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## Chapter 7

# What achieving universal basic skills means for the economy and for education

A fundamental education goal for all nations can be succinctly stated: all youth should acquire at least basic skills. This chapter summarises the benefits – both economic and social – that could accrue to countries, rich and poor, if their populations were to acquire basic skills.



There are two types of conclusions that can be drawn from this report. The first relates to what the analysis has to say about the economic benefits of the development goal of achieving universal basic skills. The second relates to the connection of this goal to larger education policies.

The Millennium Development Goals for education were successful in that they led to some significant expansion in access to education, particularly in the developing world. But they were less successful in realising a commensurate expansion in the achievement, or knowledge capital, of nations. It was for this reason that many of the hoped-for outcomes, particularly for economic development, failed to materialise.

It is relatively easy to mobilise support for development goals in education, both within individual countries and among international development agencies, because there is ready acceptance of the idea that nations' growth is directly related to human capital – the skills of the populations. The disappointments have come largely from an undue focus on access to schooling as opposed to learning while in school. Assessing progress towards education goals by measuring years of schooling attained gives an incomplete picture. Over the past two decades, school attainment has grown significantly, but learning has not grown commensurately.

This report builds on prior work that focuses on the gains from learning and that supports the finding of a strong, causal relationship between cognitive skills and economic growth.<sup>1</sup> A fundamental education goal for all nations can be succinctly stated: all youth should acquire at least basic skills. A workable definition of basic skills in today's economically competitive world is fully mastering skills at Level 1 on the Programme for International Student Assessment (PISA) test, which is equivalent to a mathematics score of 420 points. This quality aspect of the education goal can be readily measured and tracked, thus providing a similar impetus to development as did the prior focus on attainment.

The history of economic growth makes understanding the economic implications of different education policies straightforward. Three options that represent much of current policy discussion can be readily compared (see Chapter 5): all current students with basic skills; universal access to schools at current quality; and universal access with basic skills.

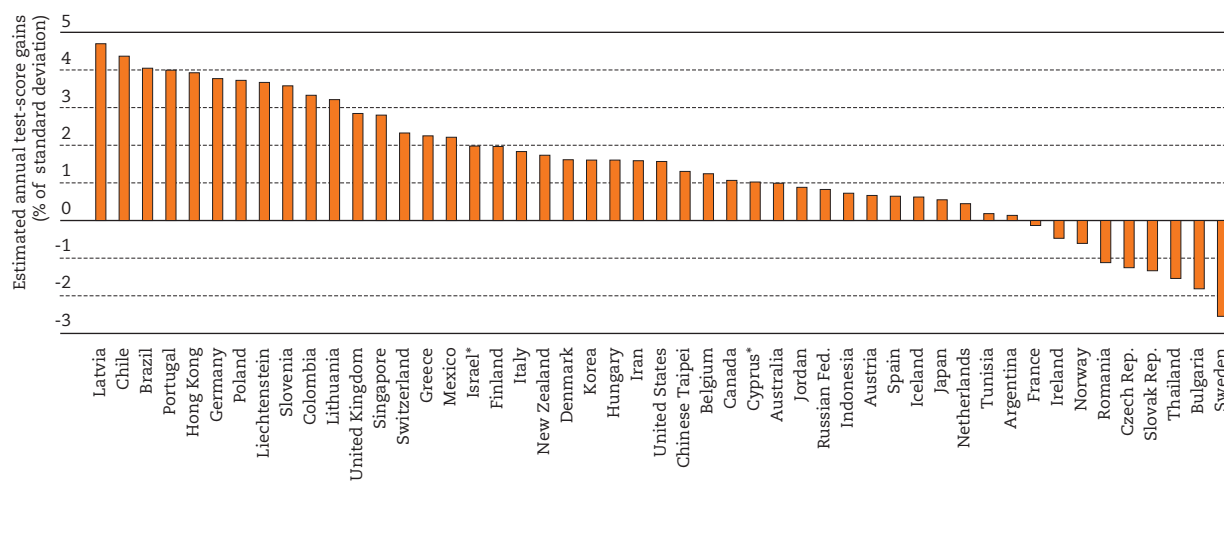
Universal access at current quality yields some economic gains, particularly in the lower-income countries. But improving the quality of schools to raise achievement for current students has a much larger economic impact. Meeting the goal of universal access with basic skills has an even greater impact. For lower-middle income countries, the discounted present value of future gains would be 13 times current GDP and would average out to a 28% higher GDP over the next 80 years. For upper-middle income countries, it would average out to a 16% higher GDP.

The goal of universal basic skills also has meaning for high-income countries. Driven in part by oil-producing countries that face some schooling challenges, the high-income non-OECD countries, as a group, would see an average of 10% higher future GDP – almost five times the value of current GDP – if they met this goal. And even the high-income OECD countries would gain significantly if all segments of the population acquired basic skills. For this group, average future GDP would be 3.5% higher than it would be otherwise. Improving the skills of the population clearly has substantial implications for economic well-being, in particular when improvements that accrue in the more distant future are also considered.

When these gains are compared to the total spending on education – typically 3-5% of GDP – arguments against school improvement based on limited funds are indeed shortsighted. The gains from meeting the goal of universal basic skills would cover most, if not all, of the costs of the entire education system, even in the most developed economies.<sup>2</sup>

Available evidence suggests that schools and student achievement can be improved, even though countries have found improvement difficult in the past. Figure 7.1 depicts the average improvement over the past 15 years (for nations that have participated sufficiently in testing to provide longitudinal data on performance).<sup>3</sup> The pace of the top performers yields dramatic changes in their knowledge capital. A four-point-per-year improvement over the 14 years of observation implies an improvement of greater than a half standard deviation – or twice the improvement that was analysed in the baseline projection. All of the countries in the graph from Italy up to Latvia have managed to gain at least 25 points. Of course, nine countries also fell back in achievement over the period shown.<sup>4</sup> Their experience illustrates that improvement can be difficult.

