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The Challenge of Rising Educational Costs

For some time now it has been a generally accepted view that all expenditures on education must be inherently desirable. When a thing is good, the reasoning goes, more of it must be better. If educational costs have increased beyond all expectations, it is a burden that must be born, for surely expenditures on education are an indicator of the progress and enlightenment of a society. Moreover, economists have demonstrated that investment in human capital is an essential spur to economic growth. As we move on through the seventies, however, economic realities may force a re-assessment of the priorities that have been granted to education as a form of social expenditure. If this is to be so, educators should be the first, and not the last, to recognize the problem, to analyse the situation and to propose practical solutions.

There are many examples, in both the past and the present, of nations and societies whose desire to improve educational standards has been limited by their economic ability to do so. Fears are increasingly being expressed by political leaders in Canada that this point has now been reached. Since the taxpayer supplies the bulk of the funds used at all levels of education, it is reasonable that governments should ask "How well is this money being spent?" The Economic Council of Canada in its *Seventh Annual Review: Patterns of Growth*¹ suggests various ways in which the efficiency of the post-secondary educational institutions could be improved. It is apparent that the first need is for those directly concerned with the administration of education to clarify their objectives and to assess their own efficiency. In Quebec, the Minister of Education has announced that education costs must be brought down to a lower percentage of pro-

vincial expenditures. At present they comprise twenty-nine per cent of government expenditures in Quebec and over twenty per cent of government spending in Canada as a whole. Demand for increases in other social expenditures, such as those on health, welfare, urban planning and environmental improvement has taken on a new importance and urgency in the society of the seventies. The need for expanded educational opportunities must be weighed against the needs of these competing demands on the limited resources of society. It seems all too probable that in the near future educational administrators will find themselves firmly called upon to re-examine the whole educational structure in an attempt to find solutions to the growing financial problems.

education costs and g.n.p.

Two broad questions present themselves. "How serious is the problem?" and "What alternatives do we seem to have in approaching it?" The extent of the problem is a matter of arithmetic and, though some elements of the calculation are familiar, it seems appropriate to review them. Education costs in Canada ranged from \$408 million in 1949 to \$1,427 million in 1959 to \$6,859 million in 1969. The rise is startling. Inflation has been a factor, of course, but when put into constant (1949) dollars, we still have a 1969 expenditure of \$3,790 million. This is an 830% increase in the past twenty years, in terms of constant dollars. Population has increased in this period by about 55%, so the burden of educational costs on the individual Canadian is clearly much heavier than in the past. But the average Canadian is wealthier than he was in the past, so these expenditures should really be judged in relation to the country's total resources. They should be looked at in terms of gross national product, or of national income. Since the 1920's when figures were first available, educational expenditures have varied from about 1.5% of national product to about 5.4% as the country passed through war, peace and depression. In 1949 the figure was 2.5%. By 1969, it had reached 8.7% of gross national product or 11.5% in terms of national income. These percentages are much higher than would have been considered normal a few years ago.³ International comparisons for the mid-1960's show that developed nations were spending about six to eight per cent of their national income

on education. At that time Canada's effort to support education was about equal to that of Israel and Japan. It was greater than that of the United Kingdom and United States, but less than that of the U.S.S.R. or Ethiopia. No country was then reportedly spending more than ten per cent of its national income for educational purposes.

costs and national development

It is generally accepted that increasing stress on the value of education is a characteristic of development and economic growth. In highly developed countries the number of jobs at a skilled, managerial or professional level rapidly increases. The average educational attainment demanded for even the more routine types of employment also tends to increase. Investment in education, therefore, becomes more important to society as industrialization and urbanization progress and it is reasonable that a higher percentage of a nation's resources should be devoted to education at this stage than at earlier stages in development. The same is true if education is viewed as a production factor rather than as a consumer good. Galbraith³ said that investment in physical resources and communications will be the most urgent form of social investment at an early stage of economic development, but that later a sufficient investment in trained manpower becomes vital. Supporting this view, Denison found that in the United States the contribution of physical capital to economic growth was twice that of education between 1909 and 1929, but the contributions of education exceeded those of physical capital from 1929 to 1957.⁴ Again, this would support the need for ever-increasing amounts of our resources to be diverted to education. In fact, in 1965 the Economic Council of Canada⁵ was strongly urging upon Canadians the need for even greater investment in education, and attributing Canada's lower rates of productivity and earnings as compared with the United States to her lower levels of educational attainment. All of which would suggest that our present level of educational spending, while high in relation to our resources, is desirable and justifiable.

