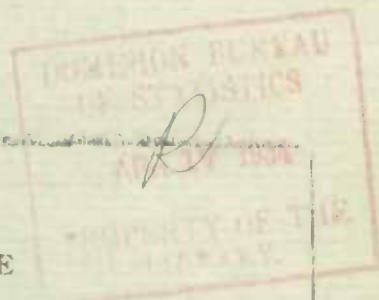


81-D-59 w.b.c.2



C A N A D A

DEPARTMENT OF TRADE AND COMMERCE

DOMINION BUREAU OF STATISTICS

EDUCATION STATISTICS BRANCH

COST OF EDUCATION

BULLETIN No. 3

Expenditure for Schools in 1931 as Compared with 1913

Published by Authority of the Hon. H.H. Stevens, M.P.

Minister of Trade and Commerce.

OTTAWA

1934

U. S. A. 1913

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

WASHINGTON, D. C.

OFFICE OF THE DIRECTOR

WASHINGTON, D. C.

RECEIVED JAN 15 1913

RECEIVED JAN 15 1913

RECEIVED JAN 15 1913

RECEIVED

RECEIVED

S U M M A R Y

This bulletin, the third in the series showing the provision of schools in perspective as an economic activity, compares some aspects of school support in 1931 and 1913.

It shows that expenditure on publicly-controlled elementary and secondary schools increased from \$54,000,000 to \$140,000,000, or about 160 p.c., but that in spite of this increase, a day's schooling was really cheaper in the more recent year. In other words, the dollar-cost of everything that the consumer buys averaged higher in 1931, but the cost of a day's schooling had not increased in as high a proportion as the cost of other things.

Although payment for a day's schooling in 1931 required less purchasing power, there is very strong evidence that the quality of it was at the same time improved. Teachers had more training and experience, and more diversity of opportunity was open to pupils in the selection of courses.

The average child leaving the schools in 1931 had received more than eight years of schooling, in 1913 probably less than six years. This increase of more than one-third in the length of the child's school life made the weight of school costs heavier, although the cost of a day's schooling was less. In other words, more purchasing power was being spent on the schools per capita in 1931 for the reason that more schooling was being received, and for this reason only.

If the number of persons gainfully employed is a fair indication of ability to pay, the weight of school costs could be said to have been in recent years about 40 p.c. heavier in the country as a whole than in pre-war years, but because schools are in the main supported by small communities, the increase has been much more than 40 p.c. in some and less in others.

DOMINION BUREAU OF STATISTICS
EDUCATION BRANCH
OTTAWA

Dominion Statistician:	R. H. Coats, B.A., F.S.S. (Hon.), F.R.S.C.
Chief, Education Branch:	M. C. MacLean, M.A., F.S.S.
Assistant Chief, Education Branch:	J. E. Robbins, M.A.

EXPENDITURE FOR SCHOOLS IN 1931 AS COMPARED WITH 1913.

In the preceding bulletin it was recorded that some \$145,000,000 in recent years has been spent annually on elementary and secondary schools. All but some \$5,000,000 of this is for publicly-controlled schools, and the \$140,000,000 compares with \$54,000,000 in 1913, the last entirely pre-war year, and the year which it has become customary to regard as most appropriate for a long-term comparison. The increase in terms of percentage is 160 p.c., substantial in itself, and in comparison with the increase of 40 p.c. in population during the period; but it is scarcely more adequate evidence for concluding at once that too much is now being spent for schools, than the fact that during the same time telephones increased 200 p.c., and automobiles 2300 p.c. is proof that too much is now being expended on these commodities. Times change and the role of the school in society may grow as does the place for means of communication or transportation. The paragraphs that follow will show how the increased cost of schools is explained by the increased demands that have been made upon them.

The Cost of a Day's Schooling in 1931 as Compared with 1913.

