

81-D-69 C.2
Memorandum re Education Statistics Branch
of the Dominion Bureau of Statistics.

The Education Statistics Branch of the Dominion Bureau of Statistics, while a recognized and essential part of the national statistical system of Canada, is at the same time an institution which was in its beginning established largely owing to the initiative of provincial educational authorities, with whom it is at this moment working "in close and cordial co-operation".

In 1912 the Departmental Commission on the Official Statistics of Canada had laid down the fundamental requirements of any scheme of Dominion-wide education statistics as follows:

"Such statistics should comprise the nature and variety of educational institutions public and private, including their organization, grading and equipment, whether for primary, secondary or higher education. They should also give the number of pupils and students in the various grades (of institutions), their attendance, age on entering and leaving school, the nature of the education given, whether theoretical, practical or special, and any supplementary educational facilities, including libraries, night schools, art and trade schools, etc. Particulars should be included as to the teaching staffs, their qualifications, sex, age, frequency of changes in the staffs, also the expenditure on education in the various grades (of institutions), distinguished as permanent and annual expenditure".

At an interprovincial conference of teachers and educational officials of the three Atlantic provinces in 1914, the suggestion was made that the Dominion Bureau of Statistics (then the Census and Statistics Office) might undertake the collection and publication of education statistics. In response to this and other appeals a section on Education Statistics was added to the Canada Year Book of 1914 and has appeared in revised form in each subsequent edition. Further, in 1918 the Dominion Educational Association passed a resolution recording its appreciation of the work being done in collecting and publishing statistics and other useful information on education in Canada and expressed its approval of the proposed appointment of an educationist to the staff of the Dominion Bureau of Statistics. In the same year similar resolutions were passed by the provincial Educational Association of Saskatchewan and Alberta.

As a result of these resolutions an Education Branch of the Dominion Bureau of Statistics was established in 1919; two educationists, the teaching experience of one or the other of whom covered five of the provinces of Canada in elementary, secondary and university work, were appointed to its staff. After they had made an exhaustive study of the provincial education reports, a set of schedules designed to procure uniform statistical information, covering as far as practicable the ground of the fundamental requirements laid down by the Departmental Commission of 1912, was prepared and submitted to the provincial Departments of Education. The scope of these schedules was confined to the more universal sides of education -age, sex and grading of pupils, school opportunities offered, school attendance, age at entering and leaving school, salaries of different grades of teachers in elementary and secondary education, subjects taught in secondary schools, etc. A Dominion-Provincial conference to decide upon a uniform policy in regard to the collection of such statistics was held in Ottawa on October 27 and 28, 1920, between the Education Statistics Branch and the Provincial Departments of Education. In order that the information might be collected on a uniform basis, it was found necessary also to bring before the conference the questions of (1) a uniform statistical school year, (2) standardization of grades and (3) annual estimates of school population.

The tables submitted to and approved by the Conference were as follows:

1. Distribution of pupils by sex, grade and age last birthday.
2. Periods during school year in which classrooms were open with the number of pupils in each period.
3. Periods during school year in which pupils attended.
4. Distribution in secondary classrooms by sex, grade and age last birthday.
5. Classification of teachers of secondary subjects.
6. Distribution of pupils in secondary grades by subjects of instruction.

Among other matters recommended was that in the annual statistical reports, a description of the conditions attached to each class of teachers' certificates should be included.

After the more general questions and the above mentioned tables had been minutely examined, discussed and voted upon by the members of the conference, three resolutions summing up the work of the conference were unanimously carried. The first of these was that in the collection and compilation of the statistics to be included in the annual report on education statistics, there should be close and cordial co-operation between the Provincial Departments of Education and the Dominion Bureau of Statistics, and that it was expedient that the education statistics for primary and secondary schools under public control should continue to be collected by these departments, while the Bureau of Statistics, as possessing adequate tabulating machinery, should on request undertake the compilation of such statistics when collected, as well as the collection and compilation on a comparable basis of the statistics of primary and secondary private schools and of institutions of higher education, where this was not already done. The second endorsed the principle that in securing uniform statistics chief attention should be concentrated upon the more general topics of education statistics, such as statistics of age, sex and degree of advancement of pupils, school attendance, teachers' qualifications, experience and salaries, subjects taught, together with the revenue and expenditure and the assets and liabilities of school systems.

