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A B S T R A C T O F A T H E S I S

ORIGIN AND DEVELOPMENT
of
TECHNICAL EDUCATION
in
CANADA

Submitted by
R. J. Johns

In partial fulfillment of the requirements
for the Degree of Master of Science
Colorado State College
of
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INTRODUCTION.

The history of the origin and development of Technical Education in Canada is replete with interesting and informative accounts of the economic, social and educational forces that have been influencing this evolutionary movement from the eighties up to the existence of the War Emergency Training Programme. Throughout the past half century the interplay of economic conditions and progressive educational thought has woven the patterns of the fluctuating programmes that have been developed and retarded from the shores of Prince Edward Island to the coastline of British Columbia.

Statement of the Problem.

What have been the nature and extent of the origin and development of technical education in Canada?

Problem Analysis:

1. What was the nature of the origin of technical education?
2. What were the results of investigations by Commissions on technical education?
3. What were the legislative Acts that aided the development of technical education?
4. What has been the character of the training programmes in each province?

5. What are the current trends in technical education?

METHOD AND MATERIALS.

The method pursued was determined by the historical character of the thesis. For the most part information comprising the body of material in the thesis was obtained by reviewing government publications.

The technique used to exhaust the usable materials was correspondence and personal explorations of the shelves of libraries. Government publications in the Provincial, department of education and technical branch libraries proved adequate to satisfy the requirements of the subordinate questions in the problem analysis.

NATURE OF THE ORIGIN OF TECHNICAL EDUCATION.

Preceding any recorded efforts to establish Technical Education in Canada, citizens of the eastern provinces were influenced to view this movement favorably by the widespread attention and consideration given to it in other countries. England's failure to keep abreast with improvements effected by technical education in Europe aroused educational leaders in eastern Canada at a time when the people

were endeavoring to improve their production and distributive methods. This anxiety found expression in a tangible beginning in technical education in the province of Nova Scotia in 1891-- the first attempt of its kind in Canada. Nova Scotia also through adequate public support passed laws which provided for a system of technical education that ranked this eastern province of Canada as having been the pioneer of legislation supporting technical education in America.

The first national expression of technical education began in 1900 with the Macdonald fund-- a private contribution. Every province in the Dominion participated in that enterprise. The enlightening and stimulating experiences gained throughout the operation of that three-year programme gave the impetus which developed national public support for the promotion and passing of the Technical Education Act of 1919.

FINDINGS OF COMMISSIONS ON TECHNICAL EDUCATION.

Research work by provincial commissions has been confined to the provinces of Prince Edward Island, New Brunswick, Quebec, Ontario and Manitoba. Without exception all these investigations revealed the need

for expanded and enriched programmes of technical education. While much progress in implementing those recommendations was achieved, retardation through the depression years inhibited the realization of the major aims contained in the reports.

The Royal Commission on Industrial Training and Technical Education, appointed by the Dominion Government in 1910, in its report of 1913 recommended the founding of a national vocational education programme. This recommendation due to the Great War of 1914-18 was not implemented by legislation until 1919.

LEGISLATIVE ACTS THAT AIDED THE DEVELOPMENT OF TECHNICAL EDUCATION.

As educationalists became aware of the intrinsic value of technical education to advance the economic interests of communities and the educational growth of citizens in school and out of school, they influenced public opinion to support legislation for the purpose of advancing the development of technical education. Provincial Acts which comprised these financial aids to local districts provided for freedom in determining the character of training programmes in accordance with local needs and also extended guidance in helping specific groups to give provincial character to their activities.

The passing of the Technical Education Act of 1919 by the Dominion Government helped to stabilize existing provincial programmes and develop new ones. The proclaiming of this Act was the first public national effort through legislation to give financial assistance to technical education.

CHARACTER OF PROVINCIAL TRAINING PROGRAMMES.

From the beginning technical education programmes in the eighties up to and including the present War Emergency Training Project, a consistently determined attitude by citizens in all provinces to make the character of programmes fit the vocational training needs of citizens and the general education needs of students in technical education, has manifested itself in demands for changes in course content. This flexibility of attitude is exhibited in the radical changes being made in provincial youth training courses to meet the objectives of the recently organized War Emergency Training schedule and also in technical high school courses, with revision from industrial arts to definite pre-vocational training.

EXISTING TRENDS IN TECHNICAL EDUCATION.

Existing trends in technical education on all levels of school work and on the adult level indicate

a definite increase in programmes and an expansion of those established. The demands for technically trained artisans in all branches of the mechanized war forces have given a definite impetus to the development of technical education programmes in all provinces. Concomitant with this development has existed an acceleration towards the inclusion in the curricula of day schools an increased and enriched programme of technical education.

CONCLUSION.

The writer after reviewing all publications which have provided the information contained in the body of this thesis has concluded that economic conditions, favorable and unfavorable, have modified the development of technical education more potently than educational thought. Educational convictions for technical education in the beginning years were acquired by vitalized contacts with successful experiences with programmes in other lands. Little experimental work was necessary to convert citizens to support technical education. When financial assistance was obtainable from Dominion and Provincial Governments programmes in all provinces have always expanded forthwith (Appendix E) and conversely programmes

were reduced automatically when grants were curtailed (5: 4: 13). With the advent of the National War Emergency Training Programme and curriculum revision towards more practical education, it seems obvious to most people now that public opinion will continue to insist on an expenditure of adequate sums of money for the maintenance of efficient technical education programmes to assist in guaranteeing the winning of the peace that will follow the successful termination of the total war.

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T H E S I S

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COLORADO STATE COLLEGE

OF

AGRICULTURE AND MECHANIC ARTS

August 1 1941

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY RICHARD JAMES JOHNS

ENTITLED ORIGIN AND DEVELOPMENT OF TECHNICAL EDUCATION

IN CANADA

BE ACCEPTED AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION

MAJORING IN TRADE AND INDUSTRIAL EDUCATION

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U. E. Lewison Dean of the Graduate School

Permission to publish this thesis or any part of it must be obtained from the Dean of the Graduate School.

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Being mindful of the many helpful suggestions and generous acts extended voluntarily to him during the organization and writing of this thesis, the writer welcomes this opportunity to give some recognition of this gratuitous service to further educational research. Among those whose courtesy and helpfulness the writer continues to cherish are:

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Chapter 1

INTRODUCTION.

The history of the origin and development of Technical Education in Canada is replete with interesting and informative accounts of the economic, social and educational forces which have been constantly influencing this persistent movement. Some conception of the character of the beginning can be derived from the following words uttered by the Hon. Mr. Carling, Commissioner of Agriculture for Ontario in 1867, the time of Confederation, (7:2,1928:1).

"Notwithstanding the great advancement we have made within a period comparatively short, I have a growing conviction that something more is required to give our education a more practical character, especially in reference to the agricultural and mechanical classes of the community, which compose the great bulk of our population, and constitute the principal means of our wealth and prosperity. What now appears to be more especially needed in carrying forward this great work is, in addition to the ordinary instruction in the common schools, the introduction of elementary instruction in what may be termed the foundation principles of agricultural and mechanical science."

An explanation of the economic conditions which prompted Mr. Carling to express this need for an education of a more practical character is found in the writings of Duncan McArthur (17:324):

"A significant change became manifest during this period in the standard of living of the residents of the older communities. Better homes were being built; more elaborate furniture was required, and the standards of the Old Land in dress were more generally adopted. In these pioneer communities the people began to use the natural resources to assist them in providing the necessities of life. This urge to help themselves accelerated the development of the saw-mills to supply lumber for building; the grist-mills to provide flour; carding mills and woollen mills to prepare the wool for spinning and to weave it into cloth."

Arising spontaneously from this effort to improve living conditions in the homes and in the community was a demand for technical education. The pioneer settlers recognized the need for special training to cope with conditions in a new country. One of the early educators who was effective in making this demand during that period was Egerton Ryerson, Chief Superintendent of Education for Ontario.

1871,
In his annual report in/ (7:9,1928;1) he expressed the following significant comment regarding the need for technical education:

"Technical education is instruction in the peculiar knowledge or special skill in any business or occupation, the training which will render the talents of the citizen most useful to the state in that particular craft or profession in which he or she is engaged, whether mechanic, farmer, engineer, teacher, merchant, architect, minister, doctor, or lawyer. As the education of the common school fits the youth for the performance of his duties as a citizen, so the technical school prepares him for the special duties of his trade or profession. Divinity, law, and medical schools for special or technical instruction have long been in successful operation."

Simultaneously with the influence of economic conditions on educational ideas, existed the stimuli afforded by the exchange of international and interprovincial experiences. History records the efforts of Professor Walter Smith, Principal of the Conservatory School of Fine Arts, Boston, Mass. (7:2,1928:1) in this respect. Speaking before the council of Arts and Manufacturers of the Province of Quebec at Montreal in 1882, he said:

"Private enterprise and munificence are at work for the benefit of the public and Mason and Holloway are just now starting on their great careers of usefulness, establishments for the promotion of technical education which dwarf by their extent and magnificence even national action in the same direction.

"It is time, therefore, for every country to consider whether it can afford to stand still and watch this

movement only and do nothing for itself. When the whole world is moving, the stagnant country is rapidly drifting to leeward and will soon find itself out of the race of progress. I beg to draw the attention of the publicists in this country to the statement which I have many times made on the other side of the frontier, namely, that it is not for the benefit or the happiness of a people to rely wholly on agriculture as a means of support. There is no profit and no honour in being the hewers of wood and drawers of water for the skilled nations; no prospect in improvement in continuing to provide for them the raw material of the arts at a low price, and purchasing from them the manufactured goods at a high price. We employ six men to raise cattle, corn, coal, oil, lumber for the skilled people, and they send us back some of our own products turned into wealth to pay for our raw material, in the proportion of the labour of one man who works with skill paying for the labour of our six men working without skill. We cannot even today pay for the labour of one Parisian art workman for a year, by the products of the labour for a year of any six unskilled workmen engaged in the whole Dominion of Canada. This is not political economy. It may be incidental to a new country, but what is being done to remedy this condition of things? Is it to last forever? If not, the remedy must come by recognizing the evil and providing by careful forethought an element in our systems of education for the recognition of industrial art and skill."

In these words is manifest the story of the indispensable need for technical education supported by public funds. Prof. Smith, among others, appreciated fully the natural need for technical education long before it became an integral part of the curriculum of our secondary schools.

At the interprovincial convention held in St. John, N.B., 1888 Dr. J. C. Fitch, the eminent author and educator of London, England (25:1887/88: xviii) said:

"I conclude, then, with this general inference from recent discussions. There is room in our schemes of instruction for increased attention to manual training. The neglect of this subject, in fact, is an undoubted mistake, and it needs to be corrected. But the necessary change in our educational procedure must be made with caution. We must not exaggerate the educational value of mere hand-work and not make it a substitute for intellectual effort. We must

not make a fetish of technical or manual instruction. We must not suppose that the world is to be regenerated by turning schools into workshops, or by dethroning the schoolmaster to make room for the artizan. The urgent question now demanding the attention of all serious educators in both the western and the eastern hemispheres is: What is the true and rightful place to be held by the training of the fingers and the senses, and the artistic faculty, as part of a liberal education, and how can such training be so given as to be instrumental in fulfilling the highest purpose of a school -- the development of a complete and rounded character, in force, in refinement, in intelligence, in moral purpose? This is not an easy problem. It is not yet solved. It will not be solved until much larger experience and more thought and knowledge have been brought to bear upon it. But every such convention as this, in which earnest teachers meet to encourage one another in the pursuit of lofty ideals, and to confer with each other respecting the best way to make teaching nobler and school more useful, will do something to render the ultimate solution of the problem easier and more fruitful"

It was not until the early years of the present century that technical education, known at that time as manual training and domestic science, was introduced into Canadian Schools. Due to the personal interest and philanthropy of Sir Wm. C. Macdonald, assisted by Dr. Jas. W. Robertson, specially qualified manual training instructors were brought from Great Britain and placed in respective schools across the Dominion (11:4:151-153).

The opinions expressed in the foregoing reflect characteristic attempts of interested citizens in the early efforts to organize technical education in Canada and to present the philosophy governing its educational advantages.

STATEMENT OF THE PROBLEM

What have been the nature and extent of the origin and development of technical education in Canada?

Problem Analysis:

1. What was the nature of the origin of technical education?
2. What were the results of investigations by Commissions on technical education?
3. What were the legislative Acts that aided the development of technical education?
4. What has been the character of the training programs in each province?
5. What are the current trends in technical education?

Delimitation of Problem:

This study is delimited to technical education supported by public funds in Canada.

FEASIBILITY

The writer is confident that this study can be conducted and completed under propitious conditions. Factors such as time, cost and availability of data will not in any way interfere with the progress of the study.

NEED FOR STUDY

Since no previous study has been made of the origin and development of technical education in Canada, it is the opinion of the writer that this study will provide for interested readers, a timely and valuable document.

Chapter 11

THE ORIGIN OF TECHNICAL EDUCATION

NOVA SCOTIA

Preceding any organized efforts to establish Technical Education in Canada, citizens of the eastern provinces in particular, were influenced by the widespread attention and consideration given to this subject in other countries (26 :1907: 68). Educational leaders in Canada were significantly moved by England's failure to keep up with improvements effected by technical education in Europe (30 :279).

Nova Scotia, one of the oldest provinces in Canada logically enough holds the position of being the first province to originate a Manual Training Department in the public schools of the Dominion (25:1891/92:110) and also to pass the first legislation providing for a comprehensive system of technical education (11:4:1669) supported by taxation. In its report in 1913 to the Dominion Government, the Royal Commission on Industrial Training and Technical Education (11:4:1669) dealt precisely with the latter in the following way:

"In 1906 the Nova Scotia legislature passed laws providing for a system of technical education. This was two months before a system was established in Massachusetts by that legislature, hence Nova Scotia may be said to be the pioneer in America of a comprehensive system supported by taxation. The Nova Scotia system attempted to provide for all kinds of technology, applied science and industrial instruction that the province needed, (except agriculture, which was already covered in the Agricultural College at Truro). It provided (1) for a technical college where youths could be trained for the engineering profession; (2) for continuance of the coal mining and engineering schools already in existence in the Department of Public Works and Improvements; (3) for the

establishment of local technical schools in industrial communities".

An additional honour goes to Nova Scotia by making in 1907, under the terms of that legislature, the appointment of the first director of technical education in Canada, Frederic H. Sexton (30 : 279).

In interpreting correctly and early the trends which ultimately assisted the passing of that legislation and aided the organization of hand, eye and mind training in regular school studies, probably Dr. David Allison, Superintendent of Education for Nova Scotia was to the forefront. In his annual report of 1884 (25 : 1883/84: xxvlii) he presaged the organization of a program of technical education of less than college grade, which was actually established by the legislation referred to above (26 : 1906/07: 79). His report included such expressive and masterly remarks as:

"It will not be deemed beyond the province of this report to allude briefly to the relation of our ordinary school work, as now planned and conducted, towards the important subject of technical education. In certain great centres of educational and industrial activity, such as Paris in the Old World and Boston in the New, the experiment is being tried of providing, in connection with the public schools, facilities for training in various manual arts. By some educationists this is regarded as a justifiable extension of the principle which has secured for such branches as Industrial Drawing, Agricultural Chemistry, Book-keeping, the practical application of Mathematics, and in some cases, Sewing, a place in the common school curricula of almost all countries. By others, and probably a larger number, the movement is regarded with distrust, and is considered to involve a misconception of the primary aim and function of the public school, as in short inconsistent with that character of general utility, which gives such a school its logical claim on the support of the entire community. But whatever be the outcome of this experiment, it cannot for one moment be imagined that a system of general instruction can be so utilized for special industrial

purposes as to supersede the necessity of distinct institutions of a higher character devoted to the various arts and industries. On the other hand it is equally clear, as shown by the history of the past half century, that without any detriment to the literary and disciplinary ends of education, the work of the common school can be so directed as to press effectively on the springs of production and bring about sweeping industrial revolutions. The lessons which the experience of other nations seems to teach Nova Scotia -- a country singularly rich in varied natural resources, largely undeveloped -- is two fold: -- (1) that her school system and methods should be in sympathy with the spirit of the age, and that, so far as this can be done without endangering higher interests, encouragement should be given to studies which train the eye and hand and thus create favorable dispositions towards industrial pursuits generally; (2) That the common schools should lead up to, and prepare for, the work of such distinct technical institutions as the industries of the Province may require, and the means at disposal can provide."

Worthy of mention also in the early discussions regarding the place of technical education in regular school studies are the words of Rufus J. Sweet, Chairman of the Board of School Commissioners of the city of Halifax. He commented on Manual Training in his annual report in 1888 to Dr. David Allison thus (25 : 1887/88: 106):

"Manual Training -- Many have feared that our free school system would result in the overcrowding of the professions and cause an excess of aspirants for positions as clerks in government and mercantile establishments. To obviate this difficulty would it not be wise to provide some instruction for the advanced male pupils which will prepare them for those industrial employments which must of necessity offer the prospect of a comfortable living to the majority of our young men? A preparatory course of training in the mechanic arts might be attempted. A "Manual Training School" might be opened in this city on a small scale, as only boys in the Academy and St. Patrick's High School would be required to attend it. The mechanical aptitudes of some boys can only be brought out in this way, and once aroused and stimulated there would be every reason to hope for a rapid and satisfactory development."

In the following year (25 : 1888/89: B) the School Commissioners urged that a new department be opened to teach not only mechan-

ical studies to boys but also cooking and sewing to girls.

The culmination of this prolonged debate concerning the feasibility of introducing technical activities in the public schools of Nova Scotia was the opening of a Manual Training Department in Halifax in 1891 (25 : 1891/92: 121) under the direction of Professor Lee Russell, B. Sc., who previously resided in Worcester, Mass. Professor Russell was a teacher of Manual Training in the Worcester Polytechnic.

To make adequate preparation for the opening of that department, he came to Halifax in August, 1891. Due to this preliminary work facilities were ready to enroll the first class of six pupils on September 17th. Enrollment increased steadily, until at the end of the school year, 160 pupils were in attendance.

