David E. Bloom & Joel E. Cohen

Education for all: an unfinished revolution

We cannot always build the future for our youth, but we can build the youth for our future.

– Franklin D. Roosevelt

Societies throughout history have acknowledged the importance of education to human progress. From ancient Egypt's Books of Instruction to ancient Greece's Academy, from early Quranic schools to the modern Western world, civilizations have attempted to ensure their prosperity by educating their youth. Smaller societies, too, from villages in Yemen to dwellers in the African bush, have invested time and resources in education for similar reasons.

Universal education has been on the global agenda since the 1948 Declaration of Human Rights proclaimed free and compulsory education to be a basic human right. The 1990 Convention on the Rights of the Child, signed by all but two of the world's governments, reaffirmed this right as a legally binding obligation. Since then, there have been many high-level international commitments to education for all.[1] Several scholars have also envisioned broadening its reach. But none of these international declarations has sufficed to translate right into reality. None of these scholarly reports takes on the linkage of basic and secondary education with other parts of the education system and with other sectors. None gives a balanced consideration of all

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1 Just this year, the World Bank announced a new effort to ensure that all children would receive an elementary education. At the same time, officials acknowledged that they would probably not reach this goal by the target date of 2015.

modalities of education (in addition to the classical schoolroom). None identifies workable solutions to the economic, political, and cultural obstacles to achieving universal basic and secondary education. Finally, none of these international declarations endeavors to document in detail the globally transformative effects that would follow from educating well all the world's children with the equivalent of today's primary and secondary education.

There is ample room, then, for further inquiry and discussion oriented toward action at the global, national, and community levels. It cannot be taken for granted that the educational models and methods of today's industrial countries will be appropriate and feasible to bring education of high quality to all children in the rest of the world.

In recent decades, progress toward universal education has been unprecedented. Illiteracy in the developing world has fallen from 75 percent of people a century ago to less than 25 percent today. The average number of years spent in school in developing countries more than doubled between 1965 and 1990, from 2.1 to 4.4, among those age twenty-five and over.[2]

However, while the number of people with access to some schooling has increased, improvements at the secondary level have been patchy. Whether the lack of progress is due to a lack of political will, a lack of resources, bad implementation of good ideas, or other factors, separately or in combination, is unclear. Acknowledging past failures and finding out what went wrong, as well as finding the reasons for progress where progress occurred, are crucial to future success.

At the same time, improvements in the quality of primary education have also been less than impressive. In many areas, official statistics disguise fundamental flaws and exaggerate the progress made. Largely focused on enrollment and literacy, the data reveal little about the quality of education. (Even the concept of the "quality of education" is problematic, likely to be culturally dependent, and in need of further analysis and operational definition.)

Rote learning is the norm in many developing-country schools, and a lack of well-qualified teachers means that many children receive only the rudiments of an education. Many others whose attendance at school does not endure much beyond registration day miss even that. Of the 1993 cohort that entered primary school in developing countries, nearly one-fourth failed to reach the fifth grade.

Enrollment data also camouflage absenteeism and grade repetition. In inefficient educational systems, many students repeat years of schooling. In Brazil, for example, 26 percent of primary and 20 percent of lower secondary school students repeated their grades in 1997. On average, Brazilian students repeat over two years of classes, which accounts for a significant amount of the total years spent in school.[3]

Even with 4.4 years of education, the developing world lags far behind the industrialized countries, where the corresponding figure is 9.4 years. Over 45 per-

2 UNESCO, *Compendium of Statistics on Illiteracy,* 1990 ed. (Paris: UNESCO Office of Statistics, 1990); Robert J. Barro and Jong-Wha Lee, "International measures of schooling years and schooling quality," *American Economic Review, Papers and Proceedings* 86 (2) (1996): 218–223; Task Force on Higher Education and Society, *Higher Education in Developing Countries: Peril and Promise* (Washington, D.C.: World Bank, 2000).