The third accepted the ~~schedules~~ submitted by the Education Branch of the Dominion Bureau of Statistics as amended by the conference and subject to the understandings there arrived at, as furnishing a satisfactory basis for a Dominion-wide statistical survey of education and recommended the adoption of these forms to the provincial Departments of Education. A resolution recommending a uniform statistical school year had already been carried unanimously as the first item of the agenda of the conference.¹

In the period which has elapsed since the Conference, the Education Statistics Branch with the co-operation of the Provincial Depart-

¹ Copies of the report of the Conference, including sample tables, are still available on request.

ments of Education, has devoted itself to the working out in practice of the statistical scheme approved by the Conference. The great age, sex and grade table, the corner-stone of the whole system, has been accepted by all but one of the provinces, and statistical compilations along the lines of it have been carried out in the Bureau of Statistics for the provinces of British Columbia, Manitoba and Saskatchewan. Alberta has adopted the scheme in toto, but is doing the work of compilation for itself. As for the Maritimes new school registers have this year been prepared in Nova Scotia and New Brunswick, and the adhesion of Prince Edward Island to the general scheme has been secured, so that uniform statistics will be available for 1922-23. Finally the province of Ontario adopted the scheme for the academic year 1920-21 in its secondary schools and for the year 1922 in its elementary schools. Further, the uniform statistical school year ending June 30, has since the conference been introduced in Nova Scotia, Saskatchewan and Alberta. On its side, the Education Statistics Branch, with the consent of the Departments of Education, has made it its business to secure similar statistics from the private schools in the provinces accepting the arrangement.

Since its commencement the Education Statistics Branch has also issued several publications of considerable importance. Besides the annual issue of press letters dealing respectively with the statistics of the universities and colleges of Canada, private elementary and secondary schools and private business colleges, the statistics for all of which are collected by the Branch, the Branch has also prepared annually the material on education appearing in the Canada Year Book - the national statistical abstract - and has published the report of the Conference above mentioned, and also a Historical Statistical Survey of Education in Canada, intended as an introduction to a series of annual reports on education statistics. The Historical Statistical Survey of Education has been very cordially received by those interested in Canadian education both within and outside of the Dominion, and the English edition of 2,000 copies is now out of print, while numerous requests for copies are still being received.

This Survey showed that in spite of the wide divergence between

the provinces in the matter of nomenclature and methods of collecting statistical data, there was no great difference between their requirements as to the ground to be covered in any one year, especially in the earlier grades. A summary of the work taught in different grades in the various provinces, published in a folding chart at page 46 of the Historical Survey, shows the general similarity of the curricula throughout the schools of the Dominion.

The Historical Statistical Survey also dealt with the growth of provincial systems in the matter of school enrolment, attendance, grading and support, with teachers and their salaries and also with special or new activities such as the education of blind and deaf, technical education and consolidation, so far as information on all these topics was available from published sources. A description of the organization of the different provincial systems was also given on account of its bearing upon the statistics. When the portions of it referring to each province were later submitted to these provinces and brought up to date, they were used in a new and greatly enlarged edition of the Survey prepared in the summer of 1922. This edition contained a historical sketch of education in each province as obtained from published reports, articles and documents. It also went into much greater statistical detail, extending the data back as far as they could be traced in the time at disposal and dealing at length with movements in rural education, technical education and school hygiene, while historical statistics of illiteracy and population of school age were also included. The publications of this revised and enlarged survey has been postponed.

The first of the annual reports of the Education Statistics Branch is now in the hands of the public. How far it covers the five fundamental requirements laid down by the Commission may now be considered. These fundamental requirements are as follows:

1. The nature and variety of education institutions, public and private, their organization, grading, equipment - whether for primary, secondary or higher education.

The report, by summarizing information derived from cuttings of the Survey submitted to and revised by the different provincial Departments of Education, gives in a list of definitions of terms a brief description of organization. Tables 2, 6, 41, 48 and 63 to 77 give a very full statistical account of the variety of educational

institutions, public and private, equipped for elementary, secondary or higher education; while the review in part 1 of the report - a review which was submitted to each province before publication - gives a summary of this information.

2. The number of pupils and students in the various grades of institutions, their attendance and age on entering and leaving school.

The first part of this requirement is met in the table already mentioned. Particulars of ages are given in table 7 for publicly controlled primary and secondary schools and in tables 73 and 74 for private schools, while minute details of grade and age, which give a fairly accurate idea of the ages of entering and leaving school, occupy the greater portion of the report and show the stage to which the work recommended by the Conference on Education Statistics has proceeded. These will be extended by next year to nearly all the provinces.