However, we may have reached a turning point in that the twenty year period of unrestricted growth that education has enjoyed is over. Henceforth it seems probable that any expansion of educational expenditure will not be able to much

exceed the percentage growth in gross national product. Over the last ten years the latter has been about seven or eight per cent a year while the former was around seventeen per cent per year.⁶ This rate of expansion can obviously not be sustained. With the demand for health expenditures rapidly shifting from the private to the public domain, with an increased demand for government subsidising of housing, with government expenditure on anti-pollution measures only just beginning, public funds are facing an unprecedented squeeze.

demands for the next decade

Estimates of the probable demand for education in the next decade indicate a definite slackening at the elementary level. Decreasing birth-rates in the 1960's will bring a slight decrease in the number enrolled in the elementary schools by 1976, according to estimates of the Economic Council of Canada.⁷ Expenditures on education at the elementary and secondary levels combined were estimated to increase by only 5.3% per annum between 1967 and 1975.⁸ This rate is well within the limits set by expansion of the gross national product. At the post-secondary level the problem is more acute. Enrolment here may double by 1976 and expenditures at universities and at other post-secondary institutions are both expected to increase at about 15% per annum in the next few years. A central factor here is the high operating expenditure per student that is necessary at the post secondary level. Using 1966 figures, these expenditures varied from \$180 to \$450 per student at the elementary and secondary levels and from \$1,460 to \$2,800 at the university level.⁹ One extra student at the university level is as great a burden on the community as eight or nine students at the lower levels of education.

Demand for university level education is not likely to slacken for some time. As it is, Canadians are well behind Americans in the average level of their educational attainment. A survey made in 1966¹⁰ showed that 20.1% of the adults over twenty years old in the United States had attended university, compared with 10.5% in Canada. The number holding a university degree was 9.6% and 4.8% respectively. Nor can the discrepancy be blamed on past failures entirely. If the twenty to twenty-four year age group is examined separately, we have a figure for United States residents of 43.9% with complete secondary education and 31.2% with some univer-

sity training, while the comparable figures for Canadians are 26.2% and 17.4%. The implication of this great difference in the educational attainments of Canadians and Americans is surely that Canada has only seen the beginning of the expansion of her university and secondary levels of education. There will be no lessening of the pressure for expansion until, perhaps, the declining birth rate begins to be felt in this age group.

alternative solutions

Only two real alternatives offer themselves in solution to the economic problems that daily loom larger. One is to limit the number of students, particularly at the higher levels of education, and the other is to minimize the capital and operating costs per student as far as is compatible with the maintenance of academic standards. These alternatives should be looked at more closely, for all levels of education, but particularly as they apply to the higher and more costly levels.

Any restriction of an individual's right to obtain as high a level of education as he can usefully benefit from should be seen as a negation of his basic freedom. After all, education is undeniably a means of upward social mobility in our society and there is ample evidence that income levels in adult life are closely correlated with educational attainment. How then, can one restrict entrance to university for any who can prove their ability to benefit from it? Yet this is what may have to be done if present trends continue. The answer might partly lie in a re-orientation of the upper levels of the education system and the creation of a greater diversity of post-secondary institutions. Perhaps the universities should return to a more traditional role in society and concentrate upon academic excellence, leaving other institutions to deal with the more specific applications of knowledge to the practical problems of modern society. Perhaps it is time to return to a greater degree of on the job training and the shifting of emphasis from the formal to the more informal types of education. Above all, there should be an effort to correlate the trained job-seekers, who constitute the output of the university, with the job opportunities that will be available to them. Certainly, any attempt to dictate what career an individual will pursue is an abridgement of his freedom, but this freedom is abridged in the long run by the realities of the job market. It is of little

use either to the society as a whole, or to the individual concerned, if trained engineers must do the work of a technician or if Ph.D.'s must suffer unemployment. In any event, it does seem to be time for all involved in education to be engaged in a re-assessment of the role of education in society and to be concerned in particular with a more specific definition of the goals and objectives of education at the secondary and post-secondary levels.