In the first place a dollar in recent years has not represented the same amount of purchasing power as in 1913. The retail price index of the Dominion Bureau of Statistics (1926=100) which was 66.0 in 1914, was 99.9 in 1929, 99.2 in 1930, 89.6 in 1931. It has since moved lower, as also has expenditure on schools. The retail index, since it indicates the changed cost of food, fuel, rent, clothing, etc., will be the best available guide as to the relative value of a dollar in the hands of the consumer in the two periods. And since the present problem is to compare the real cost to him of schooling in the two periods, it will be the proper guide to use. Thus, it appears at once that in terms of the things he buys every day—food, clothing, shelter, etc.—the Canadian taxpayer was spending, for schools in 1931 not 160 p.c. more than in 1913, but only 91 p.c. more.

Over the period 1913-31 there was an increase in enrolment at the publicly-controlled schools from 1,438,000 to 2,214,000. This fact considered together with the changed value of the dollar shows that the cost per pupil enrolled in the schools was only 30 p.c. more in 1931 than in 1913.

Regularity of attendance has improved much in recent years, or in other words, the proportion of the year's enrolment in average daily attendance at school, is higher than formerly. The number of pupils in actual attendance is a better guide to what the schools are accomplishing than is the number on the roll, and since the present problem is to show what the schools are giving in return for what is being spent on them, it should be recorded that the average daily attendance has risen from 942,000 in 1913 to 1,756,000 in 1931, indicating that the cost per pupil at school on the average day in terms of the purchasing power of the consumer's dollar, was only 2 p.c. higher in 1931.

Further, the number of days that the average school keeps open in a year has increased considerably in the last two decades. And as it seems reasonable to suppose, for example, that a teacher can do for her pupils in five days five-fourths of what she can do in four days, it is necessary to show the effect of the longer year on the value that the schools are giving. In the western provinces the school year has lengthened a full month, but they are exceptional. Not all of the other provinces have kept records to show the change, but available evidence would indicate that the average for the Dominion is in the neighbourhood of two weeks, or ten teaching days. From this it can be calculated that the amount of purchasing power expended for a day's instruction in the schools of 1931 was about 3 p.c. less than in the schools of 1913.

Moreover this achievement of 1931 took place in spite of the fact that a much higher proportion of the students were in the higher grades, which are more costly to accommodate. As compared with an increase of about 50 p.c. in the enrolment of the elementary grades, there was an increase of more than 200 p.c. in the secondary

grades, and pupils in the latter category are just about twice as expensive as those in the former. From this situation it can be deduced that the real cost of a day's instruction in 1931, if the distribution between elementary and secondary grades had been the same as in 1913, would have been only 90 p.c. of what it was in the earlier year.

From this it is obvious that what might be called the mechanical efficiency of the schools is higher now than in the pre-war years, - i.e. a day's schooling is now given at a cost that is really lower. It follows that if criticism of school costs is to be made on the basis of a comparison with 1913, it must be on the ground that children are now receiving too much free schooling. And as to whether or not this is so, the figures on school survival may be recalled; in summary, two-thirds of the children who start to school go as far as the end of the elementary years, about half do some high school work, and one-fifth reach the final or matriculation year.

The Quality of a Day's Schooling Today as Compared with 1913.

Let it be repeated that the foregoing comparison is made on a purely mechanical basis; it has simply shown the schools to have become more efficient "businesses" in the production of units that might be called "pupil-days instruction". Whether there has been any change in the quality of the product is another question.

There are numerous statistical grounds for believing that there has been an improvement in this respect, - e.g. the more thorough training that has been received by the average teacher of today, and the improvement in school equipment. Such a change, qualitative in nature, can not be measured directly with the precision of the quantitative change in cost per unit of work done, but some of the relevant numerical facts can readily be arrayed.

In all of the provincial school systems, except the Roman Catholic system of Quebec, teachers in 1931 and in 1913 can be grouped in three classes according to their professional qualifications as follows: First class or higher (the higher representing high school teachers licences and bearing a variety of names), second class, third class or lower. This grouping, without implying that the certificates of any one of the classes represent the same standing in all, or even in any two, of the provinces, is a permissible device for measuring the relative change in the status of the teachers of all provinces together. In the period 1913-31 the first-class group increased its proportion in the total from 17 p.c. to 38 p.c., the second-class group increased from 50 p.c. to 55 p.c., whereas the third-class group decreased from 33 p.c. to a mere 7 p.c. More than a quarter of those in the third group in 1913, or 9 p.c. of all teachers, had no recognized qualifications at all, but were allowed to teach simply because qualified teachers could not be secured. Such teachers had all but disappeared in the records of 1931.

