

Achieving Global Education

In April, the Academy released four new publications in its *Occasional Paper* series. These papers, which consider various aspects of the costs, means, and consequences of providing education to all children ages 6 through 16, present findings of the Academy's project on Universal Basic and Secondary Education (UBASE).

In 2001, Fellows Joel E. Cohen (Rockefeller and Columbia Universities) and David E. Bloom (Harvard University) formally proposed an Academy project that would consider the role that primary and secondary education might play in creating positive global change. With generous funding from the William and Flora Hewlett Foundation, the Academy, and a number of individual donors, they gathered scholars from many institutions and fields to tackle a key set of questions: What do we know about global education and how do we know it? What are the consequences of providing every child with primary and secondary schooling? What is the history of efforts to expand education? What obstacles stand in the way of achieving universal education? What are the best educational practices and innovations for overcoming those obstacles? What will it cost to provide primary and secondary schooling for all children?

The project has produced a number of publications, including articles in *Dædalus* and the IMF's *Finance and Development*, several Academy *Occasional Papers*, and two forthcoming books. Some publications have been translated and distributed in multiple languages.

Many of the publications of the project are available on the Academy's web site, along with more information about the UBASE project (www.amacad.org/projects/ubase.aspx).

Measuring Global Educational Progress

Knowledge of the basic facts about global education is at the heart of the UBASE inquiry, as is knowledge of how these facts are produced and whether they are reliable. Education is, after all, one of the largest and most important investments made by governments and people. Understanding whether this investment leads to the desired ends is crucial to effective government policy and private decision-making.

David Bloom advances this understanding in the UBASE study *Measuring Global Educational Progress*. According to Bloom's calculations, approximately 97 million children of primary school age and 226 million of secondary school age worldwide are not enrolled in school. At current rates of educational progress and demographic change, the corresponding figures in 2015 are projected to be similar (with an increase in the number of primary-aged children not enrolled and a decrease for secondary-aged children).

Developed countries have achieved very high levels of access to primary and secondary education, and educational attainment and completion rates in these countries are also high. Some developing regions, in particular East Asia and Latin America and the Caribbean, likewise have very high enroll-



Joel E. Cohen



David E. Bloom

ment ratios, but only in terms of primary education. In these regions, attainment and completion rates still demand improvement. The data also indicate that on nearly all measures, South Asia and Sub-Saharan Africa lag far behind. Gender differences in favor of boys are common in most developing regions, though not in Latin America and the Caribbean or in Eastern Europe and Central Asia. Gender differences are particularly pronounced in some Sub-Saharan African countries.

Although measures of the quality of education are inadequate, the data indicate that the gap between rich and poor countries is large and shows no signs of narrowing. Bloom extrapolates from the small body of country test-score data, calculating that an estimated 75 – 95 percent of the world's children live in countries where education quality falls short of the average among OECD countries.

Bloom highlights the fact that existing data systems are inadequate, and that the shortcomings may have important consequences. We know the most about the inputs into education, the investments of money and time in the education system. These data shed light on differences between countries and regions, but are incomplete. Infor-

mation on other aspects of education – e.g., on what is taught and how, on what is learned, and on the long-term consequences of investments in education – is even scarcer.

The dearth of data on education quality, in conjunction with limited data on education outputs, makes it difficult to reach definitive conclusions about the effectiveness of educational practices. Worse still, as Bloom's investigation shows, the validity of some of the most prominent schooling attainment data must be questioned, in light of serious internal inconsistencies. Available cross-national data are not always consistent with the leading country-level data sets or with country-specific population data.

Evidence-based policymaking holds great promise, but that promise can only be realized when relevant and accurate data are available. As Bloom argues in *Measuring Global Educational Progress*, greater and better-coordinated efforts by international organizations could overcome years of insufficient funding and conflicting priorities for data collection, thus improving the quantity and quality of education data.

