Are global learning metrics desirable?

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We have ample evidence about the power of international goals to focus attention on desirable outcomes and to promote improvement. The Millennium Development Goals (MDGs), calling for universal completion of lower secondary schooling, saw dramatic improvements in schooling access around the world. Unfortunately, many induced to attend did not learn anything—effectively erasing the potential gains coming from more education.

The recently ratified Sustainable Development Goals (SDGs) call for improvements in quality education, but without clearly defining “quality,” we could end up with similar disappointments to those accompanying the MDGs. The disappointment comes from the fact that the economic benefits of human capital development are directly related to the skills that are acquired.

Ludger Woessmann and I have investigated the impact of skills as measured by international tests on the earnings of individuals and on the growth of nations. In terms of economic growth, we find that performance on PISA and TIMSS tests is a strong predictor of economic growth (Hanushek and Woessmann (2015a)). Moreover, the analysis indicates that this can plausibly be thought of as a causal relationship.

The relationship is very strong, indicating that improvement in achievement (which in the aggregate we call the knowledge capital of nations) has large impacts on economic growth. This historic relationship also permits us to estimate how the MDGs or the SDGs could change the economic well-being of nations. Figure 1 summarizes our estimates of how reaching “basic skill” level— which we define as Level 1 on the PISA tests—would affect growth of GDP for the 76 countries with data. (Hanushek and Woessmann (2015b)). We summarize the present value of added growth over the next 80 years (the life span of somebody born today). We show the impacts for aggregations of countries grouped by the level of today’s GDP and consider: (1) simple quality improvement with no increased access to lower secondary schooling; (2) movement to full access to lower secondary schooling at each country’s current quality; and (3) universal access with students reaching the basic skill level.

The results are quite startling. For the lowest income countries that we observe, bringing current students up to basic skills would on average yield a present value of the growth dividend that was over six times current GDP. Just providing full access to the current schools would yield only twice current GDP, while universal basic skills would by historical standards produce a growth dividend of twelve times current GDP. Countries not currently tested would likely obtain larger gains.

The goal of universal basic skills can be applied to all countries. While the most developed countries are close to complete access to lower secondary schooling, some students are left behind. In the U.S. this percentage is 23 percent, and bringing them up to Level 1 on PISA would imply over 1.5 times current US GDP. High income non-OECD includes many Arab oil countries, gaining even more.
There are also large differences around the world in the individual returns to skills as measured by standardized math tests. Recent estimates show that the returns to skills in different countries are closely related to the amount of change in the country as indexed by the growth rate in GDP (Hanushek et al., 2016). Said differently, people without skills are severely harmed if the country grows fast.

My proposed learning metrics would relate directly to the math, science, and reading skills that have been successfully measured in PISA and TIMSS. Of course, the application of this idea is not entirely simple, because the lowest income countries currently find that these test items are too difficult for their students. Thus, as a practical approach I would recommend developing tests that were informative of student differences (such as found in the regional tests of TERCE and SACMEQ) but also including linking items to PISA and TIMSS. Making learning a real goal would have large economic effects around the world.

![Figure 1. Increased GDP from Improved Skills, Improved Access, and Universally Higher Skills by Country Income Level](source: Hanushek and Woessmann (2015b))

**References**