Indicative of the progress made from this early beginning in Halifax was the increased public financial support by 1897 for the organization of such additional technical departments (32 : 1896/97 xlvii-11) as:

1. Manual Training department of the provincial normal at Truro, established 1896.
2. Manual Training departments at Halifax and Wolfville.
3. Provincial School of Agriculture at Truro established 1885.
4. Provincial School of Horticulture at Wolfville, established 1893.
5. Mining schools established as evening classes in 1888.
6. Victoria School of Art and Design, established 1887.
7. School of Cookery in connection with schools of Halifax.

8. Twenty-six government night schools were started that year in cases of urgency for the education of persons from abroad concentrating in any given locality on account of the industrial attractions within.

Private secondary technical education centres were:

1. Two small navigation schools.
2. Two business institutions for commercial subjects.

Special provincial institutions:

1. Halifax Institutions for Deaf Dumb.
2. Halifax School for the Blind.
3. Mining Schools.
4. Evening Schools designed to take the place of government night schools.

These beginning activities for the establishment of technical education in Nova Scotia were strengthened in 1900 by the Macdonald Fund (18 : 1900/01: xvii). In fact technical education throughout all the provinces of the Dominion received its greatest early impetus by this fund.

Sir William C. Macdonald, philanthropist and millionaire, of Montreal, was interested in improving the schools of Canada by means of practical education. He saw Canadian boys using saws, planes, and hammers as part of their regular school work. In organization and administration he was assisted by his friend, Dr. James W. Robertson, Commissioner of Agriculture and Dairying for the Dominion of Canada (18 : 1900/01: xvi).

Dr. Robertson was sent to gain first hand information of the administration and methods of schools in Great Britain and Ireland, Sweden, Denmark, Germany and France, where such programmes were in

operation. After careful observation, he returned convinced of the value of manual training and of the desirability of introducing it in the public schools of the Dominion. His desire was to give such an object lesson of the advantages of Manual Training through the boys' classes that all who saw it would believe in it and work for its establishment in other schools; and by means of student teachers in Normal Schools, to spread the knowledge throughout the land.

(18 : 1902/03: 153).

The first step appeared the need of educating public opinion in favour of better methods of education. Therefore, it was decided to give object lessons in Manual Training in larger centres where newspapers were published and which would be the means of spreading the story of the value of practical education. In this way, Sir William hoped to reach the smaller towns and rural districts.

(11:4:152). This was the reason for the Macdonald Manual Training Fund and its work.

Announcement was made in the press that Sir William was willing to test the value of manual training in woodwork in the public schools of at least one large city in each province of the Dominion, at his own expense. Dr. Robertson, himself, placed the matter before the school authorities of each province.

Manual training centres were established by this means in twenty-one places (11:4: 153), from Prince Edward Island to British Columbia. They were maintained without cost to the pupil or public for a period, in most cases, of three years. Teachers had to be brought from abroad, chiefly England, twenty-seven in all. In 1903 (in Montreal 1904) the local authorities in the several provinces

took over and extended the work. The equipment was presented free to the school boards, and in the case of the normal schools given to the provincial governments. Because of the importance of Sir William's benefaction in giving a boost to that form of education, the practical results that accrued in the individual provinces will now be reviewed briefly.

PRINCE EDWARD ISLAND

By means of the Macdonald fund, in 1900, the first manual training department was opened in Queen Street School in Charlottetown (36 : 1900: 51). In one year three departments, Charlottetown, Summerside and Hillsborough Consolidated, were organized (36 : 1902: xxxiv). Teachers attended the classes Saturday mornings and Thursday afternoons. Any teachers wishing to specialize attended the Macdonald School at Truro, N.S. The girls of Charlottetown had Domestic Science one year but it was dropped because of lack of funds.

Nine years after the establishment of the manual training department in Charlottetown, there is a note of discouragement in the report of Dr. Alex Anderson, chief superintendent of education, (31 : 1909: xxv). He said:

"Manual Training and Agriculture have now been taught in the Prince of Wales College and in a few of the schools for a number of years, while Domestic Science has more recently been added to the curriculum..... But it does not appear that these experiments have produced the desired effect upon the ratepayers of other districts. Not only have no other districts expressed a wish for the introduction of it into their schools, but they have opposed it, unless the Department of Education defrayed the expense."

Dr. Anderson shows that though the teachers are given this training at normal school, it is not put into practice in the school to which they go, and therefore, the plan fails in its purpose, to convey the results of this study to the boys and girls through the province. To remedy this he suggested:

"Manifestly, something effective must be done to make instruction in these subjects imperative and practical. Legislation is necessary to provide due support for such training, as voluntary action is not forthcoming."

Ten years later this challenge was answered by the agreement made between the province and the dominion under the Technical Education Act. A Provincial and Technical School (31 : 1920: vi), established under the provincial department of agriculture, was financed by this arrangement. Instruction was given in the various branches of agriculture, farm carpentry and engineering, in blacksmithing, motor mechanics, drawing, and wireless telegraphy, as well as English, mathematics, civics, and rural economics. This department through its Women's Institute branches, introduced short courses in domestic science, including cooking, laundering, table service, household science, first aid, sanitation and nursing.
of
Another school opened was the school/navigation, which offered valuable service to the merchant marine of that part of Canada.

NOVA SCOTIA

Sir William Macdonald presented a fully equipped Manual Training School to the town of Truro. Mr. T. B. Kidner was appointed principal; in charge of training at the Normal School; supervisor of Manual Training Schools in Mechanic Science; and Director of the

Macdonald Fund for the province. Under his guidance, some of the immediate results were:

1. Macdonald Manual Training School for teachers established at Truro. It was made the training centre for Macdonald teachers of New Brunswick and Prince Edward Island. The course formulated for teachers, 1901, was adopted in schools throughout the Dominion (26 : 1900/01: xviii).
2. Special course in Manual Training arranged for Agricultural College (26 : 1900/01: 73).
3. Manual Training opened in many schools and extended to boys of Grades IX, X and XI.
4. Domestic Science, under supervision of W. R. Campbell (26 : 1900/01: 93) was started at Truro; at Normal School; and a special course for teachers of domestic science.
5. The city of Halifax began construction of a two-story building, costing about \$16,000., the upper story of which is to be devoted to Domestic Science, and the first story to drawing, woodwork, wood-turning and forge work.

Mr. Kidner in his first report on Manual Training (26 : 1900/01: 89) makes this significant comment:

"In dealing with the work of the Common Schools my experience in similar pioneer work in England was repeated. While welcoming the new movement, the teachers felt some apprehension that the curtailment of the time spent on the ordinary subjects, by the withdrawal of the boys one whole session per week during their attendance at the Manual Training School, would result in a loss to the general subjects of the curriculum. As elsewhere, their fears proved to be groundless, and after an experience of a year's working, the teachers are unanimously in favor of the "new education". As regards the Academy students, the Principal informs me that they have done better than ever in the Provincial Examinations this year. I have mentioned this point particularly because it is a just and natural apprehension which all teachers feel when the claims of another subject for a place in a somewhat full curriculum are advanced.

"I have now come to what is perhaps the most gratifying feature of the work I have to report on, the spread of

the movement for establishing Manual Training schools throughout the province. On my arrival here to take up the work of the Macdonald Fund, I found that the ground had been broken to some extent, and that Manual Training was not as in the rest of the Dominion, quite unknown. Owing to the efforts of some of our leading education-
alists...the subject had received official recognition."

NEW BRUNSWICK

It was on the 10th day of April, 1900, that Manual Training was introduced at Fredericton to the boys of Grades VI., VII., and VIII. of the city schools and to the young men at Normal (18 : 1900/01: lvii) through the Macdonald Fund for manual training. In three years, 12 centres had opened departments in the public school grades, with 990 pupils in attendance (18 : 1904/05: xlvi). It is interesting to note that the subject was taught successfully by women teachers. In every school where the work was introduced, the trustees and parents were in favour of its continuance.

Interest and expansion of manual training in the public schools grew apace. The director of manual training, T. B. Kidner, formerly of Nova Scotia, in his report of 1905/01 (18 : 138 - 141) indicated a continued steady progress but the shortage of teachers hindered greatly. The reasons given for this shortage were:

1. Growth and spread of the subject since its introduction some years ago.
2. The constant drain being made upon our supply of teachers by the United States and Canadian West.
3. The fact that very few of our teachers have realized the possibilities and great future before this and other new methods of education.

Dr. Kidner felt there would be a further extension of the work if the government's generous arrangements respecting manual training

in rural schools were better known. He urged the extension of a manual training system into the high schools of the province.

When the Macdonald Fund ceased to support the work in Fredericton, it was only necessary to call attention of the Board of Trustees to the matter: they voted unanimously to provide accommodation for carrying on the work at their own expense. A demand for male teachers with a knowledge of manual training to act as principals of village schools of two or three departments arose (18 : 1903/04: 153).

The need for qualified teachers was felt more keenly as the work developed, and particularly during the World War.

The general feeling by 1914 was that though creditable progress had been made, it was not enough. A more aggressive policy was urged in the school system and it was felt that in connection with vocational education a definite policy should be in operation, as in Nova Scotia (18 : 1914/15: lviii, 142-150).

QUEBEC

Quebec's system of education is different from any of the other provinces. Provision is made for instruction in both English and French. A large majority of the pupils are French speaking. The educational system is conducted by the Council of Public Instruction which is divided into two committees, one composed of Roman Catholic members and the other of Protestant members.

Interested educationalists had repeatedly pointed out the value of training of 'hand and eye'. S. P. Robins, principal of the McGill Normal School in 1889 said in his report when telling of

building a small workshop at the Normal (32 : 1888/89: 96):

"I am quite convinced of its value. I am sure what Sir Henry Doulton has recently said is true, not only of girls with whom his large experience has had to do, but of boys also, 'that few succeed in obtaining any degree of manipulative proficiency, however good the physical formation may be, or however intelligent they may be, if this training is commenced after the age of fourteen. The training of the muscles for delicate manipulative processes is best acquired between the ages of twelve and fourteen'. To attempt to teach trades in school would be folly. To leave our children to grow up without any systematic attempt at teaching them to use their eyes, and to compel their hands to do the bidding of their will, is a greater folly."

Fifteen years later (32: 1902/03: 112), Dr. Robins referred to the above statement and also paid tribute to the great impulse this struggling enterprise had received by means of the generosity of the MacDonald Manual Training Fund. He said the equipment of workshop had been improved and by means of the specially trained teachers it was possible to bear witness to its value both in the training of children and the training of teachers. Because the Normal School Committee could not provide the additional cost of maintaining the classes in manual training, and because of its provincial importance, Sir William agreed to continue to bear the expense.

The female students of the Jacques Cartier Normal, Montreal, followed a complete course in sewing and cutting out clothing (32 : 1905/06: 189). The report of the principal stated:

"All devote great attention to this subject because later on, besides the benefit they themselves may derive from it, they will be better able to make their pupils acquire those good habits of work and economy which always promote happiness and comfort in families."

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Further evidence of the desire to introduce domestic science is shown by the 1907 report of the principal of Rimouski Normal School (32 : 1906/07: 185), which stated:

"To complete the course of domestic economy mentioned as an optional subject of the curriculum, I would like to be able to give our girls some time every week to devote to cooking, sewing and cutting out, even if they had to sacrifice the hours set apart for the study of the laws of Mariotte and Kepler, of steam-engines, dynamos and galvanoplasty. From my humble point of view, woman's education would be much better suited to her state and condition, even as a teacher, if she were taught to sew, to cut out, to cook, to keep a garden and even an orchard, instead of cramming her head with scientific knowledge she will never understand and never have an opportunity of using. Now that we are encouraging the establishment of normal schools exclusively intended for young girls, it seems to me rational to strive to lay down a curriculum for them somewhat different from the present one which was prepared chiefly from the standpoint of the training of male teachers."

In 1907, when fifty years of age, the McGill Normal School became part of the Macdonald College, being erected at Ste. Anne de Bellevue. The property of the Macdonald College, including buildings and equipment, together with an endowment amounting to two million dollars had been donated to the Governors of McGill University. The terms of the donation provided the teacher-training of the Protestant teachers of Quebec. This training was to include nature work, household science and manual training upon a scale thoroughly adequate (32 : 1906/07: 454-461).

Schools where manual training departments were started by the Macdonald Manual Training Fund and which were attended by Protestant pupils only, were Waterloo, Bedford, Montreal and Westmount (32 : 1902/03: 393-397). These were forced to close at the end of the three-year period through lack of funds. The government in

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sympathy with the view, declared its inability to give a grant. It planned to send a gentleman to France to inquire into the methods of technical education and manual training there.

Throughout this period, efforts were made to give instruction in agriculture and horticulture by lectures and experimental work in the school gardens (37: 1907/08: xiii).

Superintendent de la Bruere, who had been commised to visit Paris and report, was very favorably impressed. He urged the government to introduce manual training in the primary schools of the province and to build technical schools (11:4: 1841) and to do this quickly. In his report of 1902, he said:

"If, within twenty years especially, the Government of the Province has deemed necessary to spread among our farming class the teaching which they needed for cultivating the land with method and success, it is urgent to display the same energy in the industrial field in order that the child quitting the primary school may not be left to himself, but that he may if he so wish, learn a trade under the best possible conditions by receiving from the States, through the foundation of technical schools, the assistance which he can legitimately claim."

In 1913, evidence given at the Royal Commission (11:4: 1838-1869) showed what had been accomplished up to that time:

1. Drawing taught in schools, so that elementary schools would give the necessary preparation for the technical schools.
2. A few technical schools had been started in Montreal and Quebec.
3. Not much teaching of domestic science in country, except where there were Roman Catholic convents, which received government grants. Manual training and domestic science had been introduced into some of the Montreal schools. There were 7 centers giving training in wood to all boys in the 6th and 7th years. In secondary education, optional courses were given in technical and commercial schools to enable students to select their courses.

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4. The chief objections to introducing domestic science and manual training in all centres that had academies:
 - (a) Expense.
 - (b) Lack of competent teachers.
 5. Montreal was the only place with night classes. These were conducted for technical work under the public school authorities.
 6. Evening classes were held under the Council of Arts and Manufactures.
 7. Montreal Technical School opened in 1911. The government paid for building and equipment. Grants for maintenance were paid by the government and the city of Montreal. For its size, the building and equipment was considered one of the finest in either America or Europe. Small fees were charged in different courses. Day classes were given to cover the theory and practice in preparation for the following callings: Pattern-maker, woodworker, machinist, fitter, lathe-hand, electrician, blacksmith, draftsman, and in general to all positions connected with the metal, wood or electrical industries. The length of course was ordinarily three years. Evening classes of a similar nature were held also.
 8. Established Provincial Domestic Science School in the building of the Montreal Technical School.
 9. Quebec Technical School established for the city of Quebec on practically the same lines as the one in Montreal. The principal of the Montreal school was principal of the Quebec one also, spending part of his time on each and having his home in Montreal.

ONTARIO

In 1896, Dr. Ross, Minister of Education, (27 : 1898/99: xxxvi - xxxix) visited the schools of Boston, New York, and other eastern cities for the purpose of ascertaining the value of manual training and domestic science. The following year, domestic science classes were held in the public schools of the city of Kingston and for part of the year, a class was held in the city of Hamilton.

Manual training had its beginning in the public schools of Ontario in a classroom of a Kingston school also. Woodstock College is the pioneer institution in Canada in introducing Manual Training (27 : 1900/01: xxxiv). In 1899 Ontario placed domestic science and manual training as optional subjects of the public schools course of study.

The only important provision for instruction in the household arts by 1900 was in the Ontario Normal School of Domestic Science and Art in Hamilton (27 : 1900/01: 241) due to the energy of Mrs. Hoodless of that city, and the Victor School of Household Science and Art in Toronto, which was established by Mrs. Lillian Massey-Treble. Both these schools provided courses for teachers as well as for other classes of students. Sewing was taught in a few of the public schools but to only a limited extent. In 1901, the Toronto Technical School, supported by the city council, added Domestic Science (27 : 1901/02: xxxi) and the subject was taught, or about to be taught, in Hamilton, Stratford, Kingston, Brantford, Renfrew, Ottawa, Woodstock and London Normal School. Hope was held that it would be introduced before long in the large towns and cities.

Through the generosity of Sir Wm. C. Macdonald centres in manual training were opened in Brockville, Toronto and Ottawa.

Albert H. Leake was the director of the Macdonald Manual Training Schools for Ontario (27 : 1901/02: 203). In addition to these, several school boards were moving in harmony with the general trend of educational development, namely, Brantford, Stratford, Woodstock,

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Kingston and Renfrew. The most important institutions for post-school training were the Toronto Technical College and evening classes of somewhat technical nature, of which there were very few (27 : 1900/01: 241).

Dr. J. Seath, High School Inspector, was sent to the United States to consider manual training systems there. After reviewing the situation, there and in Ontario, he recommended as follows (27 : 1900/01: 245):

"(1) That, for educational purposes, manual training, including instruction in domestic science and art, be placed on a par with the other subjects on the programme of both the high and the public schools. These subjects should, of course, be optional; for it will be many years before public opinion and our resources will justify the action of Massachusetts with its obligatory law. Here I should say that, in the large majority of schools, the only available form of manual training will be drawing; and, as I will point out further, on, the course in this subject should be enriched and amplified, to develop more fully the aesthetic sense and to meet our economic requirements.

"(2) That, for economic purposes:

(a) A system of evening classes for artisans and others be organized and put in an effective condition. For the actual mechanic, this provision would always be an important one.

(b) That provision be made in our high school regulations for extending the educational manual training into courses of a technical or semi-technical nature, forming departments in our existing schools, but taken, when possible, in separate high schools. And all such provision should be of flexible character, so that, as the character of our cities and towns becomes differentiated from year to year, school boards may adapt the details to local conditions; but no such provision should fail to recognize the paramount importance of a good academic education in English, Science and Mathematics."

Because the chief obstacles in introducing these subjects were lack of teachers and the expense, he recommended that the Education Department should take steps to provide a supply of competent teachers by making provision in the professional courses of the Model Schools and Normal Schools and that the legislature should, for a time, stimulate their introduction by a special grant.

The above recommendations were all carried out with enthusiasm.

When the Macdonald Fund expired in June, 1903, sixteen equipments were donated to the authorities in Ottawa, Toronto, Brockville and Brantford. In the province a total of 27 rooms were equipped for elementary and advanced woodwork. (27 : 1903/04: 1-11). Teachers were seriously equipping themselves for the newer studies. The aid granted by the legislature had been much appreciated and had a great deal to do in stimulating the growth and progress of these schools.

