

This is the second article in the series *A new set of priorities*, offering a new socio-economic policy, formulated by a team of economists and sociologists, at the request of prime minister Ehud Barak and the director-general of his office, Yossi Kucik. The members of the team are Dan Ben-David, Haim Ben-Shahar, Elhanan Helpman, Manuel Trajtenberg, Efraim Sadka, Daniel Tsiddon, Yossi Shavit and Haya Stier.

Education in Israel

retitled "Grade: Barely satisfactory" by the newspaper

Israel spends more than other countries on education but its students' achievements don't make the grade. The level of Israeli education must be raised, a uniform curriculum for basic subjects introduced and the educational systems must be made more efficient.

By Dan Ben-David

Are all Israelis really provided an equal opportunity to take part in the building of their individual futures along with the collective future of the country? One of the most basic elements in granting equal economic opportunity and increasing economic productivity is the quality of primary and secondary school education, which provides the basis for professional training and the acquisition of skills later in life.

What is the level of education in Israel today? Because we live in a period of open economies – or globalization – educational achievements can no longer be appraised according to exclusively local criteria. The level of education given today determines the future level of Israel's workers, and these workers will have to compete with the finest workers from all over the world. For this reason, it is crucial to know how the Israeli educational system measures up to the rest of the world, from the dual perspectives of expenditures and results.

When Israel is compared to other countries, it becomes apparent that there are countries that spend less than Israel on education, and countries that spend more. The question is whether Israel is getting a proportionate return on its investment. In other words, is it getting better results than those countries that spend less and lower results than those that spend more. It is not enough to compare Israel to other countries on the basis of expenditures alone, just as it is not enough to

compare Israel to other countries on the basis of results alone. A proper comparison requires a sample of countries including data on both expenditures and returns in each country.

A good measure for comparing educational expenditures is the national expenditure (including both private and public institutions) per student. However, differences in this measure do not necessarily indicate the exact cost differences between any two educational systems. In countries in which per capita incomes are higher, salaries of workers (including teachers) are higher, and consequently the expenditure per student is also higher. Therefore the part of the cost differences stemming from differences in per capita incomes must be discounted in order to attain a more accurate assessment of the differences in expenditures per pupil.

A comparison of expenditures per student (after discounting differences in per capita incomes) in countries all over the world, shows that Israel pays much more for the education its children receive. The cost per student in primary schools in the United States is 4 percent lower than in Israel; in Japan it is 16 percent lower; in Holland it is 25 percent lower; and in Ireland the cost per pupil is 42 percent lower than in Israel. A comparison of the educational systems in secondary schools yields a similar results. Only in Sweden and France is the expenditure per student higher than in Israel.

If Israeli education is more expensive, is it better too? In the mid-nineties, identical tests were given in a number of countries in two subjects considered among the most important in preparing graduates of today's educational systems for the 21st century – math and science. This made it possible to compare two important facets of the basic level of education provided in these countries.

The two charts that appear here list all the countries whose students took the math and science tests and for whom Israel's Central Bureau of Statistics (CBS) calculated the expenditure per student. For the sake of simplification, only the average of the combined test results in both subjects is given here. It turns out that not only did the primary school system in Israel spend more per student, but it also got less in return. Students in Korea, for example, received grades that were 17 percent higher than students in Israel, despite the fact that the Korean educational system spends 23 percent less per student than the Israel educational systems. This result is not unusual. Israel spent the most money and received the lowest results among the eight countries in the primary school category. On average, the cost per student in primary schools abroad was lower by 23 percent than the cost in Israel, while the achievements of the students in the other countries were 10 percent higher than those of Israeli students.

The ratio of costs to achievements in secondary schools is similarly dismal. Children in most of the other countries demonstrated better abilities than those of Israeli children. The few countries which showed lower results than Israel also spent less on their children's education. Only France spent more and achieved lower results. On average, other countries spend about 21.5 percent less than Israel – which is the equivalent of NIS 3.5 billion shekels of the primary and secondary school budget for 1999. This estimate does not take reflect the entire excess cost of education in Israel because it does not take into account the savings that other countries could have achieved had they lowered the level of their schools' education to the Israeli level. (The CBS sample of countries examined here is currently being broadened to include all countries belonging to the Organization for Economic Cooperation and Development (OECD) that also took part in the Third International Mathematics and Science Study (TIMSS). These results, while preliminary, do not appear to be essentially different from those reported here.)

It is important to note that the evidence on excess education costs in Israel should not be construed as a recommendation to reduce the education budget, but rather as a reflection of the need to find ways of eliciting a greater educational return from it.

What is the cause of these relatively high costs and relatively unimpressive results? One explanation may be found in the following figures: On the one hand, compared to most Western countries, the number of children per classroom is very high in Israel, but on the other, the ratio of pupils to full-time teaching-equivalent (FTE) positions is low. For the sake of illustration, in the 1989-90 school year, there were 1.6 FTEs per class. In the 1998-99 school year, however, the number of full-time teaching-equivalent positions per class rose to 1.9, while the average number of pupils per class – 28 – did not change at all over the past decade.

Israel's society and economy both pay the price for this state of affairs. Therefore, a number of important steps must be taken by Israel's educational system in three main areas. First, there must be a substantial improvement in the level of education provided in a number of core

International Comparison of Educational Systems

percent difference between each country and Israel

Primary Schools

	National Educ Expenditure per pupil	Average Math and Science Achievements
Korea	-23%	17%
Japan	-16%	13%
Singapore	-29%	13%
Netherlands	-25%	10%
United States	-4%	7%
Ireland	-42%	5%
Czech Republic	-22%	2%
Average	-23%	10%

Secondary Schools

	National Educ Expenditure per pupil	Average Math and Science Achievements
Singapore	-53%	19%
Korea	-33%	12%
Japan	-39%	12%
Czech Republic	-20%	9%
Netherlands	-25%	5%
Ireland	-33%	2%
Sweden	3%	1%
United States	-11%	-1%
France	9%	-1%
Spain	-18%	-4%
Denmark	-3%	-6%
Average	-20%	4%

curriculum subjects (such as math, science and English). A solid basic education is a most important springboard for future economic success.

Second, this improved core curriculum must be uniform in content and in quality if the future economic playing field is to be level. While Israeli society is characterized by numerous lifestyles, each of which demands an education that reflects its distinct social perspective, there is only one economic market in which all the country's citizens must compete and thrive without becoming a burden to society. Therefore, a country that wants an egalitarian – and not just a successful – society must make sure that the improved core education be provided at equal levels in all its educational systems, in all its towns and neighborhoods, in all parts of the country.

The third area is related to the need to improve the efficiency of the educational system. In view of the findings presented here, an examination must be conducted as to why education in Israel costs more while its achievements in core fields do not measure up to the higher levels abroad. Consequently, it is fundamentally important that the transparency of the educational systems be substantially increased – especially where school quality and the allotment of funds are concerned.

The full report (in Hebrew) as presented before the Israeli cabinet can be viewed at <http://econ.tau.ac.il/priorities>