Universal Basic and Secondary Education

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The Academy's study on Universal Basic and Secondary Education (UBASE) is a multidisciplinary effort to evaluate the benefits and obstacles involved in educating all of the children of the world, aged six to sixteen. Nearly 28 percent of the world's children in this age group – 400

million in total – are not enrolled in school and even for those attending school, educational quality often leaves much to be desired. Moreover, in the developing world, the number of young people aged six to sixteen is expected to grow by more than 100 million in the next quarter century.

With these facts in mind, Joel Cohen of Rockefeller University and David Bloom of the Harvard School of Public Health initiated the UBASE study and recruited scholars and representatives of international organizations to analyze the challenges involved in launching such a massive educational effort. There are several aspects to the project: how the goal of bringing quality education to the world's children can be defined; how progress toward this goal can be measured; what obstacles – technological, financial, political, and cultural – will be encountered; what the consequences of success might be, and how a set of options for the steps needed to advance the goal might be developed. The current phase of the project will produce research reports in eight areas, from the gathering of facts and data for measuring progress toward universal basic and secondary education to the intersection of health and education, and cost and finance issues.

My particular aspect of the study deals with the evaluation of educational initiatives and reforms. Most of the evidence on the impact of various educational strategies or interventions comes from comparing schools with different characteristics. For example, to learn about the impact of private education as opposed to public education, experts have compared private to public schools. The problem is that these comparisons can be confounded by other factors. Parents who send their children to private schools might differ from those who send

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their children to public schools. One can try to control for observable socioeconomic differences such as income and education, but parents can also differ in unobservable ways such as their attitude toward education. Even if one found a way to establish a constant in the comparison of parents, children may require different educational experiences. Statistically, it is difficult to control for all the random variables.

In contrast, we can adopt another approach known as randomized evaluation that is used in the natural sciences and particularly in medicine. Having been involved in a number of educational evaluations using randomized data, let me illustrate how we can apply this method to a few of the questions being addressed in the study. For example, what is the most cost-effective way to educate more children in developing countries, given the limited resources available? The best approach – and it was not the first that came to mind – was the elimination of intestinal worms that affect one out of every three to four people in the world and are inexpensive to treat. We found that a program involving mass treatment of children in randomly selected schools led to a reduction in absenteeism of at least 25 percent. The cost of the program was only about $3.50 per additional year of schooling generated – much more cost-effective than many traditional interventions.

There are many ways to increase the number of children in school; the more difficult challenge is to provide them with a quality education. The availability of resources is a key issue, but their impact can be more complicated than one might think. I was involved in a study of textbook provision in a part of Kenya where primary-school students had very few textbooks. Why do you need a study? Isn't it obvious that more textbooks will lead to enhanced performance? In fact, the results showed that the children who tested well before they received the textbooks improved considerably, but those who did poorly in the pretest showed no improvement. Because I had taught in this area of Kenya before entering graduate school, the outcome was understandable. The entire Kenyan educational system is based on English, but for these children, English is their third language. Their home language is their first and Swahili is their second. Because they are often sick or have other responsibilities, many of these children attend school perhaps 70 – 80 percent of the time, and their teachers show up at about the same rate. Only those students with the best attendance can benefit from textbooks.

These findings raise questions about the need for more systematic educational reform. The educational system in Kenya is oriented toward students from Nairobi with more privileged backgrounds and with parents who can afford textbooks. The system isn't really serving the typical student in rural areas.

In another developing country – Colombia – students from poor neighborhoods were given vouchers to allow them to attend private schools. Given the lack of sufficient funds, a lottery was instituted to determine the voucher recipients. When we learned about this project, we decided to take advantage of the lottery to compare the students who won the vouchers with those who did not. We found that several years after receiving the vouchers, the lottery winners scored higher on tests. As the years passed, they were more likely to complete high school and to score well on college entrance exams. There is no doubt that the lottery was highly cost-effective for those who benefited, but there remain serious questions about the more general impact of vouchers.

Ultimately, what we need to advance educational development is greater knowledge about educational systems and the impact of specific interventions. Randomized evaluations are valuable because they can create greater certainty about how we should proceed, and the UBASE project is helping to develop a strong evidence base for action.