In domestic science, the growth was equally satisfactory. The Ontario Normal School of Domestic Science and Art furnished teachers for responsible positions in the province. This was the first school of its kind in Canada (27 : 1903/04: 157). Students entering for the one year course required a first class teacher's certificate, or a university degree. For the two years' course, a junior leaving certificate, university matriculation, or its equivalent.

Since the first attempt to give organized instruction in domestic science to public school children of Hamilton in 1897, progress (27 : 1903/04: 156-163) made by 1903 was as follows:

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1. First class, Hamilton Public Schools, 1897.
 2. Ontario Normal School of Domestic Science and Art, Hamilton, 1900.
 3. Supervisor of sewing appointed in Hamilton, 1901.
 4. Course at Toronto Technical College, 1901.
 5. Classes opened at Stratford, Renfrew, Brantford, Belleville, London, Hamilton, Berlin, Toronto and Ingersoll.
 6. Class opened at Ontario Normal College 1903.
 7. Classes opened at Toronto, Ottawa and London Normal Schools 1903. Course was designed to establish a better understanding of place and value of domestic science in the general system of education. Did not qualify students to teach domestic science but accepted as equivalent of first year's work at the special training school.
 8. Opening of Macdonald Institute 1903. School equipped by Sr Wm. C. Macdonald for students to specialize in Manual Training, Domestic Science and Nature Study. The Ontario Normal School of Domestic Science and Art had fulfilled its purpose, that is, to provide special teachers in domestic science during the beginning period. Became part of the Ontario Agricultural College. Four year course was required to earn a degree. Special courses for those not desiring to teach and short courses for teachers in rural schools were also offered.
 9. Lillian Massey School of Household Science for teachers, housekeepers and children (established about 1899).
 10. University of Toronto established a four-years' course, leading to a degree of Bachelor of Household Science.
 11. The course of study for high and public schools approved, and teachers of Domestic Science required to follow the same.
 12. Graduates of the Domestic Science Schools Toronto employed by Department of Agriculture as traveling teachers for the institutes.

A word must be said regarding commercial education. As early

as 1890 Ontario had responded to the business activity of the age and its accompanying demand for the preparation for the business world, by what was termed a practical education. Under amendments in 1891 to the High Schools Act, regulations were prescribed for Commercial Specialists (27 : 1898/99: xli). The course of study prescribed for Commercial Specialists was very wide and teachers were required to have high attainments in commercial subjects. In 1898, the number of commercial diplomas issued by the department was 3,200; commercial specialists, 5, 600.

MANITOBA

In 1899 the first technical classes were introduced in Manitoba as an experiment in a commercial course at the Winnipeg Collegiate Institute (15 : 1899/1900: 18). It was believed that, for such a great business centre as Winnipeg was destined to become, it would be well to give in the last two years a course specially adapted to computation, bookkeeping and shorthand, along with English grammar and literature. Fifty-nine pupils were enrolled.

Manual training was introduced as another of the experimental centres under the Macdonald Manual Training Fund. The first school was opened January 1901 (15 : 1901/02: 2), in rented quarters in the Stovel Block on King Street at McDermot Avenue. Two of the centres, Mulvey and Machray, were opened the same year. Mr. W. J. Warters from Birmingham, England, was the superintendent of manual training schools for Manitoba. The annual report of Dr. D.

McIntyre states:

"The classes, as organized in Winnipeg therefore afford

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manual training for all boys in the city from Grade 5 to Grade 8 inclusive. The purpose of the work as carried on under Mr. Warters is strictly educational".

Mr. Warters arranged for the Normal School students to take a course also.

When the agreement with Sir Wm. C. Macdonald ended there was no hesitation in provision being made by the Winnipeg School Board.

In 1903, a course in sewing was instituted for the girls (15 : 1903/04: 21). Under the supervisor, Miss. M. Halliday, classes in sewing were given by the regular teachers. In two years, a three years' course in sewing for girls in grades 5, 6 and 7 was established (15 : 1905/06: 16) and a year's course in cooking for the girls of Grade 8. A very complete equipment for teaching this department of Household Science was placed in one of the class rooms in the Alexandra School.

SASKATCHEWAN AND ALBERTA.

Saskatchewan and Alberta, the youngest provinces of the Dominion were prior to becoming provinces in 1905 part of the North-West Territories. The educational policy was administered at first by the Council of Public Instruction which later was known as the Department of Education with headquarters at Regina.

Manual training was introduced into the territories through the liberality of Sir Wm. C. Macdonald. Under the direction of Dr. Robertson, manual training schools were established at Regina and Calgary 1901 (23 : 1901: 44). Mr. Lindley H. Bennett was made director for the Macdonald Manual Training Schools of the North-West Territories.

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In the director's report of 1903, he shows that manual training in woodwork had been carried on in the city of Calgary and in the adjacent rural district of Nose Creek; and in woodwork, cardboard work and modelling in the public schools and Territorial Normal School at Regina. It said it was well received by teachers, pupils, and parents. Other districts wished to have it introduced and he begged the department to do as had been done in Nova Scotia, New Brunswick and Ontario, that was to make definite arrangements for the continuance of manual training (23 : 1902: 50-54). This was the humble beginning of the work which continued when the two provinces were formed and two separate departments of education established.

The newly formed province of Saskatchewan experienced such remarkable development of rural schools (from 1905 to 1910, for example, a school district per day was established) that it had special difficulties with which to deal. Naturally, it could not make the progress following this introduction by the Macdonald Fund that was made by older provinces, such as, Nova Scotia and Ontario. By 1913, only two places, Moose Jaw and Regina, had classes in manual training and domestic science. The Normal School students in Regina received instruction by special arrangement between the school board and the Department (11:4: 2263).

By 1914, many of the high schools had established elementary courses in domestic science, manual training and commercial work and followed the prescribed course of study. The following grants for domestic science and manual training charged to the general appropriation for education shows the expansion (34 : 1914: 11):

Prince Albert \$150.00; Moose Jaw \$300.00; Regina Public School \$400.00; Regina Collegiate Institute \$300.00; Saskatoon \$700.00.

In the fall of 1914, the Normal School in Regina opened (34 : 1914: 34) with fully equipped rooms for this work and with a teacher for each subject attached to the staff.

A commercial course was added to the secondary school course of study and a grant allowed by the Secondary Education Act of 1907. In 1914, fourteen students completed the two-year course (34 : 1914: 19).

Alberta, like Saskatchewan, immediately following the introduction of manual training by the Macdonald fund, went through a period of settlement and the accompanying opening of schools. These presented problems, especially in the foreign settlements which taxed the capacity of the administrative officials. However, manual training and domestic science were not lost sight of. In 1909 a fairly complete woodworking department was added to the manual training in the Normal and practice schools (1 : 4,1909: 40). Edmonton reported the same year (1 : 4,1909: 45) that a system of hand work had been incorporated with the work of the public schools, and supervisors in manual training and domestic science had been appointed. A commercial course was started in Calgary in 1908 which proved popular (1 : 3,1908: 40).

BRITISH COLUMBIA

British Columbia, too, accepted the offer of establishing training centres in manual training supported through the liberality of Sir Hm. C. Macdonald. Four centres, so-called, were opened;

two in Vancouver, one in the Burrard Street old school building and one in the top flat of the Strathcona (East End) School; two in Victoria, the Rock Bay and Kingston Street schools. In Victoria, every boy in high school, also, availed himself of the privilege of attending these training schools. (2: 29,1900/01: 239,277).

At the conclusion of the three year period, the equipment of the various schools was given over to the respective school boards, on condition that they carry on at their own expense. The interest of the people was so great that it was decided by each city to extend and carry on the work. The Department of Education, two years later, assisted in paying the salaries of both the Manual training and domestic science instructors (2: 36,1907/08: B 32).

The first manual training inspector, Mr. Harry Dunnell, in his first report (2: 36,1907/08: B 33) said that the fall term would start with ten manual training schools at work, providing accommodations for 2,000 with a staff of nine instructors. In 1910, the government for the first time came to the aid of the schools of the province by giving aid to the extent of not less than three-quarters of the cost of the necessary equipment to open departments in manual training (11: 2331).

In Victoria, in 1902, classes in cooking were opened for the older girls. The equipment of the kitchen for this purpose was provided by the Local Council of Women (2: 30,1902/03: C 55). In Vancouver, during the school year 1904/05, a domestic science room was fitted and made ready for the following year. By 1910, Vancouver had six cookery centres and two sewing rooms and a

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staff of six cookery teachers and two sewing teachers. Sewing was taught to intermediate grade girls by the regular class teachers under the direction of a supervisor. Cooking was taught to senior grade girls by special teachers (2: 39,1910/11: A 36). In Victoria there was only one domestic science (cooking) centre attached to the city schools.

As early as 1902, interest in establishing commercial subjects was evinced (2: 31,1902/03: C 12). The course of study of 1905 included this subject.

From the foregoing recital of the factual information enveloped in the evolutionary steps, which had their beginning in Nova Scotia and in a brief period spread across the long stretches of territory comprising the provinces of the Dominion of Canada, the reader is given a significant contact with the original movement that became the foundation upon which technical education was established in Canada.

Chapter III

FINDINGS OF COMMISSIONS ON TECHNICAL EDUCATION

In checking the reports of commissions on technical education, the writer found a significant fact common to all investigations -- without exception the time and place of the work of the commissions harmonized with the beginning of technical education in each Province. Both the preliminary promotional work of citizens and the organization of programmes obviously influenced public opinion to support formal investigations. The writer proposes forthwith to review briefly the work of the several provincial commissions and to conclude with the Royal Commission in Industrial Training and Technical Education appointed by the Dominion Government.

PRINCE EDWARD ISLAND

A Commission appointed by the Provincial Government of Prince Edward Island in October 1908 (11:⁴1753) spent a year investigating educational matters on the Island and schools in other parts of Canada, also in England, Scotland, and part of the United States. The existence of the commission was due to expressions of public opinion that the schools were not as good as they had been formerly. This commission found that the tragedy of the schools was the disappearance of pupils aged 12 or 13. They left, according to evidence given, (11:⁴1753) with habits of listless idleness, a dislike for books and everything associated with school. Many parents complained of shipwreck and failure of their children. To stimulate the introduction and development of Nature Study in schools, the Commission recommended the use of Manual Training to

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make practical projects in conjunction with this school work, and thereby stimulate more interest in school studies.

The Commission regretted that under existing conditions (11: 1754)^{4:} it could not recommend that Domestic Science be taught in rural schools, as the only way in which practical instruction could be given would be by the itinerant method. They maintained, however, that needlework should be taught in every primary school irrespective of sex, and continued by girls through all the grades.

NEW BRUNSWICK

A commission was appointed in 1916 by the Board of Education to make a survey of technical education needs in the province (18: 1916/17: lvii). This was done in answer to interest in an agitation for further development of technical education by leading citizens. In 1914, Dr. Fletcher Peacock, then Director of Technical Education, in reporting to the Chief Superintendent (18: 1914/15: 142-150) pointed out that though considerable had been accomplished in ten years - manual training in 19 departments; domestic science in 13 departments of the public schools; manual training at the Normal; one evening school in St. John - the progress was altogether too slow. He quite frankly said:

"I cannot but contrast the numbers in this school with those in the Halifax evening schools with about 1000 enrolled, or even with Amherst, where nearly two hundred students attended during the winter. It would therefore, seem that St. John's present provision for technical education is -- to say the least -- inadequate.

"In view of the above and because no other city or town in New Brunswick has made any progress whatever in Vocational Education, I would respectfully urge upon you and the Board of Education generally that some action

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be taken in this connection at the earliest possible moment. Our province is falling behind in this matter, and from every standpoint it would seem that we could not delay action longer. Nova Scotia adopted a definite technical education policy in 1907. Since then most of the other provinces of the Dominion have fallen into line. A large number of the States of the Union to the South have passed Technical Education Acts in the past ten years, and every year sees an increasing number take up the work. It would, therefore, not be necessary for New Brunswick to experiment. Out of the experience of all these states and provinces she could evolve a policy that would be at once economical and efficient".

On June 19, 1917, Mr. Fred Magee, M.L.A. for Westmoreland called the attention of the New Brunswick Legislature (20: 3) to the question of Vocational Education and moved that a committee be appointed to investigate the matter in the province and present a report at the 1918 session. The commission was formed and set to work.

In the meantime, the New Brunswick Labor Federation also formed a committee to consider Vocational Education. This committee reported March 1918 as follows (19: 38):

- (a) That New Brunswick does need Vocational Education.
- (b) That the occupations for which such training should be provided are:- electricians, masons, carpenters, blacksmiths, brush and broom making, bookkeeping and stenography, telegraphy, agriculture and home economics but that in all cases those taking Vocational courses should undergo an examination at their completion to determine their fitness.

April, 1918, the committee appointed by the legislature presented its report. It so strongly urged the organization of pre-vocational classes in public school, and vocational schools in special day schools, by means of provincial assistances that the legislature took action immediately. The same month the Vocational Education Act was passed, embodying all the recommendations (20: 3).

QUEBEC

Upon the expiration of the Macdonald Manual Training Fund experiment, the provincial government in the absence of adequate funds to continue manual training in the centres which conducted classes, planned to send a gentleman to France to enquire (32: 1902/03: 397) into methods of technical instruction and manual training. In pursuance of this pledge, Superintendent de la Bruere visited France in 1900 and reported to the provincial government in 1902 as follows:

"Canada cannot remain in the background, but should follow the example set by other nations. With our efforts to colonize our territory and to attract foreign capital, the growth of national industry and the education of our working classes should go hand-in-hand.

"By the richness of its arable soil, its forests and its mines, by its many water-powers and great rivers, the Province of Quebec fills a prominent position in the Canadian Confederation. The owner of a vast field for development, it is incumbent upon the Province to give its children intended for the trades the special education which their occupations require."

In 1937, a Protestant Commission of Education of eleven members was appointed to enquire into the condition of the protestant school system of Quebec. In its survey the Commission found that present provision for technical and vocational courses in Montreal and other cities supported by government grants were (1) although available to the whole population were not extensively used by the Protestant section, and (2) were very inadequate as demonstrated by the extent to which the Y.M.C.A., the Montreal Board of Trade and similar bodies have entered the field of education (23: 180).

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The commission recommended providing vocational training. It pointed out, first, that the new senior high schools would contain much of the equipment and by these classes a fuller use of this expensive equipment would be made; second, that the exacting demands made by industry and commerce in a large urban community obligates that community to offer a wide range of courses in industry and commerce in order to fit its citizens to meet modern requirements; and third, that the special needs of those who are interested in the arts of homemaking should be recognized by the provision of classes in cooking, needle-work, nursing, and care of children (33: 182).

ONTARIO

Preceding the formal investigation of the manual training schools of the United States and elsewhere by Dr. John Seath in 1900 and in 1909, the Hon. George W. Ross, then Minister of Education, in 1896 during a visit to Boston, New York and other eastern cities, made a careful inspection of the educational value (27: 1898/99: xxxvi-xxxix) of domestic science and manual training. In his report to the Government of Ontario he spoke enthusiastically about the intrinsic educational as well as the utility value of these subjects.

In 1900, Dr. Seath, when inspector of high schools, at the instance of the Minister of Education, the Hon. Richard Harcourt, visited the manual training schools of large centres in the New England States and the State of New York (27: 1900/01: 216-286) and on his return, recommended to the Minister as follows:

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"In view of the situation in this province I have to recommend:

(1) That, for educational purposes, manual training, including instruction in domestic science and art, be placed on a par with the other subjects on the programme of both the high and public schools. These subjects should, of course, be optional; for it will be many years before public opinion and our resources will justify the action of Massachusetts and its obligatory law. Here I should say that, in the large majority of schools, the only available form of manual training will be drawing; and, as I will point out further on, the course in this subject should be enriched and amplified, to develop more fully the aesthetic sense and to meet our economic requirements.

(2) That, for economic purposes:

(a) A system of evening classes for artisans and others be organized and put in an effective condition. For the actual mechanic, this provision would always be an important one.

(b) That provision be made in our high school regulations for extending the educational manual training into courses of a technical or semi-technical nature, forming departments in our existing schools, but taken, when possible, in separate high schools. And all such provision should be of flexible character, so that, as the character of our cities and towns becomes differentiated from year to year, school boards may adapt the details to local conditions; but no such provision should fail to recognize the paramount importance of a good academic education in English, Science and Mathematics.

An important proviso I must add -- and in view of my experience and of my knowledge of the situation I cannot emphasize it too strongly -- the Education Department should sanction no provision for manual or technical training of any kind at the expense, even at first, of our existing courses. Notwithstanding all that can be said in behalf of the practical, the claims of the academic must always be paramount."

He further pointed out that his inquiry into the matter and his experience showed the obstacles to the introduction of manual training into the school system were the cost and the lack of competent teachers. To overcome the former, he suggested legislative assistance by special grants, and the latter, he urged the department to

take steps to provide a supply of competent teachers by making provision in the professional courses at the Normal Colleges.

In 1909, Dr. Seath, now Superintendent of Education, was again commissioned by the Minister of Education, the Hon. R. A. Pyne, to report upon a desirable and practical elementary system of technical education in Ontario, after inquiry into those already existing in some of the countries of Europe and the United States (28: 111).

In 1910 he reported his findings (28: 267-344), of which the following is a brief outline:

1. No technical education, in the limited sense, in the public or high school, nor industrial education in the sense of preparation for the trades.
2. After ten years' time, household science was taken up in 21 of 279 urban municipalities and in one township; no difficulty in obtaining teachers; good provision for training teachers; but not enough done, when the liberal assistance given by the department was considered; household science on higher plane than manual training.
3. After ten years' time, despite liberal grants, only 26 manual training centres in 279 urban municipalities and in one township; supply of teachers unsatisfactory in both quality and number; good provision in training teachers.
4. The above courses were taken as part of the curriculum. There was no correlation with the practical work of the industries.
5. The evening class movement was in its infancy.
6. The only product of the commercial departments of the high school were stenographers, typewriters and bookkeepers.

