

Israel's Educational Achievements

Updated International Comparisons

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Abstract

Results from the recently published international PISA exams indicate that the level of educational achievement in core curriculum subjects amongst Israel's children is at the bottom of the Western world. Even without the inclusion of ultra-Orthodox boys – who do not participate in the exams – the Israeli average achievement is lower than in every one of the 25 OECD countries that are relevant for comparison in the West. Likewise, gaps in achievement among the Israeli pupils are greater than the gaps within each of the 25 countries. While the country's weakest pupils score below the weakest pupils in all of the 25 OECD countries, the level of Israel's top pupils is lower than in 24 out of the 25 Western countries.

In large parts of last year's *State of the Nation Report* and in this year's Report, there is considerable evidence highlighting the strong link between education and employment, wages, poverty, income inequality, and economic growth. While the primary emphasis is on the quantity of education (for example, the number of school years), there is a large and increasing body of evidence showing the importance of educational

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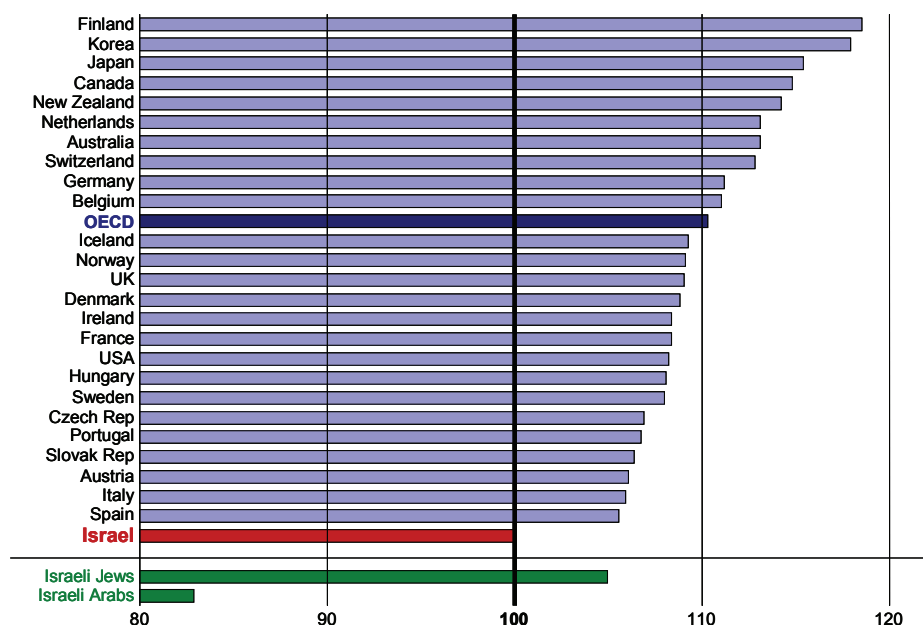
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quality. In this realm – as measured by achievements in standardized examinations – Israel's current education picture is quite sobering.

In last year's *State of the Nation Report* (Ben-David, 2010a), a comparison was made between the educational achievements of Israel's children and the achievements of children in 25 OECD countries since 1999. In four of the five international exams administered in the years 1999-2007, the average level of achievement in Israel was below each of the 25 OECD countries. The disparity in educational achievements among the children of Israel was greater than the disparity within each of the 25 OECD countries in every one of the five exams. A comparison of the weakest pupils – those in the bottom five percentiles in each country – showed that Israel's weakest pupils were far weaker than the weakest pupils in each of the 25 OECD countries in each of the five exams. Even a comparison of the top pupils in each country – those in the top five percentiles – does not portend well. The achievements of Israel's top pupils placed them at the bottom, or close to it, compared to the top pupils in the 25 OECD countries.

