Toronto, Secretary and Reporter to the Commission.

OUR FINAL WORD.

From all the Commission learned in its survey of industrial, housekeeping, agricultural and educational conditions, it does not appear that the present generation can fully discharge its obligations for life and other heritages, or enter upon the full enjoyment of its rights and opportunities, by mere payments of money for education. The various forms of education must be supported more than they have been by the

personal effort and service of parents and others. These must be given on behalf of the instruction and training of the young, together with adequate financial support of schools.

As a final word, we wish to express our appreciation of the opportunity that has come to us to render a great and lasting service to Canada, and to acknowledge the unfailing consideration which has been extended to us by the Minister of Labour and his department.

All of which we most respectfully submit.

Dated at Ottawa, the 31st day of May, 1913.

JAS. W. ROBERTSON,
Chairman.

JOHN N. ARMSTRONG,
GEORGE BRYCE,
G. DE SERRES,
G. M. MURRAY,
DAVID FORSYTH,
JAMES SIMPSON.

THOS. BENGOUGH,
Secretary.

INTERIM STATEMENT BY THE COMMISSION.

OTTAWA, March 28, 1911.

To the Hon. W. L. MACKENZIE KING,
Minister of Labour.

SIR,—We have the honour to submit to you a statement of the work of the Commission to this date. It has been arranged as follows:—

I. The plan of work adopted by the Commission and a summary of the inquiry conducted.

II. The equipment found throughout Canada in respect to industrial training and technical education; and

III. A survey of the testimony received at the sessions of the Commission.

I. THE PLAN OF WORK ADOPTED BY THE COMMISSION AND A SUMMARY OF THE INQUIRY CONDUCTED.

It is considered unnecessary to recite the steps which led up to the appointment of the Commission by the Government of the Dominion, but for the sake of clearness and completeness a copy of the order in council and of the Commission itself is attached hereto. Copies of the correspondence which passed between yourself, as Minister of Labour, and the premiers of the several provinces in respect to this matter have also been attached.

The several members of the Commission, having been notified of their appointment, were invited to meet you as Minister of Labour at the Department of Labour on July 6, 1910. All the members, together with the secretary and reporter to the Commission, were present. After hearing from you a statement giving an outline of the work expected to be done by the Commission and the nature of the inquiry it was to conduct, the Commission was duly constituted, and immediately proceeded to make plans for carrying out the duties assigned to it by the Commission itself, as well as by the directions given by you.

It was decided to visit the chief industrial and commercial centres throughout Canada, beginning at Halifax, N.S., and crossing the Dominion to Vancouver Island. Itineraries were duly drawn up and notifications of the intended visit of the Commission were sent in advance to the mayor, to the president or chairman of the board of trade, and to other persons in each locality directly engaged in, or concerned with, the industries and education.

Our duty, as set forth in the order in council and in the Commission itself, requires us to make full investigation into the matters of industrial training and technical education, in so far as these can promote industrial efficiency, which 'is all important to the development of the Dominion and to the promotion of the home and foreign trade of Canada in competition with other nations.' In the discharge

of that duty the Commission has given our attention to the manufacturing industries, to agriculture, to domestic occupations, to mining, to the fisheries, to the lumber interests, to the building trades, to the transportation services, as well as to the technical training required for commercial operations.

The Commission has also made inquiry into the needs of existing industries in respect of labour, the quality of labour which is available, and requirements of such labour for industrial training and technical education.

The Commission began its work of inquiry at Halifax, N.S., on July 18, 1910. It continued to visit places in the maritime provinces until August 26. After that date the chairman left the Commission for a time to fulfil an engagement he had with the government of Newfoundland. At the same time other members of the Commission went to the Canadian National Exhibition at Toronto.

Between August 30 and September 16 the Commission did its work in two divisions, and visited fourteen of the smaller industrial towns in the province of Ontario.

On September 19 the Commission as a whole reassembled at Montreal. That week was devoted to Montreal, Macdonald College and Quebec city. Conferences were held with representative men and women at Montreal, and arrangements duly made for the presentation, at a later date, of testimony from the various interests concerned with industrial training and technical education in Montreal and its neighbourhood.

On September 26 the Commission resumed its itinerary in the province of Ontario.

From November 1 until the first week of December the Commission visited places in Western Canada, beginning at Port Arthur, Ontario, and ending at Victoria, B.C.

On the return journey the members visited cities in the Western States where trade schools and other methods of industrial training had been established. A list of the places visited is submitted together with some notes on the institutions which were examined. The full report on these will be included with the reports of the visits of inquiry to the United States, to be made after our return from Europe.