Dr. Seath was convinced that steps should be taken to secure the more general introduction of manual training and domestic science in the schools of the province as a basis for men's and women's

trades as well as for cultural purposes, for the large number who leave school at or before fourteen. He urged that the education system (28: 345) make provision for the small number who remained at school after fourteen, by establishing different types of technical and industrial schools; and for instruction of workmen and workwomen by such classes of schools, as apprenticeship schools, evening schools and correspondence schools. These recommendations were based on the premise that a general education is an essential preparation for all vocations and that there should be a closer connection between schools and the activities of life. (See Appendix A for further details).

MANITOBA

On August 26, 1910, at the same time that the Royal Commission for Canada was making its investigations, a Royal Commission was appointed by the province of Manitoba to make a study of vocational education in the province, in Canada and in the United States. Wherever they went they found the consensus of opinion, though stated in various ways, was how to provide in schools such training as will suit the varying capacities and circumstances of children, retain them in school during the years most profitable for education, and fit them for the practical duties of life (11: 2240).

The commission recommended that vocational training be provided for the people of Manitoba. Some recommendations (Appendix A) were that the foundation of such training be laid in the elementary school; that evening classes be formed, and that the provincial government assist by means of grants in meeting the cost of equip-

ment and maintenance of approved lines of vocational training.

The findings of this commission determined the nature and scope of the two technical high schools, Kelvin and St. John's, which were opened in Winnipeg two years later (11:4:2229).

With the same degree of effectiveness that characterizes the planting of seed in season under favorable conditions, the Royal Commission on Industrial Training and Technical Education, which was appointed by an Order of the Governor General in Council on the first day of June in 1910, marked the beginning of a unified national vocational education program. Following its appointment, the Commission proceeded to Halifax, N.S., on July 18, 1910, to begin its work of inquiry (11:1:59).

The commissioners, in addition to conducting careful investigations in all principal cities in the Dominion, inspected work being done in the United States of America, Great Britain, and parts of Europe. After completing its research work, it recommended a development policy and complete system of secondary vocational education for Canada. This system, while retaining provincial control of education, provided for federal, provincial, municipal and private financial contributions and close co-operation between schools and industry.

While the Royal Commission made its report in 1913, owing to the war, it was not until 1919 that its recommendations on Industrial and Technical Education were given effect by the passing of the Technical Education Act, under authority of which the sum of \$10,000,000 was set aside for the promotion and development of technical and vocational education. The terms of the Act provided

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for the expenditure of that appropriation during the ten-year period which ended on March 31, 1929.

The types of training suggested for urban centres were as follows:

1. For those who were to continue at school, intermediate industrial classes; co-ordinated technical classes; technical high schools; apprentices' schools; industrial and technical institutes; and home economics and fine art colleges.
2. For those who were employed there should be continuation classes, apprentices' classes in work shops, industrial and technical institutes and correspondence study courses.

Similar provisions were recommended for rural communities to meet the vocational needs of workers and learners.

All provinces in the Dominion participated in the appropriations provided under the Technical Education Act during the ten-year period from 1919 to 1929 with gratifying results. At the expiration of the Act, Technical Education was established in each province with varying degrees of recognition but for the most part it maintained its existence as a regular activity in all educational programmes.

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Chapter 1V

LEGISLATIVE ACTS THAT AIDED THE DEVELOPMENT OF TECHNICAL EDUCATION

This chapter presents for the reader specific information regarding not only the decisions of provincial legislatures, throughout the Dominion, respecting their attitude towards the promotion and development of Technical Education from 1885 to 1930 inclusive, but also the measures taken by the Dominion Government for the same purpose.

NOVA SCOTIA.

1. Act to Encourage Agricultural Education 1885.

A school of agriculture in connection with the Normal School was opened where instruction was given to the male teachers and also young farmers and others wishing to fit themselves for an agricultural vocation. To arouse interest, financial support was given offering cash prizes and paying a special grant of \$100.00 to the school where a teacher was engaged who had completed this training. (25: 1885: ^{4/85}xxx)

2. Act to Establish School of Horticulture, 1892.

The Normal School of Horticulture was established by the Nova Scotia Fruit Growers' Association by virtue of an Act passed by the Provincial Legislature of Nova Scotia in 1892, in which substantial aid was provided pro rata for students in attendance at such an Institution to encourage its establishment (25: 1895/

26:128).

- (1) Students above age of 14 years.
- (2) Students with common school education.
- (3) Direction of Nova Scotia Fruit Growers Association.
- (4) Suitable Course of Study.

3. Legislation of 1900.

In 1900 an Act was passed allowing a maximum grant of \$600.00 to any school section establishing a fully equipped school of either Mechanic or Domestic Science (26: 1901: xvii)

4. Legislation of 1906.

In 1906 the Nova Scotia legislature passed laws providing for a comprehensive system of technical education supported by taxation. This provided that a Director of Technical Education should have charge of all schools and be principal of the technical college when built. Schools provided for were:

(1) A technical college, (2) Local technical schools, (3) Coal Mining and engineering schools. The college was to be supported by the government solely and private benefactors if available; coal mining and engineering schools by the provincial treasury altogether; local technical schools by the locality and central government (26: 1907: 79)

NEW BRUNSWICK

1. Legislation of 1902.

Legislation provided for grants to be paid for Manual Training and Domestic Science under provisions of Section 123 of the Schools Act. These provisions gave to any class teacher giving instruction in this work a grant of \$50.00; to every special

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instructor giving his whole time to it a grant of \$200.00, and to the school district a grant to cover one-half of the cost of equipment of the room (27: 1905/06: 1). Provision was also made to pay the travelling expenses of students attending an accredited manual training school.

Under section 124 of the Schools Act provision was made to give a grant not exceeding \$1,000.00 in any one year in case three or more districts united for the purpose of establishing a central school with a school garden and a manual training department (19: 1904/05: xlvi1).

2. The Vocational Education Act 1918.

This legislation and its amendments of 1923 and 1927 deals with pre-vocational and vocational education.

In order that boys and girls between 12 and 14 years of age, who plan to enter industry early, may continue their common school education in the essential branches, and at the same time have opportunity to select wisely the most suitable industry and lay a foundation for vocational training in the same, any vocational committee may, subject to the regulations of the Vocational Board and the approval of the Board of Education, establish a pre-vocational school or department.

In order to make vocational training accessible to the largest possible number, and that it may be adapted to local circumstances, vocational committees, may, subject to the regulations of the Vocational Board and the approval of the Board of Education establish separate vocational schools and vocational high school departments. Such vocational schools

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and departments may include day, part-time and evening courses.

The education afforded shall be less than college grade and be designed to meet the vocational needs of persons over 14 years of age who are able to profit by the instruction offered. Each district receives grants from government.

QUEBEC

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1. Technical Education and Free Library
Municipal Aid Act 1897.

The Council of any city, town or village municipality may help and encourage technical education, for the benefit of mechanics and working classes generally:

- (1) By establishing technical schools and by giving bonuses and prizes for competition.
- (2) By granting money to schools.
- (3) By placing such schools under control of Council of Arts and Manufactures.

2. Technical School Act, 1925.

This legislation provided for the establishment of technical schools by any public or private body by applying to the Lieutenant-Governor in Council and obtaining from him a charter to establish a school or vocational course for the local needs of a specified district. The course of study must be drawn up especially with a view to local needs and approved by the Provincial Secretary. The appointment of a Director of Technical Education was also provided.

ONTARIO

1. An Act Respecting Technical Schools 1897.

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This Act permitted the establishment of technical high school boards. Instruction provided in the arts and sciences usually taught in technical schools, but particularly such arts and sciences as relate to the industries of the province.

2. Amendments to the "Public Schools Act", "The High School Act", and the Act respecting Technical Schools 1903.

These amendments provided liberal grants toward teacher's salary, establishment and maintenance of classrooms for the purpose of giving instruction in agriculture, manual training and domestic science, if the school board met the requirements of the department. The approval of the department must be given in regard to plans of building to be erected, or any room adapted for the purpose of these classrooms, the course of instruction and qualifications of every teacher employed (27: 1903/04: 80).

3. Industrial Education Act of 1921.

By the "Industrial Education Act", manual training and household science were considered neither industrial nor technical, but were classed as cultural and practical subjects of the high school and public school courses of study. The name "Industrial" was applied to both day and evening schools and classes for the preparation of workmen and workwomen, and the name "Technical" to those for the preparation of foremen and forewomen and the holders of minor directive positions in the trades (11: 4: 2000).

Schools of many types were permitted by this Act. These could be established by the high school board or board of

education of any city, town, or village, or an urban continuation school board, provided the accomodation, the equipment, the text-books, the qualifications of the staff, and the course of study were satisfactory to the Minister (11: 4: 2000).

The Act further provided liberal grants and the appointment of a Director of Technical Education to visit the industrial centres of the province and to assist school boards in establishing technical systems. It provided for vocational instruction only in industrial and technical subjects. Later, the Act was amended and its scope widened to include provisions for commercial and agricultural subjects as well (27: 1920/21: 24).

4. The Vocational Education Act of 1921.

This Act (27: 1920/21: 25) Repealed the Industrial Education Act. Under the Industrial Education Act the plans for administration, supervision and support by government grants differed with the different types of instruction. The growth of each type was more or less hampered by these varying conditions, especially in schools where more than one form of instruction was offered. Now by the Vocational Education Act of 1921, the different forms of vocational instruction were co-ordinated, and all vocational schools and classes placed on the same basis. The passing of this Act marked another important step in the advancement of vocational education.

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The Vocational Education Act provided for the establishment and development of vocational schools giving instruction in industrial, homemaking, art, technical, commercial and agricultural subjects. The schools may offer full-time day courses, part-time day courses, and evening school courses of instruction.

All courses were designed to give, as a basis of citizenship, instruction in the essentials of a general education and at the same time a specialized training in the subjects, processes, and operations which were fundamental in the fields of work in which young people will seek employment.

The Act provided also that any municipality may establish one or more schools or departments for instruction in the subjects mentioned above either as separate schools or as departments in a secondary school. Such vocational schools or departments were to be under the control and management of appropriate advisory committees. These committees had power, subject to the approval of the Minister and of the board, to provide a suitable site or building and adequate accommodation, and to prescribe courses of study and provide for examinations and diplomas. Subject to the approval of the board, the committee may employ teachers, fix their salaries, and submit annually an estimate of the amount of money required to carry on the work of the school.

Under the Vocational Education Act and the regulations pertaining thereto, vocational schools or departments were entitled to annual grants to be paid out of any moneys

appropriated by the Legislature for industrial, commercial, technical, or agricultural education. These grants were paid on the expenditures made for salaries, equipment, furniture, or buildings. The grants to vocational schools were, under the regulations, calculated on the same basis for all types of schools or departments.

MANITOBA

1. An Act to Amend "The Public Schools Act",
March 10, 1911.

By these amendments, provision was made for the establishment, with the consent of the Department of Education, of a system of manual training, and domestic science. The department has assisted the school districts by giving grants for equipment and for teachers engaged in the work. This has been done by Orders-in-Council, which are briefly given below:

- (a) March 23, 1911, Domestic Science equipment. Grant for domestic science equal to 50% of the cost but must not in any case exceed \$400.00 in one department.
- (b) September 10, 1935. Teacher grant for cities. Teacher grant of 75 cents for each teaching day.
- (c) April 9, 1936. Evening Classes. Grant of \$2.00 per session per class.
- (d) October 18, 1938. Grant for General Shop. Same grant as for Domestic Science.
- (e) Nov. 8, 1938. Grants for teachers. Grant for teachers engaged in this work shall be double the ordinary legislative grant.
- (f) May 2, 1939. Grants for equipment. Grants for equipment for Vocational classes, including commercial work, equal 50% of amount expended, but must not exceed \$400.00, in any case, per department.

SASKATCHEWAN

1. Legislation of 1907.

The Secondary Education Act in 1907 made provision for the granting to every district that makes due provision for the proper instruction of pupils in the commercial course prescribed by the high school course of studies, and in whose High School or Collegiate, as the case may be, such instruction is regularly given to the satisfaction of the Inspector, an additional sum not exceeding \$100.00 per annum to be paid on the recommendation of the Inspector. (34: 1910: 13-14).

2. The Vocational Education Act, 1920.

This legislation provided for the instructions of pupils in day schools, either as independent organizations or as part of an existing educational institution, in order to train adolescents for greater efficiency in industrial pursuits and for the duties of citizenship. It also provided evening schools for adults and adolescents. The instruction given in these schools was to be both theoretical and practical in such occupations as they were engaged in during the day. Financial support was to be given for the establishment and maintenance of schools authorized by this Act (34: 1: 47).

ALBERTA

1. School Grants Act 1919.

The School Grants Act provided for grants to be paid to the

teacher or teachers of approved qualifications and to the school districts for equipment for the instructions of manual training, household economics and commercial work (except in rural districts). These grants were determined by the type of school, rural, village, town or consolidated district.

In addition to the above grants in aid of education, further grants were granted technical education. Where instruction in household economics, manual training, commercial work, music, art, or technical subjects teacher grants (from 40% to 20% of salary) and equipment grants 25% to 50% were given in districts:

- (a) employing more than 30 teachers;
- (b) employing fewer than 30 teachers;
- (c) where two or more districts have an agreement for the purpose of providing instruction in these subjects listed above.
- (d) districts having ungraded schools;
- (e) night classes and vocational subjects where not more than 30 teachers are employed;
- (f) night classes where more than 30 teachers are employed.

BRITISH COLUMBIA

1. School Act Amendment 1910.

By amendment, to section 39A a grant of not less than three-fourths of the total initial amount expended for equipment for instruction in manual training was provided.

2. An Act to Amend and Consolidate the "Public Schools Act", December 1922.

This legislation gave to any school district the power to establish technical schools and special courses of instruction in connection with any school under its jurisdiction, in manual training, or in home economics, or in agricultural, commercial technical or vocational education, and the power to establish night schools for persons of fifteen years of age or upwards who desire to obtain instruction in the ordinary courses of study prescribed for the public schools as listed above.

DOMINION LEGISLATION

While all legislation discussed previously in this chapter influenced directly the promotional and developmental growth of technical education in each province, the passing of the Technical Education Act in 1919 by the Dominion government, not only stabilized this development but also stimulated citizens generally to believe steadfastly in the educational, social and cultural values of technical education.

That Act provided:

1. That an Order in Council be passed by each province indicating its desire to take advantage of the provisions. This was fulfilled by all provinces.
2. That an agreement be signed between the Minister and each province indicating the character and scope of work to be done. (Typical agreement is presented in Appendix C).
3. That an appropriation of \$10,000,000 be made.
4. That a basic contribution of \$10,000.00 to each province be given.

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5. That additional grants to each province based on population be given.
 6. That the life of the Act be ten years.
 7. That agreements for the establishment of programmes be arranged on the basis of the province contributing an equal amount to the investment of the Dominion in all programmes.
 8. That expenditures be allowed for teacher-training, travelling expenses of directors and supervisors.
 9. That provinces have some freedom in determining the character of their programmes.
 10. That high school vocational education be established for students who have reached the age of 14 years.
 11. That evening schools be organized in trade learning for apprentices and journeyman needing occupational experiences in theory and practice.

Chapter V

CHARACTER OF PROVINCIAL TRAINING PROGRAMMES -
FROM THE PAST TO THE PRESENT.

While early Provincial Training Programmes evinced a character that reflected local educational needs, existing programmes represent inherently a unified national character. Canada's war effort necessitates a continuous supply of technically trained men and women, and the Dominion and Provincial education authorities are co-operating to provide, through the National War Emergency Training Programme, an adequate and an efficient body of technically trained citizens to serve in the armed forces and in industry.

In the latter programme, the Dominion Government is influencing more directly the character of the training than it did under the administration of previous Dominion-Provincial programmes. The major objective in this programme is the training of citizens to take responsibilities that are similar in character regardless of the locality in which the training is conducted. Training for duty in the Air Force for instance is the same in British Columbia as it is in Quebec. Under the pioneer conditions in Canada when technical education had its beginnings, the character of training was definitely determined by the economic and social needs of the local communities. To many citizens, this recent change in the character of provincial programmes augurs well for the future of technical education in Canada.

The character of the activities that have moulded the evolutionary changes in the practices of technical education throughout

the period from the time manual training was begun in Halifax, N.S., in 1891, up to the present war programme, has been fluctuating with the changing economic and social conditions. In the early struggles of the people in the older provinces technical education was purely utilitarian while in more recent years it has had recognition as having general educational values as well as vocational.

The people of Nova Scotia struggling in the eighties to improve their living standards turned to technical education for strength. Mining being one of their basic industries, they naturally adopted with hope, the policy of organizing mining schools. The first schools were opened in 1888. During the early period discussion centred around the adoption of any type of technical education that would help them to increase their fitness for producing food and home comforts. It was the era of developing home industries in the beginning techniques of production. The processes were simple and demanded education of a very elementary character. This training was confined to evening classes with teachers in charge who worked in the mines all day, with the result that their teaching efficiency was not of the highest degree (25: 1909/101 166).

Simultaneously with the opening of these evening classes discussions were increasing in all eastern provinces regarding the need for hand and eye training in the regular day schools. Halifax, as previously indicated, took the lead in this experimental venture in technical education offered in the schools. Manual training with the use of simple hand tools and with the use of wood as the

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instructional material comprised this undertaking. These early experiments together with vigorous discussions concerning the need for a modification of educational practice helped to prepare the public thinking for an expanded programme of technical education.

The year 1899 brought encouragement to the promoters of this type of educational activity. Sir William C. Macdonald, the millionaire tobacco manufacturer of Montreal, had a vision of Canadian boys using their hands intelligently to the profit of their brain (22: 1). With this objective in mind he provided funds to promote and establish Manual Training, Seed Grain Selection, School Gardens, Nature Study and Household Science as parts of a movement to assist in building up the country in its boys and girls, (11:1:152). This plan broadened the character of hand work to include activities in material of different characters.

To make a success of the plan Sir William enlisted the active co-operation of his friend Prof. James W. Robertson. Before introducing the plan, Prof. Robertson visited Europe to contact prospective teachers, to observe school shops, to study tools and equipment, to check course outlines, and to satisfy himself of the suitability of manual training as a school subject to Canadian schools. He returned ready to direct Sir William's proposal for Canadian boys and girls.