In December 2010, the OECD published the results of the most recent international exam, the PISA test given in 2009. As can be seen in Figures 1 to 4, the most updated picture of the achievement level of Israel's children in the core fields is similar to the results of the entire past decade. Although there were some slight improvements, Israel is still ranked below all of the relevant Western world. The country with the lowest achievement levels among the 25 OECD countries is Spain (Figure 1). That said, the achievements of the Spanish children were six percent above the achievements of the Israeli children. The OECD average was ten percent higher while the average achievement levels among the leading countries, Finland and Korea, were 19 and 18 percent higher, respectively.

Figure 1
Average level of education
 average achievement levels in 25 OECD countries and in Israel
 PISA 2009 exams*, base: Israel = 100



* National average in math, science and reading exams. Israeli data does not include *haredi* boys in all subjects or *haredi* girls in science.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: PISA; Israel's National Authority for Educational Measurement and Evaluation.

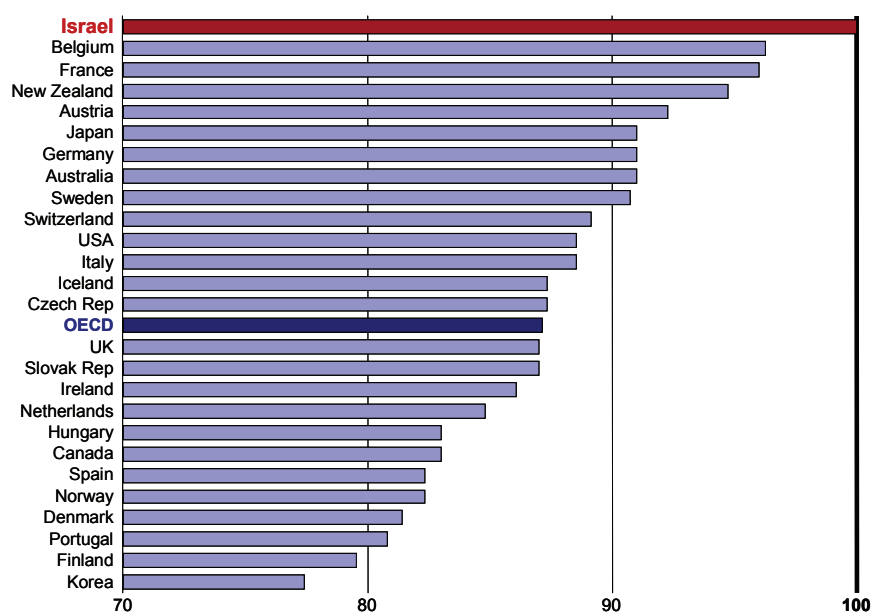
It is important to emphasize that the actual Israeli average is even lower since the Jewish ultra-Orthodox (*haredi*) children – who comprise roughly one-fifth of the country's pupils – do not study the material, do not take the exams, and are not included in the Israeli average that would no doubt have been even lower had the *haredi* children participated in the

exam. This and more: the average for non-*haredi* Jewish children was also below each of the 25 OECD countries. The achievement level of the Arab Israeli pupils was 17 percent below the Israeli national average. In fact, Arab Israeli pupils placed below Third World countries like Jordan, Tunisia, Indonesia, Kazakhstan, Brazil, and Colombia.

For three and a half straight decades, labor productivity in Israel grew at a slower rate than the average for the G7 countries (the leading Western countries) despite the existence of hi-tech sectors and basic and applied research in which Israel is at the cutting edge (Ben-David, 2010b). As a result, Israel's standard of living has been rising more slowly – i.e. declining in relative terms – than the living standards in the leading Western countries. This is not a coincidence. While there are additional reasons for the relative decline, one primary factor underlying this is the level of education that Israel provides its children. When this is the Israeli level in the core subjects, and when this has been the level for at least a decade, it is difficult to see how Israeli pupils who are struggling to compete with children in the West in the educational realm will be able to compete successfully on the future global economic playing field utilizing their limited educational toolboxes.