During January and part of February the Commission revisited Toronto, carried out its inquiry at Sault Ste. Marie, Ontario, and in places in the province of Quebec; and held final sessions at Ottawa.

The Commission has visited 100 places (cities, towns and important localities). It has held 174 sessions to receive testimony. It has transcripts of the evidence of 1,470 men and women. Written memoranda were requested from or offered by a number of these witnesses. One hundred and eighty such documents have been received and are on file with the Commission; others are still coming to hand.

In every province the Commission requested an opportunity to wait upon the Provincial Government, and it was received by the Premier with other members of the provincial cabinet, or by some member of the cabinet designated by the Provincial Government to receive us. As directed by you, the chairman conveyed to the Provincial Governments the message expressing the appreciation of the Dominion Government of the offers of co-operation and assistance which had been extended by the provincial authorities to the Commission. In every province the Commission received, not merely assurances of good will, but had the benefit of willing and helpful co-operation.

The halls or rooms for the holding of the sessions had been arranged for in every case by the local authorities. The following instances are illustrative of the other places:—

Halifax, N.S.—Provincial Technical College.
St. John, N.B.—Board of Trade Rooms.
Fredericton, N.B.—Chamber of Legislative Assembly.
Charlottetown, P.E.I.—Chamber of Legislative Assembly.
Montreal, P.Q.—*City Council Chamber.
Quebec, P.Q.—City Council Chamber.
Toronto, Ont.—City Council Chamber.

In the several localities the Commission visited industrial establishments and educational institutions during either the forenoon or afternoon or both. Sessions for receiving testimony were held during the evening; and when necessary, also during the afternoon or forenoon, instead of visits for observation. The Commission was usually met on its arrival by the mayor of the place and the members of a reception committee, representing the city or Town Council, the Board of Trade, the Manufacturers' Association, the educational institutions and the labour organizations.

As a rule the local authorities provided the vehicles—usually automobiles—for getting around to the various establishments. These were always provided free of cost to the Commission.

The first session at each place was opened by the reading of the King's Commission. Then followed a brief address of welcome and a statement of the general character of the city or town in respect to industries and education, by the mayor or chairman of the reception committee. The chairman of the Commission made a brief statement explanatory of the object of the Commission, and the way in which its inquiries were conducted. Usually a list had been obtained from the local committee of representative men and women, who were prepared to testify regarding the need and present equipment of the place in respect to industrial training and technical education. The statements were taken under oath or solemn affirmation. The information was usually secured by means of question and answer. The chairman conducted the examination in chief and each of the other Commissioners in turn asked questions as he saw fit. The witness was given an opportunity to make any statement bearing on the matters inquired into, and to supplement his oral testimony by a written statement. Many of the persons occupying the most important positions in industrial activities and educational administration were requested to furnish written memoranda. Opportunity was given to any person who desired to offer testimony, either orally or in writing. No one was summoned officially to appear before the Commission. Invitations were extended to representative men and women. Those who have testified did so with evident frankness, and appeared satisfied that they had thereby contributed something useful in respect to industrial training and technical education, and in regard to the needs of the industries and the needs of the young people and workers of the locality.

The members of the Commission have been impressed by the numbers of thriving industries in comparatively small towns. Throughout all the eastern provinces many

*Sessions held also at the Monument National, McGill University and the Board of Trade

establishments were visited, from which the products were being shipped throughout the whole of Canada. These towns enjoyed no special shipping facilities or any apparent advantages in regard to cheap power or nearness to raw material: The enterprise, ability and energy of a few men have enabled them to make the beginning upon a small scale from which businesses employing from 50 to 200 persons have grown up. Factories were situated where abundance of fresh air and light prevailed, and where the workmen could provide homes under favourable conditions for their children. As instances, we mention a furniture factory located at Windsor, N.S., with its products being shipped throughout Canada, nearly one-half to the west of Winnipeg, and a portion to Newfoundland. Windsor, N.S., is not even on the main line of a through railway.

At Truro, N.S., there is a cap factory, reported to be turning out nearly one-half of the caps required by the Canadian trade, making headway under all existing competitions.

At Charlottetown, P.E.I., a machine shop was turning out gasoline engines, one-half of which were being shipped west of Winnipeg. About 100 men were employed and they were working overtime.

At Sackville, N.B., a stove works was doing a local trade and also supplying its products throughout the Northwest. The manager stated that the cooler temperature of summer and the other favourable conditions for the workmen gave sufficient advantage to enable him to increase the business.