This Macdonald enterprise in manual training began in all principal centres in 1900 from Prince Edward Island to British Columbia. During the subsequent three years, Sir William financed the undertaking which was destined to be the means of creating the beginning of a national movement of technical education, the

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character of which was hand work for boys and girls of school age in materials that were real and of practical value. This national educational experience had a profound effect on the future development of technical education in Canada. In fact, educators and others were arguing for a "new day" in education. One comment emphasized that the new aim should be to identify the school with the farm and the village and develop a new respect in fathers and mothers for the school as a practical and not a mere scholastic institution. Any technical activity that enlisted all the learning faculties of students was acceptable to this school of educational thought. The character of the specific activities was subordinate to the principal of learning, to do by doing, (18: 1914/15: xliii).

The next substantial movement that influenced the character of technical education in Canada was the appointment in 1910 of the Royal Commission on Industrial Training and Technical Education. The principal recommendation of the Commissioners which affected the trends and character of technical education throughout the Dominion was a complete system of secondary vocational education. The Dominion Director, in his first annual report, after the passing of the Technical Education Act, based on the commission's recommendation, said; "There are those who would restrict the work of technical

"There are those who would restrict the work of technical education to such instruction or training as would improve the efficiency of the boy or girl as a productive machine". (3: 1919/20:7).

To give direction to the character of training provided under the Act and to prevent the training being conducted on a purely job efficiency basis, the following aims of all training were listed

(3: 1,1919/20:6):

- (1) The preservation of health and the vigour of life.
- (2) The formation of good habits.
- (3) The development of the sense of duty and responsibility.
- (4) The preparation of the body, mind and spirit for the following of some useful occupation.
- (5) The cultivation of the mental powers, the acquisition of knowledge and the development of the scientific spirit with reference to the occupation.
- (6) The promotion of good-will and desire and ability to co-operate with others.
- (7) The maintenance of standards and ideals.

On the foregoing aims, the dominant character of all courses of vocational education was to train for citizenship which involved, of course, the fitting of an individual for useful employment.

While each province was required to follow the basic aims determined by the Act, they were allowed some freedom in determining the nature of their courses. Character of courses offered in each province

was:

British Columbia.

In the most western province of British Columbia night schools for industrial work were opened; a correspondence school in mining and mine surveying; a day technical course for boys in Vancouver and a household science course for girls in the same city.

Alberta.

Calgary and Edmonton opened day technical schools. The Calgary school was designated a prevocational organization. Commercial schools were established in Calgary, Edmonton and Lethbridge. In addition to these day classes evening sessions for adults were

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opened in Calgary, Edmonton, Lethbridge and Medicine Hat.

Saskatchewan.

The first vocational classes in Saskatchewan were organized under the Technical Education Act. A limited number of classes were opened in shop work, commercial education and domestic science.

Manitoba.

Courses recognized as coming within the scope of the Act were conducted in Winnipeg, Brandon, Virden, Dauphin and Stonewall. Classes were offered in domestic science, commercial subjects, printing, building trades, machine shop, forging, electrical, automechanics, patternmaking and telephony.

Ontario:

The Technical Education Act stimulated municipalities in Ontario to enter upon an extensive programme of building operations. Evening classes were organized in a large number of new centres and the enrollment was exceptionally large. Ontario, because of its industrial character, offered a greater variety of courses than other provinces. A full-time Technical Teachers' College was opened in Hamilton to meet the increased demands for teachers.

Quebec.

Courses were offered in fitting, automechanics, drafting, electricity, stationary engineering, joinery and foundry, in such cities as Montreal, Quebec City, Sherbrooke, Three Rivers, Lachine and Saint-Johns.

New Brunswick.

During the first year of the Act, New Brunswick organized a

thorough programme of vocational education which included the following types of schools:

- (a) pre-vocational schools;
- (b) day vocational schools;
- (c) part-time schools;
- (d) evening vocational schools;
- (e) itinerant schools;
- (f) a correspondence school.

A thorough teacher training programme was evolved to man these schools.

Nova Scotia.

Under the Department of Education, the province of Nova Scotia offered technical education in the form of university courses leading to a degree in civil, mechanical, mining and electrical engineering in a central institution, and also secondary technical training in diversified forms. Branches of the latter included (1) Short courses, (2) Correspondence Courses, (3) Industrial Continuation Schools. In adult evening classes no less than thirty-two different courses were offered simultaneously.

Prince Edward Island.

The work under the provisions of the Technical Education Act in Prince Edward Island was centralized at the Agricultural and Technical School. Courses offered were: agriculture, motor mechanics, carpentry, farm engineering, English, economics, blacksmithing, mechanical drawing, wireless and cheese and butter factory operators.

During the first two and three years of the operations of the Act all provinces hastened to take advantage of Dominion financial assistance for vocational education, but in the fourth year of its operation a testing time was experienced because through the depression all provincial and municipal governments were compelled to reduce expenses. This financial situation had a very detrimental

influence on the stability of programmes. Some provinces actually closed departments before a fair experiment had been tried. In the Dominion's fifth annual report (3: 5, 1923/24:5) on the operation of the Act, which was a little more hopeful, the writer said:

"In some provinces the growth of vocational education has been slow, due to industrial and financial depression, but, on the whole fairly satisfactory progress has been made and the prospects for the future growth are encouraging."

This slow and steady application of the Act continued throughout the first ten years of its existence. At its expiration only one province, Ontario, had used its quota. These depression years, according to all official reports, retarded the development of a logical and normal programme of vocational education in Canada. Several five-year extensions of the Act have been necessary to give each province opportunity to use their unearned portion of their quota of the appropriation. Manitoba at present is the only province drawing grants from this Act.

Although money was not available for the expansion of vocational education during the long period of depression, interested citizens were ceaseless in their striving to obtain more recognition for this educational activity. Success crowned their years of persistent efforts when in the 1936-37 session of the Dominion Parliament an appropriation of \$1,000,000 was passed for a dominion-wide youth training programme.

A national protest against the continued neglect of unemployed youth, who were thought of as the "unwanted generation" was the force which rushed into prominence again the peculiar and effective characteristics of technical education to meet not only the occupa-

tional needs of citizens but also the recreational and cultural. Each province was eager to participate in this grant for technical training which would meet the local needs of their citizens. The character of the courses offered was designed to attract both young men and young women who needed badly an experience of social rehabilitation. All programmes succeeded in this aim in a way that won the support of the whole country (10: 6).

The local youth training programmes in the various provinces had beginnings of the character that reflected the ability of each community to meet this need. In cities where technical schools had been established evening classes were held when departments were not used by regular students. The enthusiasm reached such heights in several centres that classes were opened at 4.30 p.m and continued until 12 p.m. In the absence of regular technical schools communities in every province were not to be denied this opportunity. They proceeded to open classes in old buildings and vacant stores. This improvised approach did not discourage students or parents. Programmes continued consistently for years and were the forerunners of the Dominion War Emergency Training Programme which is operating on practically the same personnel and training facilities. The character of the courses being offered are determined naturally by the need of Canada's war effort. Training in all the basic trades in aircraft production and maintenance seem to dominate the training programmes. In addition to training in these crafts, courses are given that meet the requirements of any industries serving the war effort.

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The war effort in technical education on the adult level is having its repercussions in the technical schools for regular day students. The character of work given is being modified on the high school level particularly, to meet the general national effort to win the war. Pre-vocational courses are being taught instead of industrial arts for general education purposes.

In this way, the character of provincial training programmes is profoundly affected today by the national necessity for technically trained people and by the profitable experiences gained in these programmes. Citizens generally are insisting on the introduction of more practical work in the schools of the Dominion. This movement is growing in strength and persistency and threatens to modify the character of previous efforts in technical education in all provinces.

Chapter VI

PRESENT TRENDS IN TECHNICAL EDUCATION

Canada's part in the war effort of the British Empire has turned the attention of its citizens to the paramount importance of technical education in training men and women for service in war industries and in the armed forces. This sudden demand for skilled and semi-skilled workers has awakened citizens everywhere throughout the Dominion to the realization that technical education is indispensable in the modern life adjustment needs of the majority of citizens.

Simultaneously with Dominion-Provincial technical education conferences with all provinces participating are curriculum revision discussions which for the most part favour increased offerings in technical education. The latter discussions seem to create some alarm with university representatives and others, lest the traditional cultural education should be neglected for the accelerating demand for increased technical and vocational education.

A timely prelude to the organization of the Dominion-Provincial War Emergency Training Programme (36: 427-429) was the National Youth Training Programme which grew out of recommendations to the Dominion Government by the National Employment Commission, (20:5).

At a War Emergency Training Programme conference in Ottawa on March 17-19, 1941, the Hon. Norman A. McLarty, Minister of Labour, in welcoming the Provincial representatives, said (36: 427):

"He considered the War Emergency Training Programme as one of the most important phases of our war effort. Al-

though the drain on skilled labour had only been felt to some extent, it would come. We have been told on all sides that the demand for skilled labour is going to be extremely great. By the training programme which has been approved by each province, it would be possible to make the necessary supply of skilled help available."

At the same conference, Dominion Director, Mr. R. F. Thompson, informed the delegates that the urgency of war industrial training necessitates the use of available facilities under the Youth Training Programme and the Provincial Vocational Schools. He further advised that expansion of the training programme was recommended by the Inter-departmental Committee on Labor Co-ordination, with the result that the War Emergency Training Programme was set up in January, 1941. This expanded programme necessitated the appointment of regional directors and field representatives to maintain contact with employers in estimating the types and volume of labour required, to ascertain the kind of training to be given in the schools and to arrange for the subsequent placement of trainees.

Proposals were adopted for the training of 50,000 persons in Vocational Schools and Special Training Centres in 1941, 20,000 of whom were intended for the requirements of the Armed Forces. It was also reported that 50,000 were being trained in plant schools.

While instruction at training centres and vocational schools was being carried on in two shifts, and in some cases three shifts a day, it was believed that the method of training by industry itself should be extended.

The character of the trends in the War Emergency Training Programme is obviously influenced by the experiences gained in the Dominion-Provincial Youth Training Programme, which had its genesis

in the Parliamentary session of 1937-37 (10:5). During this session, the Dominion Government placed in the estimates an amount of \$1,000,000. for youth training. All provinces participated in this plan. Four main categories of projects were specified as coming within the scope of the Vote as follows:

- (a) training projects of an occupational nature;
- (b) learnership courses in industry;
- (c) work projects to combine training with conversations and development of natural resources;
- (d) physical training programmes to maintain health and morale.

These projects were to be open to all young people, 18 to 30 years of age, without gainful employment and in necessitous circumstances.

The response of the provinces was most gratifying to the Dominion Government. Every province signified its intention of embarking on a programme of youth training. Subsequently, outlines of their projects began to flow into Ottawa, and the work of considering them, and the drafting of agreements under which they would be carried on, proceeded forthwith. Agreements were signed with all provinces as indicated: Manitoba, July 13, 1937; Alberta, August 3; British Columbia, August 11; Ontario, September 14; Quebec, September 17; Nova Scotia, September 17; New Brunswick, October 20; Prince Edward Island, October 30.

During the first year projects were organized in the various provinces in accordance with placement opportunities. Seven of the nine provinces operated forestry projects during the period. Mine training, in one form or another, was given in Nova Scotia, Quebec, Ontario and British Columbia. In Nova Scotia a gold mine was acquired in which practical training in hard rock mining was given.

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Agriculture common to every province was taught generally throughout the Dominion. Apprenticeship and Learnership projects were organized in the industrial centres. Ontario emphasized this training more than other provinces. Manitoba had a learnership project. Urban Occupational Training Projects were offered in every province except Prince Edward Island and Nova Scotia. Courses in motor mechanics, radio servicing, electricity and housewiring, machine shop, painting, plastering, wood-working and carpentry, diesel engineering and other subjects were taught. Home Service Training Schools were also established. Physical Training was offered in all schools wherever arrangements could be made to offer this fundamental educational activity. Following the first year's experimental work in Youth Training, each province improved their offerings during the subsequent year. For that year the Dominion allotments to the provinces for youth training (8:3) were as follows:-

Prince Edward Island	\$20,000.00
Nova Scotia	90,000.00
New Brunswick	76,000.00
Quebec	235,000.00
Ontario	350,000.00
Manitoba	150,000.00
Saskatchewan	120,000.00
Alberta	120,000.00
British Columbia	155,000.00

The agreements (8:3) signed by the various provinces provided for the following features:

1. Allowances to trainees to enable them to take courses away from their own home.
2. Travelling expenses for trainees, instructors and supervisory personnel.
3. The appointment of supervisors of projects, placement officers, vocational guidance officers, class instruc-

tors and teachers.

4. Compensation for accidents.
5. Medical aid in camps or boarding residences.
6. Provision for equipment, machinery, materials, supplies.
7. Printing, advertising and publicity.
8. Provision of organized recreation, physical education, instruction in health, citizenship, etc.
9. Rentals of buildings for class accommodation.
10. Training wages in projects like forestry and mining.

On March 31st, 1940, the Dominion- Provincial Youth Training Programme completed its third year of operation. (9:3). An act of Parliament which passed in the early summer of 1939 provided an annual expenditure of \$1,500,000 for a period of three years was made available for the continuation of youth training. Following the outbreak of war, careful consideration was given to the projects which should be carried on, so that the programme might best assist Canada's war effort (9:6). Certain adaptations of projects were made to meet the greater demand for technicians, not only in industry, but also in the armed forces and to make sure that industrial production would not be held up by a lack of skilled workers. Since Canada entered the war, the Youth Training Programme has gradually evolved into the existing War Emergency Training Programme.

The Youth Training Programme destined to be the foundation for efficient technical training for the war effort arose amidst unpropitious employment conditions for out-of-school youth. Manitoba originated this movement which in a short period manifested its

strength in a national expression.

In the fall of 1935 in the city of Winnipeg, Manitoba, a questionnaire was sent to all students who graduated from St. John's Technical High School and did not enter the University. It was apparent to the then Minister of Education, the Hon. R. A. Hoey, that only a very small proportion of those leaving school was employed. Conferences between the Department of Education and representatives of the Winnipeg School Board explored the possibilities of opening classes at which these young citizens would have opportunity to recondition themselves educationally and socially. The outcome of these discussions created the first classes in organized youth training in the Dominion. In these original classes, 3,844 students were enrolled for recreational, cultural and occupational activities (15: 1936/37:109). Concomitant with this constantly increasing technical training on the adult level which drew its original stimulus from the beginnings of the youth training programme, exists curriculum revision discussions in all provinces. What appears to be a significant step in educational development is a demand for parity of status for technical subjects with traditional academic studies.

Improved employment conditions which reflect demands for more and better education are stimulating discussions and forcing decisions for new and enriched educational opportunity. These trends indicate that technical education in school studies and on the adult level of learning is on the increase in all provinces in Canada.

Chapter VII

FIVE PERIODS IN TECHNICAL EDUCATION

In analyzing and interpreting the data included in this thesis, the writer has decided that the most understandable historical treatment of the educational movement can be portrayed by a "Period" presentation. It occurs to the writer that these data, which deal with the origin and development of technical education in Canada, divide roughly into five-ten year periods. The first of these periods ended in 1900; the second began in 1900 and terminated with the appointment of the Royal Commission in 1910; the third period preceded the enactment of the Technical Education Act of 1919; the fourth period comprises the duration of the Act; the fifth period ends with the existing War Emergency Training Programme. In each of these periods the progress and retardation of technical education have been influenced by such fundamental factors as economic, social and educational.

First Period. (1834-1900)

From a national point of view it may be argued that during the first period the influence of technical education was infinitesimal and fragmentary. However, on close analysis one finds that although the movement was confined to the older provinces in the East, it was intensive and real. Nova Scotia citizens, for instance, influenced definitely by a desire to be self-sustaining and independent in their economic affairs, believed staunchly in the efficacy of technical education to aid them in that struggle.

This clear comprehension of the value of technical education was not confined to the thinking of those who were favouring its adoption solely for industrial efficiency, but educational leaders were also influenced by its force in other lands. The superintendent of education for Nova Scotia, as early as 1881, sounded a note of warning to those who supported technical education for economic reasons only and emphasized that this hand and eye training could be introduced into school work without having any detrimental influence on the literary and disciplinary ends of education.

To the superintendent referred to above goes the credit of interpreting during this early period the psychological influence that successful experiences in technical education have on students. He said,

"Encouragement should be given to studies which train the eye and hand and thus create favorable dispositions towards industrial pursuits generally."

The bringing together of the thinking and efforts of those who favored technical education solely for industrial proficiency and those who realized its general education significance created the mould out of which came an established public opinion that has consistently favored and supported technical education. It was a strong beginning for technical education in Canada and it has not failed to produce in Nova Scotia its social implications as well as economic and educational.

Second Period. (1901-1910)

The Macdonald fund, reported in detail elsewhere in this

thesis, was the most potent single influence in aiding the development of technical education during this second period. Its active programme was the means by which technical education was organized for the first time simultaneously in every province. It started the movement which actually resulted several years later, 1919, in the passage of the Dominion Technical Education Act.

The influences that motivated that undertaking were chiefly educational and social. Boys and girls were to be given opportunity through creative hand work to discover their interests and aptitudes. As an instrument for this purpose it must be considered to have been a tremendous success. Records of work achieved under the plan and subsequent programmes based on the policy embodied in it reveal in unmistakable terms student growth both educationally and spiritually. The influence of this movement permeated the thinking of citizens in all communities in which it was conducted with sufficient force to give technical education for the first time in the history of Canada a national recognition.

Third Period. (1910-1919)

Undoubtedly the most pronounced manifestation of the influence of the work of the Macdonald fund programme was the appointment in Manitoba in 1910 of a Royal Commission in Technical Education. That Commission began its work about the same time as the Royal Commission for Canada.

During the same year the superintendent of Education for Ontario was required to make investigations in United States

and Europe. These activities were indicative of the public will to support technical education. While the reports of these investigations were implemented with very great advancements in the respective provinces, unfortunately, as other provinces were moving towards similar decisions, the war of 1914-18 occupied the major attention of public officials and capital expenditures had to be curtailed. The natural growth according to the evolution of public thinking of technical education was impeded.

During this war period provincial governments and school boards were compelled to reduce their grants to technical education and this policy, which was current in all provinces, had an inhibiting effect on the growth of technical education in local communities where funds were low. It was not until 1919, at the time of the passing of the Technical Education Act that technical education recovered its normal pace of advancement throughout the Dominion.