3 UNESCO/OECD World Indicators Programme, *Investing in Education: Analysis of the 1999 World Education Indicators* (Paris: OECD, 2000).

cent of adults in the world's least developed countries, moreover, are illiterate, and gender differences are wide.[4] In low-income developing countries, according to World Bank figures for 1999, 19 percent of males and 31 percent of females aged fifteen to twenty-four years were illiterate.[5]

The authors of this essay are part of a collective effort to develop and implement a detailed program to make more progress in educating *all* of the world's children. We believe it is possible and desirable for all children to receive high-quality primary and secondary schooling, through ten or a dozen years of education, whether in traditional or nontraditional settings. In what follows, we will describe the background of our effort, and the steps underway to convert our vision into a workable plan – and a working reality.

In 1990, a World Conference on 'Education for All' was held at Jomtien, Thailand. The 155 countries represented at this conference jointly pledged to provide primary education for all by the year 2000, and to ensure that children and adults would "benefit from educational opportunities designed to meet their basic learning needs."

Progress toward meeting these goals was reviewed ten years later at the World Education Forum in Dakar, Senegal. Much had been achieved: for example, some countries have come close to achieving universal primary education since Jomtien. Much more remains to be done, however. The net enrollment ratio for primary education (that is, the number of pupils in the official school-age group as a percentage of the total population in that age group) in sub-Saharan Africa rose from 54 percent in 1990 to 60 percent in 1998, and in southern and western Asia it rose from 67 percent to 74 percent over the same period.[6] At this slow rate of progress, sub-Saharan Africa would require another half century, and southern and western Asia another quarter century, to obtain 97.5 percent net primary enrollment. Such progress is simply too slow. Parts of South Asia and sub-Saharan Africa continue to lag behind. One hundred and thirteen million primary school-age children remained out of school as of early 2000, and the quality of educational delivery and responsiveness to student need remained patchy.

Enrollment ratios still vary widely by gender. For example, in 1998 the net enrollment ratio for primary education in sub-Saharan Africa was 66 percent for males, but only 54 percent for females; in the Middle East and North Africa, it was 80 percent for males and 71 percent for females; and in southern and western Asia, 79 percent for males and 67 percent for females. For the world as a whole, including developed countries, the primary net enrollment ratio was 87 percent for boys and 80 percent for girls.[7]

Demographic trends mean that developing world educational systems are likely to come under increasing pressure. While 1998 UN Population Division projections foresee few dramatic changes to the global school-age population over the next half-century as a whole, they project large increases in the countries that can least afford it.

The growing population of primary school-age children, in conjunction with raising primary school enrollment rates

4 UNESCO, *World Education Report* (Paris: UNESCO, 2000).

5 World Bank, *World Development Indicators 2001* (Washington, D.C.: World Bank, 2001).

6 UNESCO, *Education for All 2000 Assessment Statistical Document*, 29, 33

7 Ibid.

to 100 percent throughout the developing world, would result in approximately 15 percent more primary students by 2015 than in 1995. However, a much larger problem in achieving universal education will be in secondary schools. In 1997, secondary school enrollment in developing countries stood at 281 million, with another 264 million not enrolled.[8] The population of ten- to fourteen-year-olds – the age range for which data are easily available, and which approximates the secondary school years – will grow by 65 million from 1995 to 2015.[9] Thus, full secondary school enrollment will require the enrollment of over 300 million more students in 2015 than in 1995.

By far the greatest increases will be needed in sub-Saharan Africa and South Asia, the two regions with the lowest current enrollment rates. In sub-Saharan Africa, for example, only 26 percent of children are enrolled at the secondary level – an increase of just 4 percentage points since Jomtien in 1990. In South Asia, although secondary gross enrollment rates have risen sharply since 1970, at 45 percent they remain well behind the global average. In the least developed countries overall, at most 19 percent of children attend secondary school.[10]

The Dakar Framework for Action that emerged from the World Education Forum simultaneously renewed the international community's commitments and implicitly acknowledged its inability to achieve its stated goals, extending the deadline to 2015.[11]

New thinking on designing and implementing a high quality education for all the world's children is clearly needed. In today's knowledge economy, primary education, while essential, is not enough. In the developing world, secondary schools, colleges, and universities have yet to reach large numbers of potential students. Low standards are a persistent problem in many areas where poverty is endemic.