FIGURE 7.1 ANNUAL IMPROVEMENT IN STUDENT ACHIEVEMENT, 1995-2009



\* See notes at the end of this chapter.

Notes: Estimated annual test-score change as % of a standard deviation, based on NAEP, PISA, TIMSS and PIRLS achievement tests.

Source: Hanushek, Peterson and Woessmann (2012), Table B.1.

Countries currently at the bottom of the overall skills distribution will not find it possible to reach the goal of universal basic skills within a 15-year period, no matter how aggressively they seek to improve their schools. Acknowledging that this is so, however, represents neither a retreat from the goal nor a reason to ignore it. As described in Chapter 5, stretching achievement of the goal to 30 years instead of 15 years leads to some obvious reduction in the gains – but the gains remain enormous, particularly compared to current levels of income. And such rewards cannot easily be obtained by any alternative policies.

This is not the place to develop the evidence on alternative improvement policies, but a few lessons that clearly relate to this analysis can be mentioned.<sup>5</sup> Perhaps the most important lesson is that improvement is not possible without a clear set of goals. Policies must be related to objectives. In fact, the report provides direct evidence of how goals do lead to outcomes; the rapid expansion of access to schools in the face of the original Millennium Development Goal – universal primary schooling – reinforces this proposition.

The past expansion of access also highlights the central theme of this report. Getting children into schools was not the real purpose of the goal; it was a means to the true end of increasing the learning and achievement of all youth. But because the goal was not framed in terms of learning outcomes, improvements in access did not necessarily lead to general learning

gains. As this report has shown, increased educational attainment without increased learning has limited impact on economic outcomes and on development.

It is equally clear that meeting policy objectives and goals is unlikely without measuring performance. Without information about student achievement, it is impossible to judge accurately whether programmes are meeting their real objectives. The strength of the prior access goals was that performance could be readily measured. At this point, the goals that more directly reflect the true objectives can also be accurately measured.

Judging the overall performance of the school system in today's internationally linked economic markets requires accurate assessments of performance by international standards. There is now a half century of experience with international testing, and this provides participating nations with a view of how their current performance measures up against what is possible.<sup>6</sup> These international tests feed directly into the development goal of universal basic skills. Basic skills today can be defined only by international standards. Moreover, within countries, it is unlikely that people without basic skills can be included in the gains of any development.

The analysis in this report focuses on the 76 countries with comparable international achievement data, and there is reason to believe that many of the countries that do not participate in international assessments

perform worse than even the lower-performing countries. Countries participating in regional testing in Latin America and in sub-Saharan Africa provide wider evidence of substandard outcomes for non-participating countries. If inclusive growth is to reach the poorest countries and regions, the measurement of outcomes for them must be widely expanded.

A frequent argument against pursuit of universal basic skills is that it is simply too costly. Yet, among the middle-income countries, the gains of reaching this goal average more than 6% of discounted future GDP everywhere except Hungary (where it is 4.1%).<sup>7</sup> These gains, the average over the next 80 years, exceed the total current expenditures on education in these countries, indicating considerable room for investment. Of course, there may still be short-run budgetary pressures, since it will be necessary first to improve schools and then to wait while high-skilled youth become a significant portion of the labour force. Nevertheless, forward-looking governments

must understand that changing the economic future requires investment.

One caution to keep in mind is that the economic gains come only with the development of higher achievement and higher skills. Investment in education is often understood just in terms of spending; but higher spending is not necessarily the same as higher achievement, as the record across countries shows.<sup>8</sup> Numerous programmes and policies that sound good and that have been introduced by governments in good faith have turned out to be ineffective at raising achievement, leading to increased cost with little gain.

As the record shows, the economic development that follows from reaching universal basic skills would contribute to poverty reduction, better health care, development of new and sustainable technologies, and other improvements that come with increased resources. Or to put this the other way, only improved knowledge capital makes these larger social goals feasible.

## NOTES

1. The underlying support for the basic growth model is found in Hanushek and Woessmann (2015). It is summarised in Chapter 2 and Annex A.
2. In 2010, public spending on primary and secondary schools within OECD countries averaged 3.7% of GDP; see OECD (2013).
3. For a discussion of how improvement is calculated, see Hanushek, Peterson and Woessmann (2012).
4. Those that regressed were Bulgaria, the Czech Republic, France, Ireland, Norway, Romania, the Slovak Republic, Sweden and Thailand.
5. See Chapter 8 in Hanushek and Woessmann (2015) and the references therein for international evidence on policy effectiveness.
6. The history of testing and participation by nations can be found in Hanushek and Woessmann (2011).
7. In the high-income OECD countries, the smallest gain in terms of future discounted GDP is found in Estonia (1.1%), but 18 of the 31 countries would see an improvement of over 3%.
8. See Hanushek and Woessmann (2015), section 8.1.

### Notes regarding Cyprus

Readers should note the following information provided by Turkey and by the European Union Member States of the OECD and the European Union regarding the status of Cyprus:

#### Note by Turkey

The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the “Cyprus issue”.

#### Note by all the European Union member States of the OECD and the European Union

The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

**Note regarding Israel**

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

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