Fourth Period. (1919-1929)

Following years of financial embarrassment in trying to provide adequate funds to maintain technical education, the provinces welcomed with enthusiasm the passing of the Technical Education Act. With this added financial assistance, the provinces moved immediately to increase and enrich their programmes. The outcome of this legislation was a decided impetus to the work in all provinces. Once again technical education was being accepted as an essential educational activity for the majority of students in Canadian schools and for the occupational

improvement of employed workers.

With the advent of an unexpected depression period in the year 1923, the provincial governments were again compelled to reduce expenditures, with the result that programmes were reduced and prevented from expanding, as was previously experienced. This uncontrollable financial condition worked adversely against the growth of technical education. In spite of this set-back, provinces proceeded to hold what they could of the programmes organized under the terms of the Act and also to maintain their original programmes. The net result of this retardation was the prevention of mushroom growth in programmes and the confining of development along lines of pressing needs of provincial conditions.

Towards the end of the life of the Act, the majority of the provinces had recovered sufficiently to give more support to their programmes, with the outcome that there was a general demand for the extension of the Act, because only one of the provinces had earned its full quota. The Dominion Government responded favorably to this demand and continued to extend the unearned sums of the appropriation. This concession helped the provinces to continue their support to technical education and guaranteed to the people of at least a partial programme of the type of education that they had become to recognize as essential in their preparation for the responsibilities of citizenship.

Fifth Period. (1929-1940)

At the commencement of this period the economic depression

was again influencing public officials to bear down upon expenditures. Technical education in spite of its ardent band of supporters was considered to be the "Cinderella" of Education and was the first to be considered when cuts had to be enforced. With the growing army of unemployed youth in all the principal cities of the Dominion, public thought was again turning to the technical schools for remedial measures. This agitation for education assistance for these out-of-school and out-of-work youth accelerated the passing of a youth training grant in the 1936-37 session of Parliament. This Act proved once again conclusively that Dominion financial assistance revives interest and increases support for technical education in all the provinces.

The passing of this youth training legislation has marked in the records of a beginning of a new era in technical education in Canada. It seems now that public opinion will continue to give effective support to this educational programme regardless of the claims of the public officials about the need for retrenchment in expenditure.

Conclusion.

It is the opinion of the writer that the sound foundational thought established in support of technical education throughout years of favorable and unpropitious economic and social conditions will stand resolutely for a continued expansion of vocational education in Canada. The gains being made now towards the efforts of winning the war will never be relinquished willingly when the war has been won because

everyone knows the part that technical education will have
to play in winning the peace.

Chapter VIII

SUMMARY

INTRODUCTION.

The history of the origin and development of Technical Education in Canada is replete with interesting and informative accounts of the economic, social and educational forces that have been influencing this evolutionary movement from the eighties up to the existence of the War Emergency Training Programme. Throughout the past half century the interplay of economic conditions and progressive educational thought has woven the patterns of the fluctuating programmes that have been developed and retarded from the shores of Prince Edward Island to the coastline of British Columbia.

Statement of the Problem.

What has been the nature and extent of the origin and development of technical education in Canada?

Problem Analysis:

1. What was the nature of the origin of technical education?
2. What were the results of investigations by Commissions on technical education?
3. What were the legislative Acts that aided the development of technical education?
4. What has been the character of the training programmes in each province?
5. What are the current trends in technical education?

METHOD AND MATERIALS.

The method of pursuit was determined by the historical character of the thesis. For the most part information comprising the body of material in the thesis was obtained by reviewing government publications.

The technique used to exhaust the usable materials was correspondence and personal explorations of the shelves of libraries. Government publications in the Provincial, department of education and technical branch libraries proved adequate to satisfy the requirements of the subordinate questions in the problem analysis.

THE ORIGIN OF TECHNICAL EDUCATION.

Preceding any recorded efforts to establish Technical Education in Canada, citizens of the eastern provinces were influenced to view this movement favorably by the widespread attention and consideration given to it in other countries. England's failure to keep abreast with improvements effected by technical education in Europe aroused educational leaders in eastern Canada at a time when the people were endeavoring to improve their production and distributive methods. This anxiety found expression in a tangible beginning in technical education in the province of Nova Scotia in 1891--the first attempt of its kind in Canada. Nova Scotia also through adequate public support passed laws which provided for a system of technical education that ranked this eastern province of Canada as having been the pioneer of legislation supporting

technical education in America.

The first national expression of technical education began in 1900 with the Macdonald fund-- a private contribution. Every province in the Dominion participated in that enterprise. The enlightening and stimulating experiences gained throughout the operation of that three-year programme gave the impetus which developed national public support for the promotion and passing of the Technical Education Act of 1919.

FINDINGS OF COMMISSIONS ON TECHNICAL EDUCATION.

Research work by provincial commissions has been confined to the provinces of Prince Edward Island, New Brunswick, Quebec, Ontario and Manitoba. Without exception all those investigations revealed the need for expanded and enriched programmes of technical education. While much progress in implementing these recommendations was achieved, retardation through the depression years inhibited the realization of the major aims contained in the reports.

The Royal Commission on Industrial Training and Technical Education, appointed by the Dominion Government in 1910, in its report of 1913 recommended the founding of a national vocational education programme. This recommendation due to the Great War of 1914-18 was not implemented by legislation until 1919.

LEGISLATIVE ACTS THAT AIDED THE DEVELOPMENT OF TECHNICAL EDUCATION.

As educationalists became aware of the intrinsic value of technical education to advance the economic interests of

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communities and the educational growth of citizens in school and out of school, they influenced public opinion to support legislation for the purpose of advancing the development of technical education. Provincial Acts which comprised these financial aids to local districts provided for freedom in determining the character of training programmes in accordance with local needs and also extended guidance in helping specific groups to give provincial character to their activities

The passing of the Technical Education Act of 1919 by the Dominion Government helped to stabilize existing provincial programmes and develop new ones. The proclaiming of this Act was the first public national effort through legislation to give financial assistance to technical education.

CHARACTER OF PROVINCIAL TRAINING PROGRAMMES -
FROM THE PAST TO THE PRESENT.

From the beginning technical education programmes in the eighties up to and including the present War Emergency Training Project, a consistently determined attitude by citizens in all provinces to make the character of programmes fit the vocational training needs of citizens and the general education needs of students in technical education, has manifested itself in demands for changes in course content. This flexibility of attitude is exhibited in the radical changes being made in provincial youth training courses to meet the objectives of the recently organized War Emergency Training schedule and also in technical high school course, with revision from industrial arts to definite prevocational training.

PRESENT TRENDS IN TECHNICAL EDUCATION.

Existing trends in technical education on all levels of school work and on the adult level indicate a definite increase in programmes and an expansion of those established. The demands for technically trained artisans in all branches of the mechanized war forces have given a definite impetus to the development of technical education programmes in all provinces. Concomitant with this development has existed an acceleration towards the inclusion in the curricula of day schools an increased and enriched programme of technical education.

CONCLUSION.

The writer after reviewing all publications which have provided the information contained in the body of this thesis has concluded that economic conditions, favorable and unfavorable, have modified the development of technical education more potently than educational thought. Educational convictions for technical education in the beginning years were acquired by vitalized contacts with successful experiences with programmes in other lands. Little experimental work was necessary to convert citizens to support technical education. When financial assistance was obtainable from Dominion and Provincial Governments programmes in all provinces have always expanded forthwith (Appendix E) and conversely, programmes were reduced automatically when grants were curtailed (3:4:13). With the advent of the National War Emergency Training Programme and curriculum revision

towards more practical education, it seems obvious to most people now that public opinion will continue to insist on an expenditure of adequate sums of money for the maintenance of efficient technical education programmes to assist in guaranteeing the winning of the peace that will follow the successful termination of the total war.

APPENDIX A.

Copies of the Findings of the following Commissions:

1. Commission on the Need for Vocational
Education in New Brunswick, 1916.
2. Dr. John Seath's recommendations, 1910.
3. Manitoba Commission on Technical
Education, 1910.

COMMISSION ON THE NEED FOR VOCATIONAL EDUCATION IN NEW BRUNSWICK
1916.

Summary of Findings

Briefly stated, the findings of your Committee are--

1. That the modern conception of the State's obligation as far as education is concerned includes training all the boys and girls from 5 to 18 years of age.
2. That those who cannot or do not wish to go to college, should be trained for efficiency as workers in the industries of the country.
3. That that training which best fits a child for efficiency as a producer in industry also tends to his own highest well being and value as a citizen.
4. That the N. B. school attendance falls off alarmingly after Grade V. That there were only 2,248 students in the public high schools last year, and of these only 343 were in Grade XI. There are 1,971 students in Grade V., and only 736 in Grade VIII in 12 of the largest centres of N. B. Evidence shows that the greatest scarcity of male teachers in the higher elementary grades in a measure accounts for this falling off. (Appendixes C and D.)
5. That there are 16000 persons not in school between 14 and 18 years old in N. B. That there are in the Province 75000 housekeepers and 100000 workers, many of whom would doubtless appreciate an opportunity for further training.
6. That New Brunswick does not offer courses in Vocational Education to its young people and the training given in the schools is planned largely on the assumption that all the students shall take University courses. A little money has been spent for Manual Training, Household Science and Elementary Agriculture, but these subjects are not Vocational. They do not effectively fit for profitable employment.
7. That the nature of our courses and the methods by which they are carried out do not tend to attract our young people to the common vocations open to New Brunswick citizens. Our schools do not direct attention to our great natural resources and point out how these may be developed.
8. Other Provinces and States have developed efficient courses in Vocational Education. New Brunswick and Prince Edward Island are the only Provinces in Canada which have not taken this step. Vocational education has been a fixed policy in Europe for almost half a century and within the last twenty years a large percentage

of the United States have adopted this line of educational effort. That Nova Scotia spends over \$80,000 annually on Vocational and Technical education.

9. That Vocational Education properly conducted will hold a very large proportion of the pupils in school until they are 16 to 18 years of age. (See Appendix D.)

10. That Vocational Education pays both from the standpoint of the State and of the individual. (See Appendix E.)

11. That the New Brunswick Compulsory Attendance Act is too largely a dead letter. That most European and many of the States to the south require full time attendance at school until 14, and part time attendance till pupils are 16 or 17 years of age.

12. That New Brunswick needs Vocational Education and Compulsory attendance for the purpose of properly educating her youth and developing her resources.

13. That Vocational Education is most successful when it deals with the occupations of the locality in which the school is situated, and that the nature of the teaching should be vitalized by a close contact with the industry.

14. That Vocational Training is for the masses of workers and should be made accessible to all. The training should be furnished in proximity to the worker's home.

15. That Vocational Agricultural Education is being carried to rural centers successfully in Europe and the United States and that this is our greatest single need in New Brunswick in this connection.

16. That certain subjects such as Home Economics and Motor Mechanics are needed in all the centers of the Province. That others such as training in the leather, fishing, lumber and other industries will be needed only in certain localities.

17. That the principle of Federal grants for education has been fully established. Washington last year passed an Act providing \$7,000,000 a year to be granted to States of the Union which have adopted Vocational Education, and to be used exclusively for that purpose.

18. That teachers for Industrial Vocational classes should be efficient Journeymen from the trades to be taught.

19. That the manufacturers, labor leaders, agriculturists and educators of N. B. believe we should have Vocational Education.

20. That everywhere Vocational education is preceded by pre-vocational courses for the purpose of holding the pupils until they are 14 years of age to enable them to choose a vocation wisely, and

to lay a foundation for real vocational training.

Recommendations

In order to train those young people in New Brunswick who wish to enter industry for efficiency and good citizenship, and for the purpose of increasing the earning power and happiness of the workers in the common occupations of the Province your Committee respectfully recommends:-

1. That in centers where there are not less than 100 pupils in Grades VII and VIII Pre-vocational classes be organized for pupils who have reached the age of 12 and who do not wish to take a college preparatory course. That in these classes half time be devoted to book work and half to practical subjects.
2. That in smaller centres and rural localities the work of Grades VII and VIII be given a specially practical trend.
3. That Vocational training be provided for pupils over 14 years of age. That this be done by establishing special day schools day departments and evening classes according to the wish of the community to be served.
4. That these schools and classes be under the control of special local Vocational Committees appointed by the local school boards.
5. That the Province re-imburse the local vocational committees for half the cost of maintenance of these Vocational and pre-Vocational schools and classes under terms to be fixed.
6. That a policy of developing regional Agricultural and Trade schools be considered by New Brunswick and that the Woodstock and Sussex schools be used to inaugurate this.
7. That County Vocational Education Committees be appointed to control the Regional Vocational Schools.
8. That Vocational departments in Agriculture, Motor Mechanics and Home Economics be developed in schools employing 3 or more teachers.
9. That special provision be made at the expense of the Province for training Pre-vocational and Vocational teachers.
10. That a bill giving effect to these regulations be passed at the 1918 session of the Legislature.
11. That the Board of Education appoint, before the end of the present school year, a Vocational Education Board to direct and promote Vocational Education.

12. That an act be passed requiring all pupils to attend school full time till 14, half time till 16 and two evenings a week at night classes till 18 years of age.

13. That in no case should a community which does not effectively enforce the present compulsory attendance act receive government grants for vocational or pre-vocational education.

14. That the New Brunswick Government urge the Dominion Government to aid the Provinces in financing vocational education at least to the extent recommended by the Robertson Commission.

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RECOMMENDATION OF DR. SEATH

On December, 1910, Dr. Seath, Superintendent of Education, for Ontario Department of Education, submitted an account of the provisions for elementary technical education in various communities which he had visited and a statement of the changes that appeared to him to be necessary, if the system of education for industrial purposes, in Ontario, was to be modern and adequate. The following is a copy of Dr. Seath's recommendations as given in "Education for Industrial Purposes", pages 345-348:-

"VI. SUMMARY OF RECOMMENDATIONS.

As the conclusion of my report, I submit a summary of my recommendations:

1. Fundamental

1. A good general education as an essential preparation for all vocations.
2. A closer connection between our schools and the activities of life.

11. Industrial and Technical Education

Provision for Instruction of Pupils at School.

1. In the case of the large number who leave school at or before fourteen, the extension of the present provision for teaching Household Science and Manual Training, as a basis for men's and women's trades as well as for cultural purposes.
2. In the case of the comparatively small number who remain at school for various periods after fourteen, the establishment of the following classes of day schools, by Boards of Education and High and Municipal Continuation School Boards.

(1) The General Industrial School with courses in Shop Work and in English, Mathematics and Science related thereto; all being treated from the point of view of the needs of the workmen and workwomen, and the cultural education of the Primary Schools being continued.

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(2) The Special Industrial School, providing for the trades and similar occupations, and including the full-time day school, and the part-time co-operative school.

(3) The Technical High School or High School Department, for pupils who will remain three or four years at schools and are preparing for directive positions in connection with the industries.

Provision for Instruction of Workmen and Workwomen.

3. In the case of workmen and workwomen engaged by day in their various occupations, the establishment by the aforesaid boards, of the following classes of schools:

(1) The Apprenticeship School in which the apprentice attends for part time the Day Industrial School, and the Day or Evening Apprenticeship School provided by the employer himself.

(2) The Evening School, supplementing the day shopwork by instruction in the evening in the subjects of the Day General and Special Industrial Schools and the Technical Schools.

(3) The Correspondence-Study School, providing instruction partly by correspondence and partly by a staff of travelling teachers.

Organization.

4. (1) Each industrial centre to rank as a unit for the purposes of organization.

(2) The appointment of a special departmental officer to act as Director of Industrial and Technical Schools, and to assist Boards in the establishment and organization of such schools.

An Ontario Industrial and Technical College.

5. The establishment of an Ontario Industrial and Technical College, with an Industrial museum, for the training of all grades of industrial teachers, of workmen who have already spent some years in apprenticeship, for pupils who have taken courses at the Special Industrial Schools, and for the conduct of a Correspondence-Study School with travelling teachers.

Order of Urgency of the Foregoing Provisions.

6. (1) The immediate provision of Industrial and Technical Evening Schools where competent instructors can be secured, with liberal support from Legislative grants.

(2) The appointment of a competent Director as soon as one can be secured.

(3) The establishment of an Industrial and Technical College, and, in particular, the provision of an adequate supply of competent teachers.

(4) The further organization of a complete system of industrial and technical schools in accordance with the financial capabilities of the Province, after the disclosure of the attitude of the Dominion on the question of a special subsidy to the Provinces for the improvement of agricultural and industrial education.

III. A Dominion Institute of Industrial Research.

7. The establishment by the Dominion Government, of an Institute of Industrial Research, for the advancement of the trades, as the Dominion has already done in the case of agriculture, mining and other departments.

IV. Drawing and Art Education.

1. The further extension of the provision for Art and Drawing in the Primary and Secondary Schools.

2. The establishment of a Central Art School in Toronto with both day and evening classes for the fostering of the Fine Arts, for the preparation of special teachers of Art, and for the special education of workmen in the more artistic trades.

3. The establishment of other Art Schools and Departments in other centres of the Province.

4. More generous support of Art by Legislative grants.

V. Agricultural Education.

1. The further extension of Nature Study and Elementary Agriculture in the Primary Schools with the attendant School Garden.

2. The re-organization of the provision for Agriculture in the High and Continuation Schools, and the extension in connection therewith of the present system of County representatives of the Department of Agriculture as a step in the development of School Departments of Agriculture and Agricultural High and Continuation Schools.

3. The appointment of a special Department officer to act as Director and inspector of the Primary and Secondary Agricultural Classes, and to stimulate the development of such classes throughout the Province.

VI. Commercial Education.

1. The better adaptation of our school courses to business life and the requirements of the different kinds and grades of business.

2. The provision of practical courses and of better theoretical courses for Commercial Specialists and of preparatory training for such teachers.

VII. General Provisions

Summer and Special Schools

1. The extension of the present system of Summer and other Special Schools for teachers of Nature Study, Agriculture, Art and Drawing, Commercial subjects, Household Science, Manual Training, and Industrial subjects.

Financial Support

2. The provision of adequate grants for Vocational Education by the Legislature of the Province, by the municipalities concerned as part of the school rates, and by a special subsidy from the Dominion for the advancement of both Agricultural and Industrial Education in the Provinces.