The improvement in class-grouping is very considerable but it tells only a part of the story. The qualifications required for standing in any one of the classes have been continuously made higher throughout the period. Higher academic standing, more normal school training, summer school attendance, and so on, have been demanded of the teachers who are now in the schools, as compared with those who were teaching twenty years ago. The changes in this respect have been so numerous and diverse as not to lend themselves readily to classification, but there are probably few people who are not in some measure familiar with them in one province at least, for every province has participated in the improvement. Such changes must have tended to produce more capable teachers, or in other words, to improve the quality of the educational process which it is the teachers' task to direct.

Another characteristic of present day teachers which should make for better teaching is their tendency to stay longer in the profession. Half of the Maritime teachers of 1913 had taught less than $3\frac{1}{2}$ years; those of 1931, more than $4\frac{1}{2}$ years. Half of the Quebec lay teachers had taught no more than about three years in 1913, but five years in 1931. There was a corresponding change in Ontario, though not as great, for the Ontario teachers were more permanent in the earlier year. The Western provinces have not kept a record of teachers' experience since 1913. But the Education Branch of the Dominion Bureau of Statistics has compiled a record for Manitoba for about half of the period, and if it is a fair indication of what has been happening in these provinces, as there is good reason to believe, the increase in length of tenure has been even more pronounced than in the more easterly provinces.

Apart from what appears to be more capability on the part of the teachers, they have on the whole better buildings and equipment at their disposal, and in the secondary grades particularly there is now a greater diversity of opportunity open to the students in the selection of courses. (The Agricultural Instruction Act of 1913)

and The Technical Education Act of 1919 have exerted almost their full force in the period under consideration). Though these things in themselves do not ensure a corresponding improvement in the quality of education, they make its attainment easier of realization; and, considering that their arrival has been accompanied by all the evidences of a more competent teaching body, it is probably safe to assume that they have made a considerable contribution to improvement in the output of the schools, whether that output be considered in the form of an isolated day's schooling, the aggregate of day's schooling that a child receives, or that unity, transcending the aggregate of component days again, which is the child's education.

Paying for the Schools in 1913 and in 1931.

What has been shown in the preceding pages may be summarized as follows: In 1931 as compared with 1913, we were unmistakeably getting better value for the money spent on schools than the money spent for other things. In other words, the cost of everything averaged higher in 1931, but the cost of a day's schooling had not increased in as high a proportion as the cost of the other things the consumer buys, and there is strong evidence that the quality of it was at the same time definitely improved. If the component parts of the retail price index are considered it will be seen that the only purchases yielding anywhere near as good value as schools (1931 as compared with 1913) were food and clothing; rents, fuel, services, etc., were comparatively much dearer.

But the fact that a day's schooling was cheaper in 1931 does not imply that the schools were more easily supported financially. Much more schooling was being given, and it may be that ability to pay for it had not increased at a corresponding rate.

We have already seen that in terms of retail purchasing power the schools were costing 91 p.c. more in 1931 than in 1913. This does not mean, however, that the increase in burden was 91 p.c., for there were more people to pay it. In 1931 there were 3,924,523 persons gainfully employed; in 1911 there were 2,723,624, and if it was the same proportion of the 1913 population (Dominion Bureau of Statistics estimate) that was employed, there were about 2,885,000 gainfully employed in that year. From this it can be readily calculated that the cost of schools per person gainfully occupied, was about 40 p.c. higher in 1931 than in the earlier year.

