Higher Teacher Quality Would Catapult U.S. Toward Economic Growth

Analysis examines direct link between teacher effectiveness and lifetime earnings

CAMBRIDGE, MA – A new analysis of the economic impact of effective teachers shows that closing just half of the performance gap with Finland, whose students consistently outperform most developed countries, could add more than $50 trillion to the U.S. gross domestic product by 2090.

Eric A. Hanushek, a senior fellow at the Hoover Institution of Stanford University, conducted the analysis for Harvard’s Program on Education Policy and Governance. An article presenting his findings, “Valuing Teachers,” will appear in the Summer 2011 issue of Education Next. Using the nearly $3 trillion drop in economic output resulting from the recent economic recession as a reference point, the author suggests that the achievement gap between the U.S. and academically top-performing countries “can be said to be causing the equivalent of a permanent recession.”

In his study, Hanushek calculated the economic value related to effective teaching by drawing on a research literature that provides precise estimates of the impact of students’ achievement levels on their lifetime earnings, and by combining these figures with estimated impacts of more-effective teachers on student achievement.

A body of research literature on teacher quality has isolated the impact of teachers on student achievement, apart from other factors, such as the student’s own motivations, support from family and peers, and school resources. These studies, reports the author, show that “the quality of the teachers in our schools is paramount; no other measured aspect of schools is nearly as important in determining student achievement.” However, he writes, “the variations in the quality of teachers, even within schools, are startling, and the implications of quality differences are even more startling.”

A teacher at the 84th percentile of effectiveness, for example, will raise the typical student from the middle of the distribution to the 58th percentile in a single year. While some of the achievement gains will be lost, the persistent achievement gains will lead to higher earnings over the student’s lifetime. The value of lifetime earnings for full-time work for the average American is currently $1.16 million. Hanushek calculates that this highly effective teacher (in the top 16 percent of the teaching force) will shift the typical student’s lifetime earnings up by more than $20,000. This implies increased earnings for a class of 20 students of over $400,000. Conversely, he calculates that a very low performing teacher (in the bottom 16 percent of effectiveness) “will have a negative impact of $400,000 compared to an average teacher.” The impact of even a slightly better-than-average quality teacher – one whose effectiveness ranks at the 60th percentile, for example – still has significant economic results, raising an individual student’s lifetime earnings by $5,300, or a class of 20 students’ aggregate lifetime earnings by a total of $106,000.
Alternatively, considering the economic impacts of effective teachers for the U.S. economy, Hanushek presents a “thought experiment” on the economic gains that would result from replacing the very lowest performing teachers with teachers of average performance. He finds that replacing the least effective 5 to 8 percent of all teachers with average teachers would bring the U.S. to a level of student achievement equivalent to that of Canada, and replacing the least effective 7 to 12 percent of teachers with those of average effectiveness would “move the United States to the level of the highest-performing countries in the world, such as Finland.” Such gains would imply higher economic growth and enormous gains in gross domestic product. The present value of gains over the lifetime of citizens born today would, by his calculations, exceed $100 trillion.

Moving the scale of quality of the United States’ teaching force toward this higher level would, he recognizes, require significant changes in school districts’ employment practices, basing recruitment, compensation, and retention policies on the identification and compensation of teachers according to their effectiveness. Salaries “several times higher than those paid teachers today would be economically justified,” he writes, “if teachers were compensated according to their effectiveness,” but without reforms to employment practices, “we should expect both our schools and our economy to underperform relative to their potential.”

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