The Consequences of Global Educational Expansion

If every child in the world received a primary and secondary education of high quality, what would the consequences be? The UBASE project commissioned sociologists Emily Hannum (University of Pennsylvania) and Claudia Buchmann (Duke University) to review the research on the presumed consequences of expanding primary and secondary education.

They find substantial evidence that increased primary and secondary education is associated with improved health and lower population growth. Evidence to support the proposition that investment in education results in growth in gross domestic product is less clear. Although increased individual income is clearly correlated with higher educational attainment, the growth effects of national investments in education are difficult to establish. Evidence is also ambiguous on whether education reduces social inequality and promotes democratization. The summary by Hannum and Buchmann of what is known and what remains uncertain is critical for guiding future policy and research in this area because the rationale for pursuing universal basic and secondary education must be clear if initiatives are to attract political support.

In a forthcoming UBASE paper on the relationship between education and health, Bloom finds that education reduces adult mortality and that the effect is larger than previously thought. In addition, increased schooling is associated with lower blood pressure and lower likelihood of reporting disabilities or functional impairments,



even after accounting for background variables such as age, initial health, and ability. Maternal education has been found to be strongly associated with reduced fertility and improved health outcomes for children. But, as Bloom indicates, much remains unclear about the role of factors that are interposed between education and health.

Historical Legacies, Political Obstacles

As Hannum, Buchmann, and Bloom suggest, the reasons for providing all the world's children with high-quality primary and secondary education are numerous and compelling. In 1990, the international community resoundingly pledged to achieve universal basic education by 2000, and later extended its deadline to 2015. At current rates of progress, this goal will not be met. The unanimity of commitment and shortfall in achievement raise a fundamental question: If universal education is such a good idea, why don't we have it already?

The UBASE project asked this question of Aaron Benavot and

Julia Resnik (Hebrew University, Jerusalem) and Javier Corrales (Amherst College). Their findings, published in *Global Educational Expansion: Historical Legacies and Political Obstacles*, bring a healthy dose of realism to estimates of the scale of the UBASE challenge. But by illuminating the challenges, the authors also render them finite.

Benavot and Resnik consider the history and legacy of efforts to achieve universal basic and secondary education. The authors call attention to the complexity of the work remaining. They examine the emergence of compulsory education laws, the transformation of diverse educational frameworks into formal school systems, the problems of inequality and equity that have arisen, and the role played by international organizations in creating an increasingly interconnected global education system.

On the basis of this geographically broad comparative history, the authors offer an essential observation and an important suggestion. The observation is that despite the apparent uniformity in contemporary schooling, past educational models

have taken many forms, and motivations for educational expansion have varied widely. The suggestion is that international organizations seeking to facilitate educational expansion need to be attuned to this varied history if their interventions are to succeed. For example, when leaders advocated the decentralization of education in Latin American countries in the 1980s, they ignored the specific social and political purposes for which those schools had been founded, which included ending severe socioeconomic segregation. Decentralization led to a growth of private schools and renewed fragmentation along class lines, which exacerbated the social divide that school centralization was intended to correct. The implication is clear: education advocates, donors, and policy makers who ignore history do so at considerable peril.

Where Benavot and Resnik emphasize the historical legacies with which policy makers must contend, Corrales examines the present political obstacles to and incentives for universal education. His paper highlights the weak, conflicting, and at times perverse political incentives facing those interested in expanding and improving education.

Overall, international sources of leverage are weak. For example, as globalization proceeds, the demand for highly skilled labor is mixed – some industries require an educated labor pool while others seek labor that is cheap and relatively unskilled. Within countries, state authorities rarely face strong political pressures to expand or improve their educational systems. Societal demand for education is frequently weakest in poor regions or countries where it is most needed. From this analysis, it appears that past state mo-

tivations to provide education – to consolidate national identity, win citizen loyalty, or neutralize rival political groups – were most prominent when nationalist, revolutionary, and totalitarian ideologies drove political development. Today, these rationales are less relevant.