At Fredericton, N.B., a shoe factory employing over 100 persons was shipping boots and shoes to Montreal, to Moosejaw and other points in the West.

At Victoriaville, Que., we found four prosperous industries—furniture, chairs, iron bedsteads, clothing—all reported to have grown up within seven years. The products from each were being shipped all over Canada, in each case about one-half to points west of Winnipeg. We saw one carload at each of two factories loaded for Vancouver, B.C.

Instances of similar development and extension of trade could be cited from a score of places in Ontario. Those mentioned are typical and not exceptional. It has been made evident that the industrial development of Canada has not been going on only in the larger towns and cities.

The Commission observed the establishment and growth of comparatively new industries whose managers testified that they required increasing numbers of highly skilled and technically trained workers, as for example, electrical works and automobile factories.

II. THE EQUIPMENT FOUND THROUGHOUT CANADA IN RESPECT TO INDUSTRIAL TRAINING AND TECHNICAL EDUCATION.

Provisional summaries have been made of the information obtained regarding the present equipment of the Dominion respecting industrial training and technical education. These are arranged as underneath and are submitted herewith:—

A. Universities, colleges, and experiment stations.

B. The equipment and courses at secondary schools and public schools with particular reference to shopwork, manual training, domestic science and nature study with school gardens.

C. Night schools and evening classes for industrial training and technical education.

A provisional survey of what is contained in these summaries indicates that at many places in Canada, as enumerated in them, a good beginning has been made.

There is hand work of some sort—hand-and-eye training—in the elementary grades of many schools from the kindergarten up. In a number of towns there are courses in manual training and household science; and other places are planning to introduce them. That is part of general education for development, for culture and for citizenship; and it is also preparatory education to which industrial training and technical education will piece on without waste.

A beginning has been made in technical education in secondary schools in Montreal, Toronto, Hamilton, Sault Ste. Marie and Halifax. Technical and commercial high schools in Montreal and Toronto are carrying on day and evening classes The evening classes are attended almost wholly by young men and women who are working in some factory or shop or office during the day or are engaged in the building trades. New technical schools have been established at Montreal and Quebec but classes in them have not yet begun. Winnipeg is erecting two new technical high schools at cost of $700,000. There are good night schools for the workers in places like Montreal, Quebec, Toronto and Vancouver, but not much opportunity in the way of classes in the smaller cities and towns where the man who earns his living by craftsmanship or in industrial work can get a further training.

Several colleges and universities provide courses of a partially technical character for what may be called the technical professions. Principal Falconer, of Toronto University, was disposed to call the education provided formerly by the School of Practical Science and now by the Faculty of Applied Science of the university, 'professional and not technical.' The institutions where the most advanced courses are provided are the University of Toronto, McGill University, the Polytechnic School of Laval University, the School of Mining of Queen's University, the Nova Scotia Technical College and the University of New Brunswick.

The Agricultural Colleges which are intended primarily for the technical education of farmers also give courses to qualify students for entering upon professional work related directly to rural occupations.

The Ontario Agricultural College at Guelph, with the Macdonald Institute on adjoining grounds, receives men and women. The courses include the various branches of agriculture, household science and manual training. An illustration consolidated rural school rounds out the equipment. During recent years some of the teachers-in-training go from the Normal Schools of Ontario to the Ontario Agricultural College for a special course of some ten weeks in nature study and elementary agriculture.

Macdonald College at Ste. Anne de Bellevue, Que. (which is a College of McGill University), carries on its work in three schools: the school of agriculture, the school for teachers and the school of household science. It also has a Macdonald Illustration Rural School with a model school garden.

The Agricultural Colleges at Truro, N.S., and Winnipeg, Man., do similar work suited to the needs of their provinces. Buildings are in course of erection at Saskatoon for the College of Agriculture as a part of the University of Saskatchewan. Extension teaching and demonstration work for the rural populations are promoted and assisted by the Agricultural Colleges in all the provinces.

III. A SURVEY OF THE TESTIMONY RECEIVED AT THE SESSIONS OF THE COMMISSION.

Of the 1,470 men and women from whom testimony has been received, some occupy foremost positions in industries, agriculture, mining, lumbering and fishing; others are engaged in educational work, including the superintendents of education, principals of universities and colleges and teachers in institutions and schools of all grades; and others represent the various trades and occupations.

The transcript of the evidence received by the Commission during its 174 sessions amounts to about 4,030 typewritten pages of foolscap size. A first analysis of it has been made and summaries have been arranged under marginal designations, according to the plan on the sheets which are attached hereto.