Israel's socioeconomic problems are not limited to just an economic growth rate that has been relatively low for decades. Income inequality within the country is among the highest in the Western world. The more the educational system represents a springboard into the labor market, educational disparity today will be reflected by economic disparity tomorrow. Therefore, while the low average Israeli achievements *vis-à-vis* the West reflect the general national level, the very high gaps in achievement within Israel – which continue to be higher than in each of the 25 OECD countries – point to severe future problems in reducing income inequality (Figure 2).

Figure 2
Educational inequality
 standard deviations in achievements in 25 OECD countries and in Israel
 PISA 2009 exams*, base: Israel = 100



* National average in math, science and reading exams. Israeli data does not include *haredi* boys in all subjects or *haredi* girls in science.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

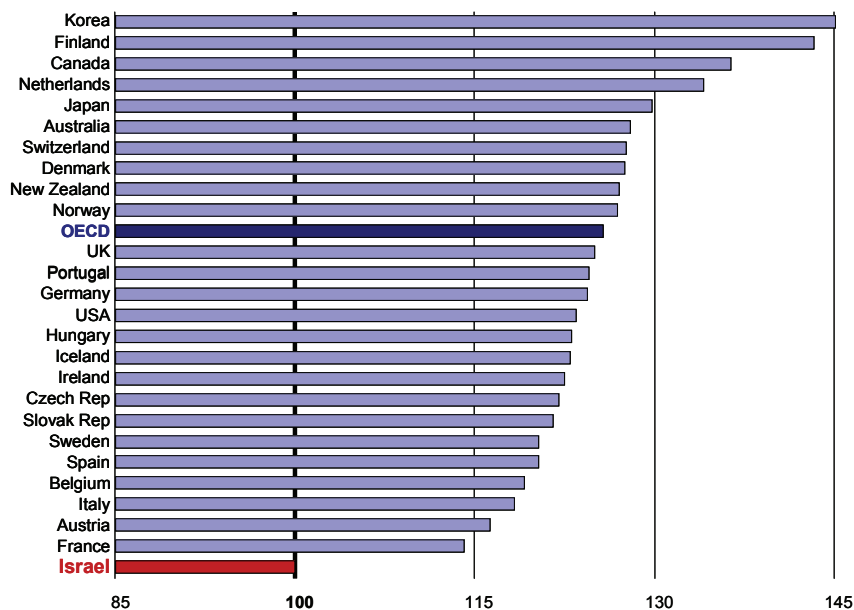
Data: PISA; Israel's National Authority for Educational Measurement and Evaluation.

Figure 3 compares between the weakest pupils in the Western world in the core curriculum subjects. The Israeli average in the bottom five percentiles is substantially lower than the averages for the same percentiles in each of the 25 OECD countries. When this is the level of education provided the weakest pupils in Israel, what kind of future poverty level can be expected when they will have to compete in a modern and competitive labor market with only the inferior educational tool box that they have at their disposal?

Figure 3

Comparison of weakest pupils

average achievement levels of bottom 5th percentile in
25 OECD countries and in Israel, PISA 2009 exams*
base: Israel = 100