Lest education reformers lose hope, Corrales discusses policies that might reinforce the positive incentives for expanding education. He suggests approaches that are aimed at boosting the demand for education by reducing the cost of schooling to individual families; building up the capacity of state agencies to deliver education of high quality; generating additional performance indicators to improve efficiency; containing opposition to educational expansion by compensating those most directly threatened; and strengthening mechanisms for ensuring accountability at all levels of the education system. These informed and ambitious proposals should stimulate necessary discussion.

Assessment, Innovation, Evaluation

The research of Bloom, Benavot, Resnik, and Corrales provides the groundwork from which informed efforts to change education on the ground can be developed. But what of the specific mechanisms for getting students into school, for improving the quality of education, and for ensuring that education is producing the desired outcomes? Henry Braun (Educational Testing Service), Anil Kanjee (Human Sciences Research Council), Eric Bettinger (Case Western Reserve University), and Michael Kremer (Harvard University)

take up these questions in their contributions to *Improving Education Through Assessment, Innovation, and Evaluation*.

Although assessment is often seen as a tool to measure student progress, it also allows individuals, communities, and countries to track the quality of schools and educational systems. In theory, if policy makers have access to reliable information on educational quality in specific schools, they can monitor outcomes and tailor policies to local and national needs. If this information is made available to the public, then students and parents may be better able to choose among educational options and demand education of higher quality.

The potential benefits of assessment are not easy to capture, however. Braun and Kanjee observe that educational assessment must overcome a number of implementation challenges. If there are no consequences attached to a test, then it will do little to motivate healthy change; however, if the result of an assessment is highly consequential, then it may engender unproductive or undesirable outcomes such as narrowing the curriculum or “teaching to the test.” When assessments are tied to funding decisions, those responsible for the quality of education – teachers, administrators, and state officials – may oppose the release or even the creation of such data.

Braun and Kanjee describe the factors preventing better assessment and review promising national, regional, and international initiatives for improving current practices and resolving this dilemma. They propose that developing countries should participate in international assessments as “associates,” without

requiring that the results be released internationally. This interim arrangement would generate much-needed data, give developing countries access to expertise, and build local capacity to develop, administer, and analyze tests, while avoiding the political consequences of possible poor performance.

Testing offers a means to track the outcomes of schools and educational systems. But how can education reformers identify the practices that led to improved or worsened outcomes? Deciding whether an educational innovation is responsible for a change in student outcomes is essential for implementing the most effective educational programs.

As Bettinger and Kremer each discuss, one reliable means of evaluating the effects of a program or intervention – namely, randomized controlled experimentation – is now finding use in education. These experiments make it possible to compare pedagogical techniques and systems of management because randomization establishes equivalent participant and nonparticipant groups for comparison. Randomized controlled experiments can, therefore, produce the most credible evaluation of programs.

Kremer reviews the findings from randomized evaluations to determine low-cost means of increasing enrollment. He reports, for example, on a study of a school-based health program that proves to be an extremely cost-effective method of increasing students’ participation in school. In the program, deworming medication and iron and vitamin A supplements were provided to pre-school children in Delhi (at a cost of \$1.70 per student per year). The treatments were phased in at random to two

hundred schools over a two-year period, enabling a comparison of treatment and nontreatment groups. Researchers found that the treatment had the effect of reducing absenteeism by 20 percent, making it an extremely low-cost means of increasing the number of days students are in school. Similar results were found in a randomized, controlled, school-based deworming program in Kenya, which offers hope that the program may be as effective in other regions.

Bettinger explains why randomized evaluations, though they provide highly credible results, remain underutilized guides for policy. Randomized experiments can be expensive and time-consuming. They require technical sophistication to plan, implement, and analyze properly. He notes, however, that certain types of experiments are no more expensive or time-consuming than other rigorous data-collection activities. A more formidable problem is the political justification of delivering a program to only a small set of students or schools while withholding it from a comparison group of students or schools. However, when budgetary constraints make it difficult or impossible to reach all members of a population in a given year, randomly selecting which groups receive the program when may be the fairest way to implement the program and simultaneously permit measurements of its impact.