In general the testimony has been to the effect that provision for industrial training and technical education, in institutions and in industrial establishments, exists in comparatively few places, and in them not to an extent adequate to the needs of the industrial population.

Some of the chief matters which have come before the Commission from witnesses are presented in the following paragraphs in so far as the testimony in regard to particular industries and localities can be summarized into general terms:

The system of training young men and women as apprentices, is becoming less common than formerly. In some trades it has disappeared as a system and learners are expected and required to pick up the trade as best they can. The introduction and use of machinery where hand labour was formerly employed is given as one of the chief causes for the change. In a few shops, notably the shops of the railway companies, instruction classes and systematic instruction in the shops and at machines have been provided to meet the new conditions.

The rapid development of the country and the growth of towns and cities, have provided the lure of relatively high wages for boys and girls of 14 years and younger. That attracts them to leave school early. Frequently such young people accept places and begin work for which little training is required and in which experience does not lead to the acquisition of ability or skill in a trade or occupation which affords permanent employment or is suitable for mature years. At least part of a remedy would come through schools or courses of study which provided more hand work of a constructive kind.

The testimony was substantially unanimous in indicating that in respect to industrial training and technical education the following are among the pressing needs of the people:

(1) Some opportunity in all schools for boys when they are past twelve, whereby the boy will gain experience in constructive hand work as well as book work and thus

reveal to himself and his teacher and parents the bent of his ability to an extent that will give an indication of what he should choose, and how he should prepare, for his life's work.

(2) Provision for the boys from twelve to sixteen who intend to go into some skilled trade, to learn in school how to use common hand tools for wood and iron and the qualities of common materials. A few of these are fundamental to most industrial occupations.

(3) Courses or schools, of high school or academy grade, adapted to the boys who are going into industrial life. Such schools or courses to give them preparation for their future work equivalent to what the present high schools give to the boys going into the professions.

(4) Some education to make up to the boy, after he begins to work, for what he does not now get through lack of an apprenticeship system, some forenoon, afternoon or evening classes to give him the further knowledge of mathematics and mechanical principles; and also some variety of shop work, to develop the skill of hand and the all-round ability in some trade, which the apprentices formerly got by their long and practical training. The manufacturers and other employers of labour have expressed a willingness to co-operate in helping to make such classes and courses effective.

(5) Evening schools for workmen in the smaller cities and towns to fit them for advancement and promotion.

(6) Some enlargement and improvements of the means whereby farmers' children may learn the elements of the scientific principles which underlie rural occupations such as the growing of crops, the feeding of live stock, the fighting of weeds, insects and plant diseases, and the maintenance of fertility and beauty, and the same in more advanced forms suited to the farmers themselves.

(7) Instruction—the means and opportunity for instruction—of a similar character suited to the lives and occupations of the fisherfolk, and those engaged in the mining industries.

(8) Classes and courses for the training of women and girls to give them clear concepts of the sanitary conditions which make for the safety, comfort and economy of the home; correct ideas of economical ways of providing food and garments and of using fuels; and some practice in domestic art that will further enable them to reveal and enjoy their love for the beautiful by making beautiful things for the house.

(9) Correspondence study courses for persons who are unable to avail themselves of schools and classes; and the advantage to such persons of visiting instructors in connection therewith.

(In this connection it is to be noted that, from the many statements made to the Commission, it would appear that several hundred thousand dollars per annum have been paid by Canadians for correspondence courses provided by American institutions. Those who had taken the courses, or were taking them, testified that they derived benefit; although only a small percentage of the number appear to have carried the work through to the end of the course.)

(10) Intimate correlations and co-operations between those who manage industries and factories, the men and women most skilled in their trades and occupations, and the managers of the schools and classes where workers are trained.

A great deal of testimony was presented indicating that properly organized hand-and-eye-training with constructive work, was helpful in developing the powers of children from the kindergarten classes upward. The teachers who had experience spoke highly of its value in qualifying the children to take up bench and table work in manual training and domestic science in later years; they also testified that the hand work contributed to the progress of the pupils in what are called book studies.

The survey made by the Commission has revealed a great measure of interest throughout the whole of Canada in the subject of industrial training and technical education.

The representatives of all occupations and interests, who testified, gave the Commission the impression that they expect further action to be taken in the near future in all the Provinces, such as will result in meeting the needs which have been indicated by their testimony.

A number of persons, occupying important and influential positions in industry and education, expressed the opinion that the Dominion Government should in some way assist in developing industrial training and technical education by granting financial assistance.

All of which is respectfully submitted. By direction of the Commission,

JAS. W. ROBERTSON,
Chairman.

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