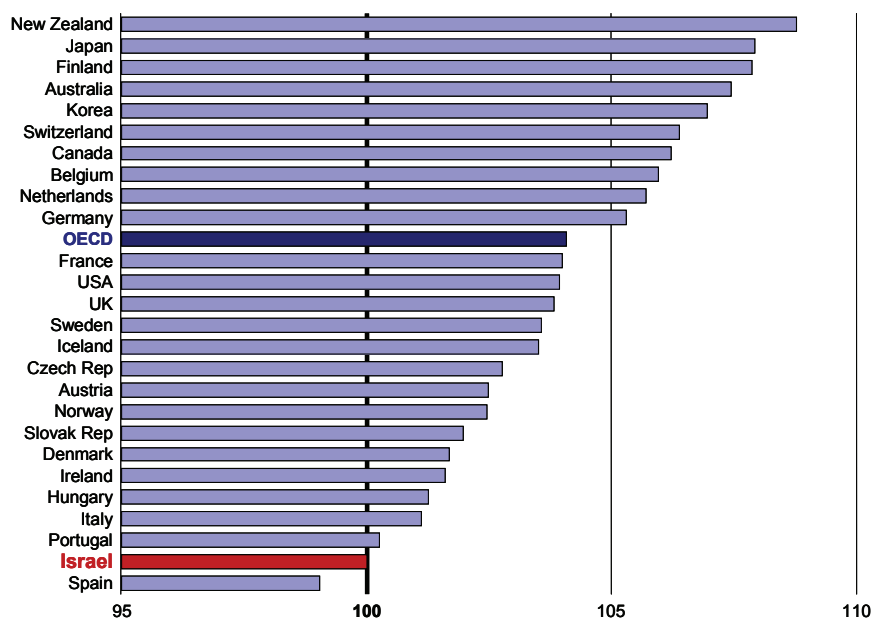
* National average in math, science and reading exams. Israeli data does not include *haredi* boys in all subjects or *haredi* girls in science.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: PISA; Israel's National Authority for Educational Measurement and Evaluation.

A comparison of the top pupils can be found in Figure 4. It shows how the average level of achievement among the top five percentiles in Israel compares to the average among the top percentiles in each of the other countries. Israel's top pupils are ranked below the top pupils in every one of the other countries except Spain.

Figure 4
Comparison of top pupils
 average achievement levels of top 5th percentile in
 25 OECD countries and in Israel, PISA 2009 exams*
 base: Israel = 100



* National average in math, science and reading exams. Israeli data does not include *haredi* boys in all subjects or *haredi* girls in science.

Source: Dan Ben-David, Taub Center and Tel-Aviv University.

Data: PISA; Israel's National Authority for Educational Measurement and Evaluation.

A country in perpetual danger since its birth cannot allow itself to wither economically or technologically and it will continue to be required to develop abilities that do not exist in other countries. A small economy that needs to withstand existential pressures in such a hostile neighborhood must understand that its economic future depends on technological, scientific and medical innovation. In this kind of a reality, it is not too difficult to understand the future implications of providing its top pupils with an educational toolbox of poorer quality than that provided by 24 of the 25 Western countries with whom Israel must compete in the global marketplace.

The recently signed wage agreement between the secondary school teachers' union and the government is supposed to substantially increase teachers' wages. Nachum Blass discusses this agreement in his chapter "Developments in Israel's Education System" in this volume, so only a few related points will be highlighted here. It is vital that the teachers' compensation be sufficient to attract good teachers to the educational field. One question that arises is whether, in order to attract a good math teacher (for example), Israel must pay the same amount as it needs to attract a good physical education teacher (for example)? Is the amount needed to draw someone to teach a class of children from a poor socioeconomic background the same as what is needed to draw someone to teach a class of children from wealthier backgrounds? Are the extra hours that each teacher must work in order to receive higher wages – as is the case in both teachers' unions' agreements – necessary in equal amounts across all teaching fields, or could it have been possible to utilize the additions to the wages and instructional hours in a manner that would have primarily emphasized an improvement in the teaching of core curriculum subjects that have turned out to be so difficult for so many Israeli children?

The primary points that need to become the basis for any systemic educational reform in Israel appear in last year's Report (Ben-David 2010a). They include a change in curricular emphasis and the provision of a greater share of resources and instruction time in the core subjects –

especially in schools belonging to the *haredi* and Arab Israeli educational systems, and in the poorer neighborhoods and towns of Israel, regardless of religion or degree of religious observance. Similarly, a greater number of high quality teachers are needed in the core subjects. They need to come with better professional training in their respective fields and possess university-level B.A. or B.Sc. degrees (depending on the subject) at least, and receive compensation that is competitive with the alternate job opportunities that they would have in their field.

Without serious systemic reform, it will be difficult to implement the kinds of policies needed for changing the types of results that are seen in the figures shown here – with all that this implies for the country's future society and economy.

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