Policymakers are now coming to acknowledge these failings more fully. 'Education for All' has not been achieved. We need new ideas, new strategies, and new efforts if the goals laid out at Jomtien, and our more ambitious goals, are to be realized.

The case for providing an 'Education for All' can be made on four different grounds: humanitarian, sociological, political, and economic.

The humanitarian case is straightforward: Education enables human beings to develop their capacities so that they can lead fulfilling and dignified lives. Promoting equality of opportunity through education can be a powerful response to those who believe that the recent process of globalization has increased inequality and further marginal-

8 UNESCO online database.

9 United Nations, *World Population Prospects*, 2000 rev.

10 Each of these figures is a gross enrollment rate – that is, the ratio of the number of students enrolled in secondary school to the number of children in the population who are in the age group normally expected to be enrolled in secondary school. Children counted in the numerator may be older than the normal ages for secondary school because they started school late or because they had to repeat one or more years of schooling. A gross enrollment rate, therefore, may exaggerate or overstate the fraction of children of secondary school age who are enrolled in secondary school. UNESCO Institute for Statistics, "Gross enrollment ratios by level of education," 2001; available at <http://www.uis.unesco.org/en/stats/stats0.htm>.

11 UNESCO, "Education for All," 2001; available at <http://www.unesco.org/education/efa/ed_for_all/index.shtml>.

ized the poor. Education of high quality helps people give meaning to their lives by placing them in the context of human and natural history and by creating awareness of other cultures. (We address below the formidable task of specifying what we mean by "education of high quality" when we sketch some preliminary thoughts about the goals of education.)

A second justification for basic and secondary education is sociological. Social and cultural capital, which are crucial ingredients in the development process and ones that enhance the operation of other development channels, can be greatly strengthened by education. Schools can help foster a sense of community. A good education empowers people to take responsibility for their own lives and for improving the lives of those around them. The Jomtien Declaration highlights the importance of education to furthering the cause of social justice, human rights, and social and religious tolerance – all vital to ensuring international peace and promoting sustainable human development.

A third justification for universal education is political. Education is popular among voters. It can also, as Francis Fukuyama has argued, "create the conditions necessary for democratic society."[12] "It is hard to imagine," he continues, "democracy working properly in a largely illiterate society where the people cannot take advantage of information about the choices open to them." Both domestic and international political stability, too, are affected by education or its absence. Dictators, for example, who can have serious destabilizing impacts on their regions, often endure because the limited educational level of their subjects makes it more difficult for a populace to mobilize against them.[13] At the level of international politics, education has an important contribution to make to global peace and stability, as modern technology makes it possible for the problems caused by poor education anywhere to affect other countries everywhere.

A fourth and perhaps most persuasive argument for universal education is economic. For over two hundred years economists have been struggling to answer one simple but fundamental question: Why are the people of some countries richer than others? Why did Australia surge ahead of Argentina? Why are the Asian Tigers so far ahead of South Asia? A classic answer has been that some countries have more natural resources and physical capital and better technology than others, and that these advantages allow them to create greater income and wealth. But the truth seems to be more complex. Beginning in the late 1950s, economists expanded the notion of capital to include human capital as well. Education, or investment in people's capacities, raises people's productivity and provides a foundation for rapid technological change. Each year of schooling in developing countries is thought to raise people's earning power by over 10 percent.[14]

Education can also operate indirectly by promoting good health and a demographic transition from high fertility and high mortality to low fertility and low

12 Francis Fukuyama, *The End of History and the Last Man* (London: Penguin Books, 1992), 116.

13 We recognize, of course, that a well-educated population is not a guaranteed barrier to the power of dictators. The most notable exception is that of Nazi Germany.