3. The nature of the education given - whether theoretical, practical or special.

This part, which is included in the recommendations of the conference, has not entirely reached the stage at which all the information can be given in tabular form, but table 2 which gives the different institutions in the different provinces with their enrolment, staff and average attendance; tables 46 and 47 which give statistics of the work coming within the sphere of the Dominion Director of Technical Education; table 45 which gives the number of pupils taking different courses of study in secondary grades; tables 63 to 71 which give the facilities and students in universities and colleges; tables 75 and 76 which show the work done in private business colleges; table 48 which gives statistics of blind and deaf; and the reviews already mentioned, which deal with such matters on technical and other education as could not be given in tabular form, deal with the questions fairly fully. Questionnaires now being sent out for information on playgrounds, school medical inspection and manual training, etc., will, it is hoped, procure information for definite tables on these subjects for the next report. Statistics of libraries have also been collected and compiled and one press letter based upon them has already been issued.

4. Particulars as to the teaching staffs, their qualifications, sex, age and frequency of change in the staffs.

Fairly full particulars as to qualifications, sex, salaries, and, in the case of four provinces, experience of teachers are contained in tables 49 to 58. A folder showing the conditions attached to each class of certificate is inserted opposite page 90. The information in this folder is tabulated from questionnaires of exactly the same form sent to each Department of Education and the replies to these questionnaires are given verbatim.

5. Expenditure on education in the various grades distinguished as permanent and annual expenditure.

This information according to the system of accounting of each department is given in tables 60 to 62. A table for uniform statistics on this subject was submitted to the conference, but owing to various difficulties the adoption of it was postponed on the understanding that it should form the basis of further discussion.

It will be seen then that the ideals of the Departmental Commission and various other bodies have already been carried out in form and that what remains is simply a matter of perfecting and completing, a matter which is progressing favourably, but necessarily still requires time. It will also be seen that the Education Statistics Branch has never lost sight of these ideals and is working steadily towards their realization. The new report for 1922 will retain the form of the present report, unless there is good reason to change it. The different sections of this report provide for nearly every feature of general importance. Under "Teachers in Training" it is proposed to have a table giving statistics of the various grades of normal schools and colleges; under "School Hygiene" and Special Classes, which title is to include "Education of the Blind and Deaf" in the present report, and "Medical Inspection" in our Historical Survey, it is proposed to add two tables, one giving details of activities connected with medical inspection, auxiliary classes, etc., and the other in connection with playgrounds and recreation. Under "Vocational Education" it is planned to add a table giving statistical details of manual training, domestic science, agriculture, etc. in the schools, in addition to the information supplied by the Dominion Director of Technical Education on the work within his sphere. It is intended to add one short section on public libraries. Where the greatest refinement is expected is in the sex, grade and age tables which will include a table giving the popula-

tions at school age and illiteracy as obtained from the census of 1921.

This, then, with bulletins on illiteracy and school attendance and school ages from material obtained from the census forms the programme of the Education Branch of the Dominion Bureau of Statistics. It is easy to see that, as in touch with the census, and other statistical branches which are closely related to education, having access to material dealing with literacy and school attendance compiled by these branches, of which motives of economy prevent the publication, having also access to the expensive machinery of the Bureau, machinery which is serving its best purpose when kept constantly in use, the Education Branch has unique advantages for carrying out its programme - possessed by no other educational organization either in Canada or elsewhere.

The recognized functions of the Education Statistics Branch so far described, leave ample room for the work of unofficial organizations formed for the promotion of education. Its activities, carried out at the capital city of the Dominion, are necessarily concerned with general phenomena capable of being reduced to a statistical form, or with other phenomena in so far as these either throw a light upon or are illustrated by statistics. Naturally, it cannot undertake intensive statistical surveys of the educational situation in particular localities, requiring the services of field agents, though it could furnish the organization undertaking such surveys with a great deal of valuable preliminary information compiled from the published or unpublished records of the census, concerning any particular area and the people of any particular area throughout the country.

Further, statisticians frankly recognize the limitations of their science in the field of education. The writer's first memorandum on educational statistics, written four and a half years ago, commences with a quotation from Sir Robert Giffen's book "Statistics", p.420 - "Statistics can only deal with plain and definite facts capable of being counted and it is obvious that nothing can be more difficult to put into a statistical form than the statement as to whether a particular person is educated or not up to a definite standard". The

writer continued, "The deep things of the mind, like the deep things of the soul, defy the foot-rule of the statistician. These things

"the world's coarse thumb
and finger fail to plumb".

This fact, when we are making our calculations and comparisons, we must never forget".

The Education Statistics Branch, as has been seen, recognizes its limitations. Within those limitations, it believes that it is performing a most useful service to Canadian education. It recognizes, also, that its value to Canadian education can only be enhanced if it co-operates to the limit of its ability with any approved organization having a wider field of action, but having also the same general aim of promoting the physical mental and moral advancement of the Canadian people.

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