Costs of Primary and Secondary Education

Of the many unknowns associated with universal education, the price tag – for books, buildings,

teachers – is one of the most pressing areas of uncertainty. What would it cost to provide every child in the world with a high-quality primary and secondary education? Economists Melissa Binder (University of New Mexico) and Paul Glewwe and Meng Zhao (University of Minnesota) address this question in *Achieving Universal Basic and Secondary Education: How Much Will It Cost?*

Glewwe and Zhao review World Bank, UNICEF, and UNESCO estimates of the annual costs of achieving universal primary school enrollment by 2015. These range from an additional \$6.5 billion to \$35 billion per year, over and above the approximately \$82 billion dollars that developing countries currently spend each year on primary education. The estimates focus on the cost of increasing the number of places for students in schools and the number of teachers to teach them.

However, as Glewwe and Zhao observe, the number of places available is not always the limiting factor in school attendance rates. Parents choose not to send their children to school for various reasons, such as the cost of schooling or a need for labor at home. The true cost of enrolling all primary school-aged children will include the cost of implementing policies that influence those decisions and boost the demand for primary education. Future estimates should account for the cost of these policies – possibly including the provision of school meals, tuition subsidies to families, higher-quality and more reliable teaching, and reductions in rates of repetition and noncompletion. These costs are far more difficult to calculate. Glewwe and Zhao demonstrate that including some of them boosts the total costs substantially.

The cost of achieving universal secondary education will be greater than that for primary education because more children in this age bracket are not now in school and because secondary education is more expensive per pupil. Binder offers a pioneering estimate of the cost of providing spaces to accommodate all children of secondary school age. According to her analysis, if a gradual approach is taken between now and 2015, the annual additional cost would be approximately \$34 billion. This cost could fall to \$32 billion per year if countries were able to reduce repetition rates significantly. The best (albeit unlikely) scenario, in which policy makers adopt the practices of countries most successful in getting students to attend school, and helping them learn while they are in school, would reduce the additional annual cost to \$27 billion. These estimates establish an important foundation upon which future efforts to estimate the costs of universal education can draw.

The UBASE project findings suggest that high-quality primary and secondary education is achievable in the first half of the twenty-first century. In its next phase, the project will focus on identifying and evaluating strategies for expanding access to primary and secondary schooling where it is most needed, and for improving the quality of education for all children. ■

Occasional Papers of the Universal Basic and Secondary Education Project

Benavot, Aaron, Julia Resnik, and Javier Corrales. 2006. *Global Educational Expansion: Historical Legacies and Political Obstacles*.

Bloom, David E. 2006. *Measuring Global Educational Progress*.

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Braun, Henry, Anil Kanjee, Eric Bettinger, and Michael Kremer. 2006. *Improving Education Through Assessment, Innovation, and Evaluation*.

Glewwe, Paul, Meng Zhao, and Melissa Binder. 2006. *Achieving Universal Basic and Secondary Education: How Much Will It Cost?*

Hannum, Emily and Claudia Buchmann. 2003. *The Consequences of Global Educational Expansion: Social Science Perspectives*.

UBASE Edited Collections

Cohen, Joel E., David E. Bloom, and Martin Malin (eds.). Forthcoming, 2007. *Universal Basic and Secondary Education*. Cambridge, MA: The MIT Press.

Cohen, Joel E. (ed.). Forthcoming. *Education for All, But for What? International Perspectives on the Goals of Primary and Secondary Education*.

Other Publications of the UBASE Project

Bloom, David E. and Joel E. Cohen. 2002. "Education for All: An Unfinished Revolution." *Dædalus* 131 (3) (Summer): 84 – 86.

Cohen, Joel E. and David E. Bloom. 2005. "Cultivating Minds." *Finance and Development* 42 (2) (June): 9 – 14.

Cohen, Joel E. and David E. Bloom. 2005. "Bombs, Books, and Bucks." Distributed worldwide via *Project Syndicate*. Available at: <<http://www.project-syndicate.org/commentary/cohenbloom1>>.