14 Gene Sperling, "Educating the World," *New York Times*, 22 November 2001; George Psacharopoulos, "A reply to Bennell," *World Development* 24 (1996): 201.

mortality. The spread of schooling increases possibilities for the growth of national income, and that additional income helps to finance additional education, which leads to more income, in a virtuous spiral.[15]

Amartya Sen has shown how the economic success of Japan in the last 150 years was driven by its focus on expanding education before economic development was underway. The contrasting fortunes of China and India in moving toward an open, market-oriented economy further support the importance of education. India's "massive negligence of school education," Sen argues, meant that the country was ill-prepared for economic expansion. The spectacular success of China's economy, on the other hand, since it began to open markets in 1979 was built on a highly literate population produced by a strong basic education system, which attempted to include all girls as well as all boys.[16]

The economic argument, however, is not, by itself, sufficient. Well-educated populations in the Soviet Union, Cuba, and the Indian state of Kerala, for example, have failed to build strong economies. There are limits to what education can achieve when its effects are neutralized by other obstacles to development. Some of the Gulf states, whose growth has been founded on oil rather than education, show that universal education is not even necessary for economic growth.

15 David Bloom and David Canning, "Cumulative Causality, Economic Growth, and the Demographic Transition," in Nancy Birdsall, Allen C. Kelley, and Steven W. Sinding, eds., *Population Matters: Demographic Change, Economic Growth, and Poverty in the Developing World* (New York: Oxford, 2001), 165–197.

16 Amartya Sen, *Development as Freedom* (Oxford: Oxford University Press, 1999), 42–43.

Indeed, the case for universal education must rest finally on the best available empirical evidence for *all* of its possible benefits – humanitarian, sociological, political, *and* economic.

Those who promote the benefits of education must demonstrate that education is an essential component on the path to greater quality of life in the future if they wish to convince political leaders and their constituencies to take meaningful action. The arguments for education as an essential complement to other factors of development and to other factors of national interest must be analyzed, the likely cost of progress measured, and the practical actions agreed on, while taking into account the lessons learned from previous successes and failures.

The field of international development is littered with apparently good ideas that failed to deliver their promised benefits. The failures to achieve universal basic and secondary education have many causes.

Economists have long argued that education should be a policy priority for developing countries, but many governments have so far done little to raise educational attainment beyond increasing primary enrollment rates. Some of the obstacles are material: a lack of funds and inadequate infrastructure. Some obstacles derive from limited local capacity to change. But among the greatest problems is lack of political will for an initiative whose benefits will accrue substantially to nonelites and remain invisible until far into the future.

Developing countries spend around $240 billion a year of public money on primary and secondary education.[17] As

17 Authors' calculations based on data from Task Force on Higher Education, *Higher Education in Developing Countries.*

there are approximately one billion children aged six to sixteen in developing countries, the average expenditure is about $240 per child per year – less than 10 percent of the comparable figure for high-income countries.

How much additional funding is really required is not obvious from these figures because some countries are apparently able to educate children very well at relatively low cost. For example, Cuba spends below $1,000 of public money per primary school student per year, less than most other nations of the Western Hemisphere. Yet Cuba's primary school students rank far higher in terms of standardized test scores than those of any other country in the Latin American region.[18] More generally, there is much to learn from studying success stories of both countries and regions within countries.

Another view of the financial obstacles to the spread of education is given by estimates of what it would cost to put every child in quality primary education by 2015. Gene Sperling quotes recent UNICEF estimates of $7 billion and $9.1 billion per year and an Oxfam estimate of $8 billion additionally annually.[19] On their face these cost estimates seem implausibly low, especially in comparison with amounts that are currently being spent.[20] A recent World Bank Working Paper has given a higher estimate of $10 – 15 billion per year.[21] This is not a trivial magnitude, but even it surely pales in comparison to the full costs of not educating these children. In any case, more data and analysis are sorely needed here.

Rising enrollment figures are likely to magnify the strain on government budgets. The strain may be moderated insofar as there are some natural economies of scale in the provision of education (development of educational materials and tools for educational management, for example). On the other hand, it may be magnified as a result of the need to recruit larger numbers of qualified teachers.