Advisory Committees

3. (1) The appointment of Advisory Committees for the management of duly established Industrial and Technical Schools; such Committees to consist of members of the School Boards and an equal number of other citizens, representing the employers and the employees, who are qualified voters and who are specially competent to advise and assist, and the proposals of such Committees to be subject to the approval of the Boards with which they are connected.

(2) The establishment of similarly constituted Committees for the management of Agricultural and Commercial Departments and Commercial High Schools.

Relation of Vocational to Academic Schools

4. (1) The organization of Industrial Schools with separate staffs and courses, and under separate principals.

(2) The organization of the Technical, Agricultural, and Commercial Departments to remain as at present, except where they may be organized as separate schools.

Compulsory Attendance of Adolescents

5. The enactment of a Provincial law with "local option," giving Boards the power to pass by-laws to compel the attendance at school of adolescents between fourteen and seventeen, under certain specified conditions."

MANITOBA COMMISSION ON TECHNICAL EDUCATION
1910

The Commission's Recommendations

After much study and inquiry, the Commission recommended:

1. That it is desirable that such measure of vocational training as is found possible should be provided for the people of our Province:

(a) On account of its value as a means of interesting large numbers of pupils that cannot be held by the purely academic work of the schools;

(b) As a means of a fuller and more rounded development for all classes of children;

(c) As an aid to pupils and parents in discovering capacities and aptitudes to assist in making choice of an occupation;

(d) As an agency for producing vocational efficiency through the development of the activities that are used in the practical affairs of life;

(e) As a means of elevating the intellectual status of the worker and broadening the range of his interests by giving him an understanding of the scientific principles and natural forces that underlie the operations of his craft;

(f) As a factor contributing to the industrial progress of the community;

(g) As an agency for social betterment through the increased intelligence and wider outlook and enlarged earning powers of numbers of trained workers.

2. That the foundation for such training should be laid in the elementary school in suitable courses of hand and eye training, leading up to the regularly-organized industrial work in the higher grades of the elementary and through the secondary school.

3. That vocational and general education should go hand in hand, each in turn contributing to the effectiveness of the other and each recognizing their interdependence.

4. That at the present stage of our development, this can be done more economically and effectively by the modification of existing agencies and the enlargement of their scope than by the establishment of special institutions.

5. That a certain number of the members of the Advisory Board should be men engaged in the industries, and selected on account of their acquaintance with and interest in the aims and ideals of vocational training, and that school boards be authorized to appoint advisory committees outside of their own members to assist them in the organization and development of the work of vocational education.

6. That school boards be authorized and encouraged to provide

such courses in vocational education as will suit the needs of their respective communities.

7. That such provision should include carefully organized evening classes, in which opportunity would be given to men and women engaged in occupations during the day to improve their general and technical education.

8. That the Department of Education should appoint an officer familiar with the aims and methods of vocational education, whose duty it would be to advise with and assist school boards in the organization of such work.

9. That grants be made by the Provincial Government as is now done in the case of Manual Training and Household Science, to assist in meeting the cost of equipment and maintenance of approved lines of vocational training.

10. That in any scheme of education looking to increased vocational efficiency, provision must be made for systematic physical education.

11. That provision be made for the preparation and training of teachers to meet the requirements of the new activities of the schools.

12. That when there shall be a sufficiently large number of students requiring higher training than is herein provided for, a technical college shall be established to provide such training.

APPENDIX B.

The following copy of a report issued by the Inspector of Manual Training in British Columbia is indicative of the character of similar statements made by officials in all parts of the Dominion at the expiration of the Macdonald Fund experiment.

COPY

REPORT OF MANUAL TRAINING INSPECTOR

Victoria, B.C., 15th July, 1908.

Alexander Robinson, Esq.,
Superintendent of Education, Victoria, B.C.

Sir,- I have the honour to submit to you my first annual report of the Manual Training Schools in British Columbia, and in doing so, I propose, with your permission, referring to the work since its introduction in 1900.

In November of 1900, Professor Robertson, on behalf of Sir Wm. Macdonald, visited British Columbia to make arrangements with the Education Department and the School Trustees of Victoria and Vancouver for the introduction of Manual Training into the schools, for a period of three years, to illustrate the usefulness of some form of handwork being taken in connection with a child's school life.

Except the providing of rooms in which to carry on this branch of study, neither the Education Department nor the cities of Victoria and Vancouver were asked to bear any of the expense. This was borne entirely by Sir Wm. Macdonald.

For three years the work was steadily carried on. By means of the press, exhibitions of the boys at work and the work done, the public was gradually educated to the meaning and the scope of this branch of study.

Though no active opposition was apparent during these three years, there is no doubt many were very skeptical about the work, its usefulness and ultimate success; not only among the public, but more so amongst the teaching profession.

However, we have faith in the work we were trying to introduce, and on its own merits we were confident of success.

In the spring of 1903, Professor Robertson again visited the Province to see what progress had been made, and also to see what prospects there were of the work being continued.

Now came the testing time as to whether our three years' labours were to bear any fruit.

On condition that the School Trustees of Victoria and Vancouver carried on the work for one year at their own expense, the equipment of the various schools was given to them free of any expense.

In Victoria, the School Trustees decided to carry on the work. In Vancouver the School Trustees, at a public meeting held in the City Hall, unanimously decided to carry on and extend the work.

For two years the entire cost of working the schools was borne respectively by Victoria and Vancouver; and since that time, as you know, Sir, the Education Department has assisted in paying the salaries of both the Manual Training and Domestic Science Instructors.

During the introduction of Manual Training (1900-3), and since that time, I have had applications from School Trustees in different parts of the Province, asking if Sir Wm. Macdonald would not assist in establishing more of such schools; but no further help could reasonably be expected, as Sir Wm. Macdonald's intentions, both here and in other parts of the Dominion, were to bear the expense of the introduction of the work, to prove that this branch of study was worth including in the school studies.

The initial expense is the stumbling block to the opening of new schools in the other cities of the Province, only one city having got over that difficulty unaided, namely, New Westminster.

Now, Sir, I venture to say that had not a start been made by Sir Wm. Macdonald seven years ago, there would still not be any Manual Training in this Province. Not that the public or the teachers would not want it, but that the initial expense would be the stumbling block.

I think the time has now come when the Education Department should take up the work vigorously, and in cities like Nelson, Rossland, Grand Forks, Revelstoke, Cranbrook, Fernie, Armstrong, Vernon, Kamloops and Nanaimo, provide the equipment (about \$300. each), if the cities provide the room and carry on the work.

The equipment, with ordinary care, would last many years, without even having to replenish any of the stock, and a great part of the stock will last a lifetime.

All around us (in other parts of the Dominion, in the United States, and the countries of Europe) we find manual training being introduced largely into the studies of the schools.

Can a young country like ours, that is constantly drawing from the older countries for its increasing population, ignore this fact? Our schools, good as they are, cannot afford to lag behind, and where the attendance is large enough, Manual Training Schools should be established as soon as possible. Once established, I feel confident the work would be appreciated and carried on.

For over seven years Manual Training has been carried on in the two largest cities of the Province (Victoria and Vancouver), and by now the work has either proved itself a success or a failure.

Evidently the work has gained some measure of success, and is considered of some value in the curriculum of the school work, else ere this a decay would surely have set in. Instead of decay there is a slow but steady growth (even though the work is not compulsory), a growth that would be rapid if financial aid was forthcoming to help the smaller towns in establishing the schools.

Beginning with the opening of the schools in August, there will be ten Manual Training Schools at work, providing accommodation for 2,000, with a staff of nine instructors. This is a small proportion of the boys in this Province who should be enjoying the advantage of Manual Training in connection with their school life, and I hope before another year passes away some means will be devised whereby the country towns can have the benefit of Manual Training in the schools.

I have, etc.,

Harry Dunnell,

Inspector of Manual Training.

SUGGESTED REGULATIONS FOR MANUAL TRAINING AND DOMESTIC SCIENCE SCHOOLS.

- 1. A course of work, approved by the Education Department, to be taught in each school.
- 2. Every instructor must also be a qualified public school teacher.
- 3. Each boy or girl must receive at least two hours' instruction per week.
- 4. Each instructor must be responsible for not more than 24 pupils per lesson, and not more than 240 pupils per week.
- 5. Plans of all new work-rooms to be submitted for approval to the Education Department.

H. D.

APPENDIX C.

**Copy of a typical agreement between the
Minister of Labour and a province.**

MEMORANDUM OF AGREEMENT MADE THE

DAY OF

A. D.

BETWEEN

The Honourable Gideon D. Robertson, Minister of Labour of Canada, hereinafter called "the minister," of the First Part,

AND

, hereinafter called "the province," of the Second Part.

Whereas by the Technical Education Act (chapter 73, Statutes of Canada, 1919) the minister is authorized, subject to the approval of the Governor General in Council, to enter into this agreement;

And Whereas by an order of the Lieutenant-Governor in Council the province has signified its desire to take advantage of the said Act;

Now Therefore the parties hereto mutually agree each with the other as follows:

1. For the purpose of the said Act and of this agreement, "technical education" means and includes vocational education or instruction which is supplementary to and distinct from the general educational system of the province, and the controlling purpose of which is to fit young persons for useful employment or to improve the efficiency of those already employed, subject, however, to the following limitations:-

- (a) No person under fourteen years of age shall be admitted to vocational day classes.
- (b) No person under fifteen years of age shall be admitted to vocational evening classes.
- (c) Courses of instruction of college grade are not included.

2. Subject to the modifications made herein all the provisions and conditions set out in the said Act are deemed to be incorporated in this agreement and to be binding upon the parties hereto.

3. In addition to the stipulations contained in the said Act, it is agreed that in determining the amount spent by the province on vocational education no account shall be taken of:-

- (a) Any payment or support given to any religious or privately owned school or institution.
- (b) Any expenditures which have been made in respect of any educational work for which a grant is paid to the

province by the Minister of Agriculture of Canada.

4. The following expenditures and no others shall be deemed to be properly made on vocational education:-

- (a) Purchase or rental of land, buildings, furnishings and equipment to be used for vocational education.
- (b) Remuneration and travelling expenses of persons employed for the purposes of administration of vocational education and all expenses incidental to such administration.
- (c) Remuneration of teachers employed to conduct vocational education classes.
- (d) Training of teachers specifically for vocational education work.

5. (1) The province shall furnish the minister with the following:-

- (a) A monthly statement of the work done during each month on a form to be prescribed by the minister.
- (b) At the end of each half of the calendar year a detailed financial statement showing the amount expended by the province under this agreement.
- (c) Such evidence as the minister may require to show that the amounts paid to the province hereunder are expended in accordance with the terms of this agreement.

(2) The province shall not be entitled to claim any part of the moneys available hereunder for the purchase or erection of buildings or extensions and equipment unless the plans and specifications of such have been approved by the minister.

6. The minister or any one authorized by him shall at all times have the right to inspect any work on technical education existing or being carried on under the terms of this agreement, and if the accommodation, equipment, text-books, course of study, discipline or qualifications of teachers are in his opinion not adequate or satisfactory or if such work is not being carried on to his satisfaction, he may withhold payment of any moneys remaining unpaid under the terms of this agreement. Persons appointed by the minister under this section to inspect shall not have any directive control over any part of the educational organization of the province but shall have opportunity to witness any part of the work, as normally conducted from time to time.

7. The province shall, as soon as possible after the execution of this agreement, take necessary steps to provide for the adequate training of a sufficient number of teachers and to furnish such other

officers as may be necessary to carry out the provisions of this agreement.

8. Subject to the conditions of the Act and to such modifications as may be mutually agreed upon by the parties, this agreement shall be renewed on or about the first day of April each year until the 31st March, 1929.

9. This agreement shall not be valid until the same is approved by the Governor in Council.

In Witness Whereof the minister has hereunto set his hand and the seal of the Department of Labour, and has hereunto set his hand and the seal of the said province the day and year first above written.

APPENDIX D.

Tables 1 and 11.

Money available and Paid to the Provinces
Under the Technical Education Act for the years
ending March 31, 1920 and 1930.

TABLE 1. - MONEY AVAILABLE AND MONEY PAID TO PROVINCES UNDER TECHNICAL EDUCATION ACT, FISCAL YEAR ENDING MARCH 31, 1920.

Province	Amount Available	Amount Paid
	\$ - cts.	\$ cts.
British Columbia.....	43,346.01	19,407.78
Alberta.....	41,832.35	23,374.21
Saskatchewan.....	51,838.18	809.18
Manitoba.....	48,710.03	4,487.42
Ontario.....	224,383.30	111,751.06
Quebec.....	180,199.30	94,716.96
New Brunswick.....	39,897.30	4,561.77
Nova Scotia.....	51,830.18	14,679.61
P. E. Island.....	17,963.35	Nil
Totals.....	700,000.00	273,787.99

TABLE 11. - MONEY AVAILABLE AND MONEY PAID TO PROVINCES UNDER THE TECHNICAL EDUCATION ACT FOR FISCAL YEAR ENDED MARCH 31, 1930. (1)

Province	Amount Available	Amount Paid
	- \$ - cts.	\$ cts.
British Columbia.....	68,563.73	68,563.73
Alberta.....	21,779.82	21,779.82
Saskatchewan.....	695,054.99	60,505.89
Manitoba.....	528,340.07	41,541.51
Quebec.....	125,302.35	125,302.35
New Brunswick.....	106,768.60	51,951.21
Nova Scotia.....	363,067.89	21,525.08
Prince Edward Island.....	126,522.07	22,117.30
Totals	2,035,399.52	413,286.89

(1) NOTE. - As the Province of Ontario had received its entire appropriation under provisions of Technical Education Act prior to commencement of year under review, no report has been submitted by that province.

The outstanding feature revealed by these tables is the difference in the amounts earned by the various provinces.

APPENDIX E

Table III

Vocational Schools, Teachers and Pupils in
Canada, 1919-27.

TABLE 111 - VOCATIONAL SCHOOLS, TEACHERS AND PUPILS IN CANADA, 1919-27.

<u>Year</u>	No. of Municipalities		Number of Teachers				Number of Pupils			
	Day	Evening	Day	Evening	Correspondence	Total	Day	Evening	Correspondence	Total
1919-20	32	97	384	1,423	3	1,810	8,512	51,827	207	60,546
1920-21	45	149	573	1,605	4	2,181	11,683	44,441	620	56,744
1921-22	54	167	527	1,711	30	2,268	13,583	46,219	2,154	61,961
1922-23	54	156	752	1,833	39	2,674	16,242	53,080	978	70,300
1923-24	58	156	929	1,970	44	2,943	20,527	57,986	1,316	79,829
1924-25	65	156	1,057	2,273	28	3,158	24,137	62,249	1,638	88,024
1925-26	72	166	1,361	2,090	27	3,478	29,010	57,706	1,396	88,961
1926-27	78	170	1,515	2,129	22	3,666	34,703	60,313	1,666	96,682

The outstanding feature of this table is the growth in day schools.

APPENDIX F.

**Responsible provincial officials in the
field of technical education.**

APPENDIX F

Listed below are the names of responsible officials in the field of technical education in the Dominion of Canada, to whom interested citizens may write for information:

Prince Edward Island:

H. H. Shaw, Chief Superintendent, Department of Education, Charlottetown.

Nova Scotia:

Dr. F. H. Sexton, Department of Education, Halifax.

New Brunswick:

Dr. Fletcher Peacock, Department of Education, Fredericton.

Quebec:

J. T. Lamontagne, Department of Education, Quebec.

Ontario:

F. S. Rutherford, Department of Education, Toronto.

Manitoba:

R. J. Johns, Department of Education, Winnipeg.

Saskatchewan:

Dr. J. H. McKechnie, Deputy Minister, Department of Education, Regina.

Alberta:

Dr. W. G. Carpenter, Institute of Technology and Art, Calgary.

British Columbia:

Lt. Col. F. T. Fairey, Department of Education, Victoria.

APPENDIX G.

Review of literature.

REVIEW OF LITERATURE

Annual Reports of the Department of Education.

Each province of Canada has jurisdiction over and is responsible for the administration of the educational system within its borders. Annually, in each province, the Minister of Education presents, to the Premier, the report of the work of which he is head. This report includes statements of superintendents, inspectors of schools, directors and supervisors. From the annual reports of the various Departments of Education, it is possible to study each provincial set-up, and to trace its growth and development.

History of Vocational Education in Canada.

An official report (7:28) issued by the Department of Labour, Canada, August 1928 gives the history of vocational education in Canada up to that period. Throughout this report brief summaries are presented on the early developments, recent developments, the Royal Commission on industrial training and technical education, Royal Commission on industrial training and technical education in Manitoba, Dr. Seath's report on Ontario, Dominion Institute of Industrial Research, Agricultural education, commercial education, and the developments in each province since the passing of the Technical Education Act, 1919.

The Report of the Royal Commission on Industrial Training and Technical Education (11:1-436; 1639-2354).

The Royal Commission on industrial training and technical education reports in Part 1 on the commission's opinions and

recommendations. In Part II, the commission reports:

- Elementary Education in Relation to Industrial Training and Technical Education.
- Secondary and Higher Education in Relation to Industrial Training and Technical Education.
- Manual Training, Nature Study, School Gardening, Household Science, Vocational Education, Industrial Training and Technical Education.
- Industrial Training and Technical Education in Relation to National Problems.
- Industrial Training and Technical Education in Relation to the Needs, Duties and Rights of Individuals.
- Organization and Administration of Industrial Training and Technical Education for Canada.
- 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.
- Industrial Training and Technical Education in Relation to Apprentices, Foremen and Leaders.
- Education for Rural Communities.
- Schools for Housekeeping Occupations.
- Industrial Research.
- Vocational Guidance.
- Wider use of the School Plant.
- Compulsory attendance at Continuation Classes after fourteen.

The following letter (II:viii) written by the Minister of Labour (at that time), W. L. Mackenzie King (now Prime Minister of Canada) to the premiers of the several provinces reflects the crystallized thinking of the responsible government officials:

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 endorsement of the governments of the several provinces of the Dominion, and I am, therefore, writing to ask if the appointment of 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.

In response to this letter, the federal government received the unanimous approval of the several provinces to proceed with the appointment of a Royal Commission to inquire into the needs and present equipment of the Dominion of Canada as regards industrial training and technical education.