There are other sources of income than an occupation, but it is hardly possible to compare their relative importance in the two years, and in any case their yield is small in the aggregate as compared with the income of the gainfully-occupied, for this expression covers all those who are working on their own account, such as farmers, shopkeepers, lawyers, etc., as well as those who are working for salaries or wages. So it is probably not far from the truth to say that the burden of school support, from a national standpoint, was about 40 p.c. heavier in 1931 than in 1913, in spite of the fact that a day's schooling was cheaper in the later year.^{1/}

1/ Since this 40 p.c. additional real cost is due entirely to the fact that more schooling is being given, it suggests itself as indicative of the increased amount of schooling that the child of today is receiving as compared with the child of twenty years ago. Because the proportion of children to gainfully occupied persons is not a constant factor, the inference is not quite as direct as this, but from the figures that have been shown on the preceding pages, the increase can be deduced with a fair degree of accuracy. Children between the ages of five and nineteen years numbered about 2,225,000 in 1913 and 3,246,391 in 1931. For every 100 days of schooling that the former group received, the latter received about 200, as is deducible from the costs figures. It follows that each child in the 1931 group was receiving about 37 p.c. more schooling than the child in the 1913 group. Since it was shown in a previous chapter that the average child of 1931 was covering about eight and a quarter years of school, the 1913 child was not covering more than about six years, - and less than six if there was more retardation, as seems very likely when the irregularity of attendance and poorer teacher qualifications of the time are considered. It is not possible to check this calculation by a record of the actual progress of children through the grades (the manner in which the 1931 figure of eight and a quarter years was reached) as it is only in more recent years that age-grade compilations have become available. But it can safely be taken to give a reasonably accurate conception of the schooling received by the child of 1913 as compared with the child of 1931.

The statement is true only insofar as the number of people gainfully-occupied is an index of the purchasing power produced. In the long run, and from the national standpoint, it is probably reliable as such an index. But in any single year, or as regards any particular group of producers, it may be very far from it. Consequently the statement is likely to be more valid in expressing the weight of school costs in recent years as compared with pre-war years, than in comparing one recent year with one pre-war year.

The fact that the statement applies to the country as a whole, but not necessarily to any particular section or group in the whole, has a very important significance for the study of school support, because schools are supported by groups or sections of the population independently, and not on a national or provincial basis. In rural communities particularly, the group supporting a school is generally not larger than a few dozen ratepayers, all or nearly all of whom are farmers. Though the country's schools as a whole may be only 40 p.c. harder to support than they were twenty years ago, for any particular community its school may be 80 p.c. or 100 p.c. more burdensome, and the school of another community correspondingly less. Since it is the ratepayers of the former school from whom more is likely to be heard on the matter of school costs, there is danger that an exaggerated impression may be created as to the increased costliness of schools generally.

The rural school is the most common case of violent fluctuation in the difficulty of school support, but other less common cases where the difficulty may become equally acute are fishing villages, mining or pulp and paper towns, and other communities where there is a lack of diversity in occupation or of stability in population numbers.

In the last few years, rural schools as a group have undoubtedly suffered more from failure of support than urban schools. ^{2/} For example, salaries of rural teachers in Manitoba in two years have declined 33 p.c. as compared with 10 p.c. for urban teachers; in New Brunswick rural reductions have been 19 p.c., urban 10 p.c. The condition producing this result has been the exceptionally depressed level of prices for agricultural produce, the index ^{3/} for which stood at 46.9 in 1931, and 40.4 in 1932, as compared with 69.6 in 1913. If the volume of produce had been the same in 1931 as in 1913, the farmers' school costs would have been about 50 p.c. harder to meet even though they had not in dollars risen at all.

Violent fluctuations of this kind in the conditions affecting any industry are considered in the main unavoidable, but the effects of them on a particular group of schools and on the people in that industry in their capacity of school supporters, can in a considerable measure be offset by making the entire population of a large and diversified area responsible for all of the schools in the area. A recent survey of school support in Manitoba ^{4/} has recommended the province as a whole to be the most desirable area for this purpose, supplemented by municipal areas, and a New Brunswick ^{5/} survey has recommended the county unit.

2/ See the Annual Survey of Education in Canada, 1932, Chapter I. Dominion Bureau of Statistics.

3/ Monthly Bulletin of Agricultural Statistics. Dominion Bureau of Statistics.

4/ Report on the Administration and Financing of Schools. By a Committee composed of representatives of The Manitoba School Trustees Association, The Manitoba Union of Municipalities, The Manitoba Teachers' Federation, The Department of Education, and The Manitoba Tax Commission, 1933.

5/ Report of Commission on Education for the Province of New Brunswick, 1932. A commission appointed by the provincial government in 1931.



1010491908

81-D-54
Bulletin No 302