While a lack of funding has undoubtedly been a problem in some countries, the fact remains that even where good schools are available, many children do not attend them. The opportunity cost of attending school is particularly significant in poor areas, because sending a child to school prevents him or her from making an economic contribution to the family. Out-of-pocket costs such as for school fees, uniforms, or textbooks may also be beyond the reach of many poor families. Even if the labor market offers reasonable rates of return on investments in schooling, families may decline to undertake the investments insofar as education promotes migration (urban and international), the benefits of which do not necessarily accrue to the family left behind.

18 Christopher Marquis, "Cuba Leads Latin America in Primary Education, Study Finds," *New York Times*, 14 December 2001, A22; Task Force on Education, Equity, and Economic Competitiveness in Latin America & the Caribbean, *Lagging Behind: A Report Card on Education in Latin America* (Washington, D.C.: Partnership for Educational Revitalization in the Americas, Inter-American Dialogue, November 2001).

19 Gene Sperling, "Toward Universal Education: Making a Promise and Keeping It," *Foreign Affairs* 80 (5) (September/October 2001): 7 – 13.

20 If we divide these estimates by the estimated number of children of primary school age who were not in primary school in 1998, namely, 113 million (UNESCO, *Education for All 2000 Assessment Statistical Document*, 9), we get a cost of $62 to $81 per child per year.

21 Shantayanan Devarajan, Margaret J. Miller, and Eric V. Swanson, "Goals for Development: History, Prospects, and Costs," *World Bank Working Paper* 2819 (April 2002): 16, 22 – 26.

Gender inequality can also depress enrollment rates. In many of the poorest areas of the world, girls do not receive the same education as boys. Parental concerns about the personal and sexual security of their daughters may make them reluctant to send daughters to schools away from home, to classrooms without female teachers, or to schools without latrines separated by sex. In sub-Saharan Africa, for example, only 69 percent of girls enroll in primary school, compared to 84 percent of boys.[22]

Promotion of female education has strong potential to trigger virtuous development spirals. Educated girls generally have fewer children, so that educating one generation of girls makes it easier to educate the next. The children of educated mothers generally enjoy healthier lives than those of less educated mothers, and hence are better able to learn. They also have lower mortality, so they are better investments for the educational system.

In addition, education directly improves the quality of life and the economic potential of the educated girl herself. Increasing the number of female teachers, expanding schools so that sexes may be separated where that is deemed culturally desirable, and working to eliminate gender discrimination in the labor market can all help to cut gender bias and increase enrollment rates further.

The poor quality of education is another major factor behind low enrollment statistics. Obsolete curricula, a lack of educational materials, inadequate classrooms, and poor teacher quality all reduce the incentive for children to attend school.

In many areas, moreover, the drive to increase enrollment rates has had a detrimental effect on educational quality. In such areas, the number of teachers has not kept pace with the number of students, and student-teacher ratios have risen as a result. A study in Tamil Nadu, India, for example, found that while the number of children enrolled in primary and lower secondary school increased by 35 percent from 1977 to 1992, the number of teachers rose by only 4 percent.[23] A falling ratio of students to teachers is no guarantee of rising educational quality, as Argentina appears to have discovered, but the trend in Tamil Nadu goes in the wrong direction. Improved access to education may therefore become a threat to quality.

Higher enrollment rates do not lead to greater knowledge or skills if teaching quality is low. Low salaries and poor teacher training mean that highly skilled, motivated people are unlikely to be attracted to a teaching career. Large class sizes also tend to be a further deterrent to potential educators. Moreover, those who are attracted, if they are not judged and rewarded on the basis of their results, often have little incentive beyond normal worker's pride to improve their methods.

Effective reform requires more than articulating a sensible new vision for basic and secondary education. It requires appreciating the different goals of education in different cultures, and it requires developing the human and technological means necessary to achieve those goals. It requires a thorough quantitative assessment of present educational performance and a rigorous

22 UNESCO/OECD, *Investing in Education.*

23 P. Duraisamy, Estelle James, Julia Lane, and Jee-Peng Tan, "Is there a Quantity-Quality Tradeoff as Enrollments Increase? Evidence from Tamil Nadu, India," *Policy Research Working Paper* (Washington, D.C.: The World Bank, 1997).

projection of the expected consequences of future improvements. It also requires the mobilization of political will, building a broad-based consensus in favor of key reforms.