Part IV of the report deals exhaustively in 89 chapters with vocational education in the nine provinces. In Chapter 1 is the introduction. Here is given a review of the extent of the inquiry. The Commission found among other things that those who know the trades were wanted as instructors; efforts must be made to keep young people in the country; that systematic education which comes to an end about the age of 14 is incomplete; and that evening classes must be attractive. Subsequent chapters report the findings of the investigations in Nova Scotia, Prince Edward Island, New

Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia.

Reports of the Technical Branch of
The Department of Labour, Ottawa. (4),(5),(6).

Information embodied in the annual reports of the technical branch of the Department of Labour, Ottawa, during the years 1920 - 1940 inclusive, which are given in the annual statements of the department at each session of parliament, has been reprinted in special bulletins. Each of these reports gives the annual statement from the several provincial directors on the current activities of technical and vocational education conducted in their provinces. Such items as funds expended, numbers of students participating in programme, character of training offered, and growth of the programme have been reported and reprinted for circulation throughout the Dominion.

Vocational Education Series,
Department of Labour, Ottawa,(7).

In a series of booklets on vocational education (1 to 29) issued by the Technical Branch of the Department of Labour, Ottawa, between the years 1922 - 1929 inclusive, much historical data can be collected from the many topics authoritatively and authentically presented.

The purpose of the booklets was to give information to administrators, teachers and interested citizens regarding the basic philosophy, objectives and concise content of the growing vocational movement.

The proceedings of the first national conference on technical education (7:1:7-76) reveal the progress, ideals and difficulties

in the development of technical education in Canada at that time. Representatives from each province met in Ottawa in 1920 with the Director of Technical Education for Canada, Prof. L. W. Gill, who represented the Federal Department of Labour, to discuss teacher training, prevocational classes and vocational guidance, courses of study, text books, condition for entrance to technical classes, length of school day, length of school year, educational reports, method of preparing and general supply of teachers.

The proceedings of the interprovincial conference on vocational education (7:12:5-46) held in Calgary, Alberta, 1925, reflect the existing conditions in vocational education for the four western provinces, namely, British Columbia, Alberta, Saskatchewan and Manitoba. After deliberation, the following resolution was adopted by the conference:

Whereas it is desirable that co-operative action be taken in the four western provinces in the formulation of standard courses for vocational correspondence and evening schools and,

Whereas it is desirable that investigation be made of the feasibility of co-operative action along other lines of vocational education;

Therefore this conference recommends that each of the four western departments of education appoint one representative to act upon an interprovincial vocational education committee for the purpose of,-

- (a) Considering and reporting upon standard courses for correspondence and evening schools and indicating methods for their compilation and distribution;
- (b) Reporting to the various departments upon the scope of interprovincial co-operation;
- (c) Preparing the details of any scheme or agreement arising out of clauses (a) and (b) and submitting

the same to the departments of education concerned.

The agenda of the second national conference on technical education, Ottawa, 1927 (7:20:5-48) indicate problems confronting the directors of technical education, both federal and provincial.

Topics for discussion were:

1. The inclusion of agricultural education under the provisions of the Technical Education Act.
2. The aims and objectives of technical or vocational education.
3. Individual agreements with each province setting forth the work on which federal grants are to be paid.
4. Summer conferences or courses for vocational teachers and local directors conducted under the auspices of the Department of Labour.
5. Co-operation between the provincial and federal governments in connection with bulletins, text-books, and courses of study. (Committees).
6. The development of apprenticeship and part-time work.
7. Educational statistics and reports on technical education.

Because of the urgent need for further improvement in technical education for Canada, a need greater than in 1919, because the Technical Education Act was due to expire in 1929, and because the provinces had entered into programmes which still required federal assistance, the conference strongly recommended the continuance of the technical education grant for a further period of ten years after the expiration of the present Act in 1929. This was done.

The Contribution of Industrial
Arts to Modern Education. (14)

William Ivens, a member of the Manitoba Legislature, prepared

for teachers of the industrial arts and others interested in childhood and youth, and presented to the Industrial Arts Teachers' Association of Manitoba, April 1936, a report, "The Contribution of Industrial Arts to Modern Education" (14). In the first part, Mr. Ivens gives a compendium of opinions and progressive educational leaders, and a factual statement on the contribution of "Industrial Arts" considered as an integral part of a dynamic programme of modern education. In the second part, he has made an historical survey of industrial arts and vocational education in the Dominion of Canada and in each of the provinces of Canada.

The March of Time in Practical Arts
Education in Manitoba. (22)

S. T. Newton compiled the above brochure and presented it at the Manitoba Teachers' Convention, Winnipeg, March 1940 (22). This survey, while indicating national trends throughout this period, deals more specifically with the practices and development of technical and vocational education in Manitoba.

Dominion-Provincial Youth
Training Programmes. (8), (9), (10).

In the three reports of the Dominion-Provincial Youth Training programme the genesis and the general outline of this vocational programme in its three years of operation are summarized.

APPENDIX H.

Methods and Materials.

METHODS AND MATERIALS

The problem with which this thesis deals being historical in character, the writer needed to consult reliable documents. For the most part, the final selection of reference materials for this purpose was chosen from government publications, both dominion and provincial.

In order to have access to these documents for review purposes, it was necessary to obtain the co-operation of responsible government officials. In the case of the Provincial Library of the Province of Manitoba, and of the Department of Education Library, Legislative Buildings, the writer was given the generous permission to inspect the desired publications during evenings when the use of these libraries was normally closed to the public. This concession accelerated the research work and proved very beneficial to the progress of the investigation.

The procedure of collecting and checking the data may be summarized as follows:

1. Geographically. It was decided to maintain a uniform policy of starting with the provinces on the east coast and taking them in order, westward to the west coast.
2. Chronologically. Beginning with the oldest annual report of the department of education obtainable (here), the writer searched each report for statements of deputy ministers, directors, inspectors, etc., relating to manual training, mechanic science or technical education, according to name in vogue at the period in question.
3. These data were organized according to the steps of the problem analysis:

- (a) Origin or beginnings.
 - (b) Character of programme and course content.
 - (c) Commissions.
 - (d) Acts or Legislation.
4. Filing - Four files were kept, labelled as indicated in (3). Research on one province was completed before another was begun. For example, consider the annual report of the department of education of Nova Scotia for the year ending 31st, October, 1892. Page xxvi has a paragraph entitled, "Manual Training" under Course of Study. This was listed for Nova Scotia, 1892, and placed in file for courses. Page 119, gives the first report of the first manual training teacher. Under Nova Scotia, 1892, this was filed in "Origin" file. In this manner, the factual evidence on Nova Scotia was collected and clipped together. Each file had a set of work sheets for each province on which was listed the factual evidence in chronological order.
5. Checking legislation - For the purpose of making a thorough check of references to legislation made in the annual reports, the writer checked the legislative measures dealing with technical education meticulously and patiently, with the Statutes, copies of which are in the Provincial Library.

This checking procedure varies somewhat with different provinces but in the case of the Statutes of the Dominion, and of the provinces, Nova Scotia, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia, the following steps were used to trace the legislation from the present to the origin:

- (a) Table of Statutes in the current issue of the Statutes of the Province was consulted. (The topic under which the legislation is indexed varies but the reviewer was guided from his previous reading of the annual reports). Here, was found the number of the chapter in the revised Statutes, and also the list of subsequent amendments.
- (b) In order to trace the origin, the writer found the chapter and also found previous legislation that was cited.

For example, in checking the legislation re technical education for Alberta (which the writer learned in reading is referred to as "School Grants Act"), the writer proceeds as follows:

- (a) In current issue of Statutes (1940), in the table of Public Statutes was found School Grants R.S., Chap. 53 - and subsequent amendments listed in the column for that purpose.
- (b) Turned to Revised Statutes of 1922 (at time of writing), Chapter 53, which is entitled "An Act respecting School Grants: Found Sec. 4 (K) is one of several sections dealing with manual training, etc. Here is noted the citation,

(1920, C. 13, S. 3 (1)), which being interpreted means, previous legislation in 1920 was passed, which is contained in Chapter 13, Section 3.
- (c) Chapter 13 of the Statutes of 1920 is checked in a similar manner. No further citations are given, the reader has reached the original measure.
- (d) Then amendments are considered. Referring again to the current Statutes and the table of index, the reader found the list of amendments, subsequent to Chapter 53, which were found by referring to the Chapter and the year given.

For the purpose of this thesis, the writer studied the annual reports of the department of education of each province of the Dominion of Canada. These deal with all phases of the provincial education system, of which technical education is a part. The writer found that the introductory report of the Deputy Minister or Superintendent (the head administrative officer, as the case may be), gave the distinctive features of the year in question. It revealed many key points. Reports of directors and inspectors gave the progress in their fields. Legislation was noted. In short, the annual reports furnished excellent material of a reliable nature for this thesis. The Department of Education Library, Legislative Buildings, Winnipeg, has copies of these annual reports.

Another valuable source were the publications of the Technical

Branch of the Department of Labour, Ottawa, Canada. Under the jurisdiction of that department, the history of technical education under the Technical Education Act was carefully assembled each year and recorded. That department is also responsible for the report of the Royal Commission on Industrial Training and Technical Education and a special series of bulletins on vocational education. All these publications are in the library of the Technical Branch, Department of Education, Winnipeg.

In addition to the information obtained from these governmental sources, the writer among a large number of people interviewed received helpful information from Dr. William Ivens, former member of Manitoba Legislative Assembly, author of "The Place of Industrial Arts in Modern Education" (14); Dr. Robert Fletcher, former Deputy Minister of Education of Manitoba, Prof. H. R. Low, Superintendent of Education, on leave to serve as an administrative officer in the R. C. A. F., and Mr. S. T. Newton, former Director of Education for the province of Manitoba and writer of "March of Time" (22).

Others with whom the writer had discussions through correspondence were Col. F. T. Fairey, Director of Technical Education for Alberta; British Columbia; Dr. F. McNally, Deputy Minister of Education, /Mr. J. A. Doyle, Swift Current, Sask.; F. S. Rutherford, Director of Vocational Education of Ontario; J. F. Marsh, Deputy Minister of Labour for Ontario; Dr. Fletcher Peacock, Director of Technical Educational Service, New Brunswick; Dr. F. H. Sexton, Director of Technical Education for Nova Scotia.

After reviewing materials from these prominent men in the

technical education movement in Canada, the writer found that the information received was recorded in the official government publications on the shelves of the libraries named above.

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B I B L I O G R A P H Y

1. Alberta. Dept. of education. Annual report, 1,1906-34,1939. Edmonton, Govt. printer, 1907-1940. 34 v.
2. British Columbia. Education dept. Annual report of public schools, 29, 1900/01-65,1936/37. Victoria, Printer to the king, 1901-1937. 37vv.
3. Canada. Dept. of labour. Technical education branch. Annual report, 1, 1919/20-7,1925/26. Ottawa, King's printer, 1921-1927. 7 v. Reprint from the Department's Annual report.

At that time the Technical Education Act had been in operation six years. During that short period, due to the liberal assistance rendered by the Dominion Government, every province had taken steps to establish technical or vocational education as a permanent part of the provincial education system. However, it must be noted that a brief study of the reports from the nine provinces shows that in almost every case some branch of the work was being neglected or was suffering from a temporary setback, due to financial stringency or the failure of previous efforts. It is also quite clear that an outstanding weakness of the technical and vocational schools in Canada at that period was the failure to co-operate with industry.

4. Canada. Dept. of labour. Technical education branch. Annual report, 8,1926/27-11,1929/30. Ottawa, King's printer, 1928-1931. 4 v. Reprint from the Department's Annual report.

At that time the ten-year period during which federal grants were available for use in the nine provinces of the Dominion under the provisions of the Technical Education Act, terminated. However, eight of the nine provinces were unable to earn their full appropriations during the ten years as had been anticipated by the statute. For this reason the Act was amended by 1929 session of Parliament to extend the period of time in which these eight provinces might earn their share. Ontario was the only province to earn its entire appropriation within the ten-year period.

5. Canada. Dept. of labour. Technical education branch. Annual report 12,1930/31-15,1933/34. Ottawa, King's printer, 1932-1935. 4 v. Reprint from the Department's Annual report.

In 1929, when the ten-year period for the distribution of ten million dollars to the provinces expired, it was necessary to extend this period for five years. At the end of that period (1934), three provinces, namely, Saskatchewan, Manitoba and Nova Scotia were unable to take full advantage of their allotments, so the Act was again extended for five years. The remaining provinces, though not obligated to do so, continued to report the nature and extent of the work in the technical and vocational field of education.

6. Canada, Dept. of labour. Technical education branch. Annual report, 16, 1931/32-21, 1939/40. Ottawa, King's printer, 1936-1941. 6 v. Reprint from the Department's Annual report.

The province of Manitoba is now the only one which has not used its appropriation. It was decided at the 1939 session of Parliament to extend the Act once more for a period of five years in order that the province, Manitoba, might make use of its appropriation.

7. Canada, Dept. of labour. Technical education branch. Vocational education series, 1, 1920-30, 1930. Ottawa, King's printer, 1921-1929. 30 v. Out of print.
8. Canada, Dept. of labour. Review of the dominion-provincial youth training programme, 1939. Ottawa, King's printer, 1940. 24 p.
9. Canada, Dept. of Labour. Review of the dominion-provincial youth training programme and the national forestry programme, 1940. Ottawa, King's printer, 1941. 24 p.
10. Canada, Dept. of labour. Training Canada's young unemployed, 1938. Ottawa, King's printer, 1939. 25 p.
11. Canada. Royal commission on industrial training and technical education. Report of the Commissioners. Ottawa, King's printer, 1913-1914. 2354 p. in 4 parts, part 3 out of print.
12. Experience under Canadian technical education act, 1919 to 1929. Monthly labor review, 31:1382-3, December 1930. Brief Summary of bulletin 30 issued by Technical Education Branch of the Dominion Department of Labor.
13. Fairburn, R.D. Work of the Ontario association for the promotion of technical education. Toronto, King's printer, 1915. 7 p.

14. Ivens, William. The place of industrial arts in modern education, 1936. Part I 50 p. mim. Out of print. Part II 50 p. ms. (Part I and part II on shelves of Technical Branch Library, Department of Education. Winnipeg, Man.)
15. Manitoba. Dept. of education. Report, 1899/1900-1939/40. Winnipeg, King's printer, 1900-1941. 42 v.
16. Manitoba. Royal Commission on technical and industrial training. Report---August 26, 1910. Winnipeg, Man. 1912. 78 p.

On Aug. 26, 1910, a Royal Commission was appointed by the government of Manitoba to investigate and report on the subject of technical education for industries and agriculture. The Commission made inquiry outside of Manitoba, in Canada and the United States.
17. McArthur, Duncan. History of Canada for high schools. Toronto, W. J. Gage and Co., 1938. rev. ed. 528 p.
18. New Brunswick. Education office. Annual report, 1899/1900-1919/20. Fredericton, King's printer, 1901-1921. 21 v.
19. New Brunswick. Education office. Report on the need for vocational education in New Brunswick, 1918. Fredericton, King's printer, 1918. 38 p.
20. New Brunswick. Laws, statutes, etc. An act respecting vocational education, 1918. Fredericton, 1918. 8 p.
21. New Brunswick. Vocational education board. Annual report, 1920-1929. Fredericton, King's printer, 1921-1930. 10 v.

The first report gives a brief sketch of events leading up to the formation of the New Brunswick vocational education department, shows in outline the plans adopted by the vocational board for the school year 1919/20; and indicates the progress made in applying this program during the first term of that year. In addition, some reference is made to the progress of the vocational education movement abroad; to the Dominion Technical Education Act, and to some problems connected with the development of vocational training in New Brunswick.

22. Newton, S.T. The march of time in practical arts education in Manitoba, 1940. Winnipeg, Technical Branch Library, Department of education. 33 p. ms.

23. Northwest Territories. Dept. of education. Annual report, 1901-1903, Regina, King's printer, 1902-1904. 3 v. Preceded by Education Council.

24. Northwest Territories. Education council. Report, 1896-1900. Regina, King's printer, 1897-1901. 5 v.

25. Nova Scotia. Education office. Annual report 1884/85-1896/97. Halifax, Queen's printer, 1885-1898. 14 v.

The annual report of 1897 gives a comprehensive review of the previous sixty years in education .

26. Nova Scotia. Education office. Annual report, 1900/01-1939/40. Halifax, King's printer, 1902-1941. 40 v.

27. Ontario. Education dept. Report of the Minister of education 1892/93-1938/39. Toronto, Gov't. printer, 1894-1940. 41 v.

The report of 1893 gives a number of changes effected by legislation in the previous ten years. The report of 1901 contains the first report of the director of the Macdonald manual training schools.

28. Ontario. Education dept. Education for industrial purposes. Toronto, L. R. Cameron, printer to the King, 1911. 390 p.

A report by John Seath, Superintendent of education for Ontario.

29. Ontario. Education dept. Industrial, technical and art education act; recommendations and earlier regulations for the establishment, organization and maintenance of day and evening schools; the record for 1912 in industrial technology and art education. Toronto, Education dept., 1913. 181 p. (Its Bulletin 2, 1912).

30. Phillips, C. E. Education, commercial, elementary, secondary, technical and vocational. (In Encyclopedia of Canada, Toronto, University Associates of Canada, 1935. v 2. p 279-281).

31. Prince Edward Island. Dept. of education. Annual report on public schools 1896/97-1920/21. Charlottetown, Govt. printer, 1897-1921. 24 v.

Annual report of 1901 records the first manual training department opened in Queen Square School, Charlottetown.

32. Quebec. Dept. of public instruction. Report 1885/86-1936/37. Quebec, King's printer, 1886-1937. 57 v.
33. Quebec. Protestant education survey report. Quebec, Minister and director of Protestant education, 1938. 368 p.
34. Saskatchewan. Dept. of education. Annual report, 1905-1938. Regina, King's printer, 1902-1939. 34 v.
35. Sexton, F. H. Technical education in Nova Scotia ; History of thirty years development. Educational review, (Moncton and Fredericton, N. B). -----:----- December, 1920.
36. Summary of proceedings of Dominion-provincial conference on the war emergency training program. Labour Gazette (Canada), 41:427-429, April 1941.

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