The question of efficiency within the educational system and of whether maximum output, in terms of both quantity and quality of students, is being obtained for the inputs of time, money and effort involved is one that has been neglected too long. Research on the effective use of educational funds has been minimal, especially in Canada. Administrators must daily decide on the allocation of funds without any real guidelines as to whether they would be most effectively spent on buildings, equipment or salaries. Little is known from the economic viewpoint of the relative efficiency of school units of varying size, of the economics of bus transportation or of the effectiveness of some of the more sophisticated types of visual aids in relation to their contribution to the learning process. Perhaps none of these aspects of education should be decided on the basis of economic efficiency alone; but neither is there any justification for deciding upon them with no thought of it at all.

Actual costs per student have risen considerably in the post-war period, even when calculated in constant dollars. In Quebec, for example they increased from \$95 per pupil in 1946 to \$316 per pupil in 1965. The increase in Ontario in the same period was from \$142 to \$333. Some of this increase is due to the greater number of pupils at the more expensive levels of education. Other factors involved are increased expenditures on such educational "extras" as school health services, hot lunches, gymnasias and swimming pools. Visual aids, language laboratories, improved buildings and expanded libraries have also added to per pupil cost. But salaries are the largest component of educational cost. Like many service industries, the education industry is one in which modern technology can do only a limited amount to raise efficiency. The basic dependence is on human personnel and there is no way in which increasing labour costs can be offset by the increased use of technology. These are all valid reasons for increasing costs per student, but one must still ask whether money is being spent as wisely as it might be. At the university level operat-

ing expenses have been growing at almost twice the rate of enrolment. Obviously there is an urgent need for more research into the economic efficiency of the education system and for more factual information on which to base policies.

capital expenditures and student fees

Capital expenditures at all levels of the education system have been comparatively high. This is not just a matter of increased building costs or more elaborate buildings, but is related to the significant shifts in population in the post war period as well as to the shifts in pupil enrolment at various education levels. In the population as a whole there has been a shift from rural to urban living and there has simultaneously been a shift within the cities from the core to the suburban areas. This brings a demand for new schools in new residential areas while old buildings must be abandoned. At the university level the growth of community colleges and CEGEPs has also involved much capital expense. There are signs that some reduction in the rate of capital expenditures might be expected. There is much discussion of ways in which the capital investment in buildings can be put to more intensive use, mostly through the year-round use of buildings. At the university level perhaps more will have to be done along these lines. At the school board level more careful long-term planning and forecasting of school populations, as well as more emphasis on regional co-operation in utilising existing school facilities, might be helpful.

A more controversial suggestion is that made by the Economic Council of Canada,¹¹ which suggested that it is perhaps time for the public sector to curtail its contributions to university education and for a greater proportion of costs to be met from students' fees. Until recently there has been considerable hope that the time would soon arrive when the government would be able to pay the fees of all students, or at least of all in need. Newfoundland embarked on such a course but was unable to continue it. But since university education is of great economic benefit to the person receiving it, for he can expect to receive a considerably higher total of life-time earnings than one who does not attend university, it is not unreasonable that he should be expected to pay at least part of the cost. Increased availability of long-term loans to

students seems to make good sense, although it would not ease the economic burden of the government in the short-run.

the need for research

Reference has been made several times to the need for more research into the economic realities of running an enterprise that is now, by almost any measure, Canada's biggest industry.¹² In 1968-69, expenditures on educational research were only \$15 million and in that year total education expenditures exceeded \$6 billion. One half of this research expenditure was in the province of Ontario. It is time now for some much more definitive research on the relationship of inputs and outputs in the education system to be undertaken. It is time, too, for a much more precise definition of the role of education in twentieth century society to be made by those whose task it is to make the decisions that affect the future of education. Above all, it should be realized by teacher, taxpayer, parent and administrator that the problems that loom on the horizon will not go away if they are ignored. The seventies should not be allowed to become a time of defensive reactions to externally imposed economic restrictions. The only way for the education system to avoid such a situation is to take the initiative itself and to begin to plan, probe and police itself in such a way that the public and politicians will no longer need to ask, "Are you spending these vast sums of money wisely?"

references

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8. Economic Council of Canada, *Sixth Annual Review*, Ottawa: Queen's Printer, 1969, p. 38.
9. *Ibid.*, p. 137.
10. Dominion Bureau of Statistics, *Educational Attainment in Canada: Some Regional and Social Aspects*, Special Labour Force Study No. 7, Ottawa: Queen's Printer, 1968.
11. Economic Council of Canada, *Seventh Annual Review*, Ottawa: Queen's Printer, 1970, p. 70.
12. *Ibid.*, p. 55.