Governments, ministries of education, teachers, and parents all need to be enlisted in a renewed drive for universal education. These traditional agents of education will benefit from nontraditional partnerships with other government ministries, such as ministries of labor and of commerce, along with local, national, and multinational businesses – in short, with all parties that have a stake in a capable populace. An effective strategy requires an appreciation of national needs and concerns outside of basic and secondary education. It requires an objective account of each country's financial, human, and political resources. It requires sensitivity to each country's history and cultures to ensure the workability and legitimacy of the institutions that have to be built as part of the reform.

If governments and teachers are to be brought on board, the beneficial consequences of achieving universal primary and secondary education will have to be spelled out and, ideally, supported by credible data. An evidence-based strategy needs to identify the mechanisms through which education enhances the quality of life by promoting health, human dignity, and economic growth.

For example, education may affect a population in a variety of ways: by cultivating skills and disseminating knowledge; by raising social status; by increasing earnings in the labor market; by lowering fertility rates; by enhancing the sense of personal autonomy; by broadening cultural horizons.[24]

24 National Research Council, *Critical Perspectives on Schooling and Fertility in the Developing World* (Washington, D.C.: National Academy Press, 1999).

If knowledge and skills acquired in schools are the main avenue of influence on demography, then curricular content is crucial. If, on the other hand, contact with a culture outside the home, or potential earnings and the opportunity costs of high fertility are the main avenues of influence, then the content of the curriculum may not be so crucial. This is one reason why careful research is critical to the formulation of policy.

Cross-national comparisons and research into the effect of education on foreign direct investment, international competitiveness, inequality, and poverty will be instructive for policymakers and educators alike. Because considerable research on these topics has already been carried out, new efforts should build on what is already known and clarify areas of uncertainty.

Of course, not every regime will welcome every likely consequence of providing an 'Education for All.' Marshalling the evidence that education changes the aspirations of women, brings down fertility rates, and promotes a demographic transition (by, for example, increasing age at first marriage, age at first birth, use of family-planning services, and encouraging parents to invest more time and money in fewer children) will act as a spur to some governments – and perhaps as a deterrent to others.

In addition, governments may react in varied ways if there is reason to think that money spent on universal education detracts from the achievement of potentially competing social goals, such as improved health.

Still, if it can be demonstrated empirically that universal education is finally in the interest of every society, then most governments are eventually liable to join in the effort. And if businesses, too, can be persuaded that universal education is a public good, then they too may be will-

ing to bring their innovation and creativity to the table, and perhaps even some money.

One of the most sensitive issues in any effort to promote universal basic and secondary education is the definition of goals. Goals must be clearly laid out so that the success of programs can be continuously monitored. At the local level, those who will be most affected by locally adopted goals should not be excluded from the tasks of adapting educational goals to local knowledge and aspirations. To stimulate thinking and provoke discussion about possible shared goals, we offer the following suggestions:

- The skills taught should include reading with understanding, writing with clarity, and speaking with confidence. (The choice of language or languages in which these skills are practiced is likely to be a national or local issue.) The skills taught should also include numeracy, that is, the ability to read and understand the kinds of quantitative information encountered in daily life, plus the ability to compute as required in the contexts of daily life. (These fundamental skills with words and numbers are to be distinguished from the specialized disciplinary skills of literary and mathematical analysis.) Additional skills worthy of attention include peaceful ways to manage and resolve, where possible, conflicts and differences within and between a variety of cultural units. The conflicts and the means of resolving them will differ culturally (e.g. compromise vs. consensual discussion vs. majority vote vs. appeal to tradition) but the skills of dealing peacefully with conflict may have widespread or universal value. Other important skills include the ability to analyze and make choices about personal life and work, and the ability to be productive and find satisfaction in personal life and work.
- The knowledge to be imparted must focus on both the self and others. In human terms, others might include the family, the local community, other communities and cities, the nation-state (if relevant), other countries and cultures, and humankind. In nonhuman terms, others might include other living species and the major nonliving components of the Earth. "Other" will also refer to other times, including the sources and limitations of our understanding of past and future. These domains of knowledge can be approached through the perspectives of the natural sciences, the social sciences, and the arts and humanities. For example, understanding the self in scientific perspective provides a vehicle for instruction in health and human biology and behavior.
- The attitudes to be instilled must also refer both to the self and to others – though here the goals of a universal education are liable to provoke controversy. How will schools balance the values of individuality and of collective concern, of innovation and conformity, of initiative and obedience, of competitiveness and cooperation, of skepticism and respect? The industrial model of classroom education, with students sitting silently and obediently at desks arranged on a grid and listening to an authoritative teacher, with classes starting promptly when the bell rings, conveys a different set of values and attitudes than many alternative modes of education.

The goals of education for children around the world will shape the kinds of people we and our children will live among. More is at stake in defining and assuring a quality education for every

child than defeating terrorism, or lowering population growth rates, or expanding world economic growth, or spreading democracy and the rule of law – though all of these in our view are worthwhile consequences. Also at stake are the inventiveness and civility of the people among whom we will live, and the richness of our own opportunities to learn from them.

The American Academy of Arts and Sciences is currently assembling a task force to examine the rationale, means, and consequences of providing a quality education to all the world's children at the primary and secondary levels. The project aims to synthesize what is known about many of the issues raised above, and also to identify what needs to be known, in order to formulate policy options for moving forward.

The Academy project has six features that, in combination, set it apart from previous efforts to promote universal education.

First, instead of taking the value of universal education as self-evident, the project will be analytical. It will attempt to document in detail who benefits and to what extent and how. Thus the value of education is taken as a hypothesis to be evaluated, not as an axiom.

Second, the project will be cross-sectoral in orientation, attempting to evaluate the interactions of education with competing and complementary contributors to human well-being, such as public health (including family planning and reproductive health), jobs, nutrition, and physical infrastructure.

Third, the project will be cross-sectoral in expertise. It will encourage fresh perspectives from economists, developmental psychologists, demographers, statisticians, historians, cultural anthropologists, medical and public-health workers, and others to complement the expertise of those who already work in education.

Fourth, the project will consider education by all means, including but not limited to enrollment in primary and secondary school.

Fifth, the project will explore the view that the goal of *primary* education for all is not ambitious enough. The project will extend this goal through *secondary* education.

Sixth, the project will take into account the interactions of universal and local criteria for what constitutes education of high quality.

Ideas for means of reaching children to educate them will benefit from drawing on successful efforts to change large, complex systems in other fields. Educational programs may benefit from experience with successful delivery methods in national and international efforts in, for example, agriculture and public health.

The project will examine whether and how new technologies can be harnessed to promote a more effective and equitable distribution of education. It will also evaluate teacher development efforts where education is to be delivered by teachers.

These large goals will eventually have to give way to specifics, such as 'Where will the implementation of the plans developed by the first phase of the project start?' 'Who should be involved?' 'Where will the money come from?' 'How can students study at night in villages with no electricity?' 'How are poor families going to be persuaded to let their children study instead of work?' Delivery methods will inevitably need to be judged on their economic viability as well as by their human and political advantages.

The research is not intended to compare formally universal basic and secondary education to other instruments

of development. It is not trying to model rigorously the whole development process. It *is* meant to take a critical look at previous thinking in the field and assess both the desirability and the feasibility of a global effort to involve governments, businesses, nongovernmental organizations, families, and individuals in the drive for primary and secondary education for all.

The Academy's scholarly analysis and dissemination of research results will complement other efforts under way to develop support for universal education at the level of grass-roots organizations and at the level of national and international political leadership (for example, the Global Alliance on Basic Education proposed by Gene Sperling[25]).

We hope that the Academy's research will support and improve the policies advocated by other groups, while receiving stimulation from the practical questions they raise. A coordinated approach to global educational development that combines analytical research with popular and political advocacy seems more likely to be effective than advocacy without research – or research conducted without effective advocacy.[26]

25 Sperling, "Toward Universal Education," 7 – 13.

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