Background Paper of the Task Force on Education and Gender Equality,

Achieving Universal Primary Education by 2015

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Note to the reader
The Background Paper provides a preliminary overview of existing knowledge and scopes out the questions addressed by this Task Force. The analysis, conclusions and recommendations contained herein should be considered as very preliminary as they are likely to evolve as the Task Force works toward its final report at the end of 2004. Comments and suggestions are welcome. Please cite this paper as "Background Paper of the Millennium Project Task Force on Education."

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Achieving Universal Primary Education by 2015: Background Paper for the Millennium Project Task Force

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Section I. Introduction

How can the international community reach the global goal of universal primary education by 2015? This question, by some measures a $9 billion dollar question (annually), is now loudly asked among both the providers and recipients of development assistance, and is the focus of one of the Millennium Development Goals endorsed by world leaders at the UN Millennium Summit in 2000.

This short paper, prepared as a background document for the UN's Millennium Project Task Force on Education and Gender Equality ("the Task Force") and as an input into the 2003 *Human Development Report,* seeks to put this question in context, summarizing a selected portion of the vast array of literature on the determinants and consequences of primary education attainment, and setting out a preliminary agenda for the Task Force's deliberations. It makes no claims for comprehensiveness in a field that has benefited from decades of careful scholarship and energetic advocacy, but rather aims to highlight the core areas deserving of more intensive consideration by the Task Force and, by extension, by international agencies, developing country governments, and non-governmental organizations in the North and the South.

The paper is organized as follows: Section II highlights the multiple links between education and other facets of human welfare. Section III turns to the history of the relevant Millennium Development Goal. Section IV highlights which countries and regions of the world are in relatively better and worse positions in terms of education performance. In Section V, we then attempt to examine how good education performance is dependent on favorable economic policies and conditions; responsive education system policies; effective schools; household-level demand; and student preparedness. In the sixth section of the paper, we describe a sample of the innovative approaches that have been instituted (or proposed) to manage the constraints to higher levels of primary school enrolment, quality and achievement. Section VII discusses the potential for learning from and/or scaling-up those innovations, and summarizes current estimates of the cost of achieving universal primary education. At the conclusion of each of these sections, highlighted in italics, we identify gaps in knowledge that constrain our ability to develop the right policy and operational recommendations for international agencies, and particularly for the UN; these knowledge gaps, in turn, set out the beginning of an agenda for the task force. The eighth section addresses the question of

whether primary education is, in fact, a subject that is likely to be responsive to a "global" strategy.

Section II. Education's Transformative Power

Perhaps more than any other sector-specific Millennium Development Goal, the education goal carries with it a promise of fundamental social transformation. Increasingly recognized as an essential ingredient – or even the main catalyst – for the transition to effective democracy and for sustained economic growth, education has the potential not only to change individuals' life chances, but to profoundly alter society itself.

Education is, first and foremost, an end in itself: an essential ingredient for the full realization of human capacity, within the tradition of Human Capacity Theory.[1] In this framework, education is essential for making informed choices, for seeing beyond the immediate horizon and opportunities, and for having a voice in public decision making. Education is a counterweight to limits on social and economic mobility that are imposed by cultural biases, gender and ethnic discrimination, and history.

Broadened educational opportunity also is an instrument through which to meet many other social objectives, including several of the other Millennium Development Goals:

- Education is a key component of **nation-building**, the vehicle through which a nation's shared interpretation of history and its cultural values are reproduced across generations.

- At a country level, education is considered to be an important determinant of **economic growth**[2] and is frequently hailed as one of the primary contributing factors to the dramatic economic growth in East Asia. At the same time, it is likely that the relationship between education and prosperity holds only under certain conditions.[3]

- At an individual level, a strong relationship has been repeatedly documented between educational attainment and earnings,[4] and greater access to good quality education is a key **poverty-reduction** strategy advocated throughout the developing world.

- Parents' education, and particularly mothers' education, is strongly and consistently correlated with **lower fertility, lower maternal mortality,** and **better child health and nutrition status.**[5] It also has been suggested that individuals with at least some education respond better to **HIV/AIDS prevention** messages.

Despite the well documented advantages to individuals and societies of broadened access to primary and secondary education, reforms to increase education system

performance in rich and poor countries alike often prove difficult to implement, and have an unenviable record of success. The reasons for this are several: First, education reforms are often a battleground of ideologies, competing views of nationhood, ethnic identity and history; their content may have more to do with the political context than with technical aspects of teaching and learning.[6] Second, changes in approaches to instruction and school organization often are instituted without a strong theoretical or empirical underpinning. Systematic evaluation of education interventions has been weak.[7] Third, in most countries teachers constitute the largest single group of civil servants. Politicians are well aware of the collective interests of teachers, and teachers' unions play a powerful role in shaping education policy.[8]

For the Millennium Project, these observations have several implications:

- ✓ *The Task Force should develop a way to communicate and share information on an on-going basis with (at least) the Task Forces on Poverty, Maternal and Child Health. This means sharing all Task Force documentation, initiating special discussions on topics of shared interest (for example, school health and school feeding programs), and possibly jointly commissioning background studies that will enrich the deliberations of both groups.*

- ✓ *The Task Force should consider developing analytic work to better understand how teachers (and teachers' unions) can be brought into the international dialogue about education system expansion and reform. The Task Force will seek to develop communication with teachers' representatives.*

Section III. History of the Millennium Development Goal

The Millennium Development Goals (MDGs) were ratified by the leaders of the U.N.'s 189 member nations at the September 2000 Millennium Summit, and since then have gained some purchase in guiding public policy priorities. The MDGs, which are based on analytic work and consultation that started in the mid-1990s, are intended to be shared statement of global aspirations for improvements in human welfare, tied to concrete indicators to be achieved by 2015 or earlier.

In some ways, the MDGs follow a long tradition of far-reaching, high-level goals that are generated through the U.N. agencies. In particular, they are characterized by an imperfect link between the political, or rhetorical, level and the technical level: The feasibility of the goals was not established before the language was adopted, and they manifest an oversimplification of complex social phenomena. The indicators chosen arguably are not the best measures of the concepts of interest. In addition, as global goals that represent a uniform vision of where countries should be headed, they obscure the tremendous heterogeneity that currently exists across countries and regions. For example, while most of the goals that today seem unreachable without a major improvement in current trends by many of the poorest African countries (at least in the given timeframe), they have already been surpassed in many instances in Latin America

(at least at the national level). Finally, but perhaps of most importance, it is an uncomfortable truth that agreement by world leaders in a global forum does not guarantee their commitment on home territory. It remains an open question whether the goals reflect priorities that will withstand competing pressures among domestic constituencies.

In other ways, however, the MDGs are distinguished from many other goal-setting exercises. They are clearly oriented toward results that correspond to individual and social welfare, rather than inputs and strictly sector-specific objectives. They place high priority on combating poverty itself, rather than just its correlates. They emphasize gathering and analyzing quantitative information to monitor progress toward achievement. And they have been created in an era of increased attention to development aid effectiveness, donor coordination and donor accountability, and thus may represent a significant amount of concordance between the priorities of rich and poor countries.

Education plays a prominent role in the Millennium Development Goals. Goal 2 of the Millennium Developments Goals – "achieve universal primary education" – has the following target: "Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling." Three indicators were chosen: net primary school enrollment ratio; proportion of students starting Grade 1 who reach Grade 5; and the literacy rate of 15- to 24-year-olds. Goal 3 – "achieve gender equality" – focuses squarely on gender parity in education at all levels, with ambitious targets for both 2005 and 2015 (and is discussed in detail in another background paper).

The goal of universal primary schooling has been an oft-promoted but elusive one, on the global agenda since the 1948 Declaration of Human Rights. The goal was articulated at the 1990 Jomtien, Thailand, Conference Education for All and the World Summit for Children; it was then addressed again at the Dakar World Education Forum in 2000, when the international community admitted lack of progress toward the objective[9] and recommitted itself to a broad agenda of educational efforts, and donor financing. The reasons for the shortfalls in achievement of past goals are multiple, and include: inadequate political commitment at both the country level and among donors; a focus on increasing enrollments rather than enhancing the effectiveness and quality of schools; and the lack of movement toward fundamental reforms in education system financing, organization and management.

Growing from the same spirit of concern and emphasis on concerted global action as the MDGs, the Education for All initiative merits particular attention. The Dakar "Framework for Action" stated a commitment to achieve six education goals (see box), including universal primary education by 2015, and the elimination of gender disparity in primary and secondary education by 2005.[10] In April 2002, the Development Committee endorsed an Action Plan to accelerate progress toward Education for All and the "Fast Track Initiative," which seeks to provide funding for 18 countries if and when they develop a credible national plan (5 additional countries have also been asked to carry out background work to join the FTI in the future). To date, 12 countries have prepared and presented national plans.[11] However, to date the response of the donor community has been tepid at best – a reaction that is generating considerable concern among the network

of professionals working on the EFA effort, and calling into question the global commitment toward the education Millennium Development Goal, as well.

The 6 Dakar Goals

• Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.

• Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities complete, free and compulsory primary education of good quality.

• Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programs.

• Achieving a 50 percent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for adults.

• Eliminating gender disparities in primary and secondary education by 2005 and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality.

• Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

SOURCE: Education for All: Information Kit, UNESCO

For the Task Force, there are two main implications of the many goal-setting activities in the education sector:

- ✓ *The Task Force should endorse the Education for All initiative, and focus on how to make that initiative as successful as possible, rather than developing new approaches or frameworks. Toward that end, the Task Force should consider commissioning background work on recent experiences with donor countries' responses to the Fast Track Initiative, and should examine national country plans.*

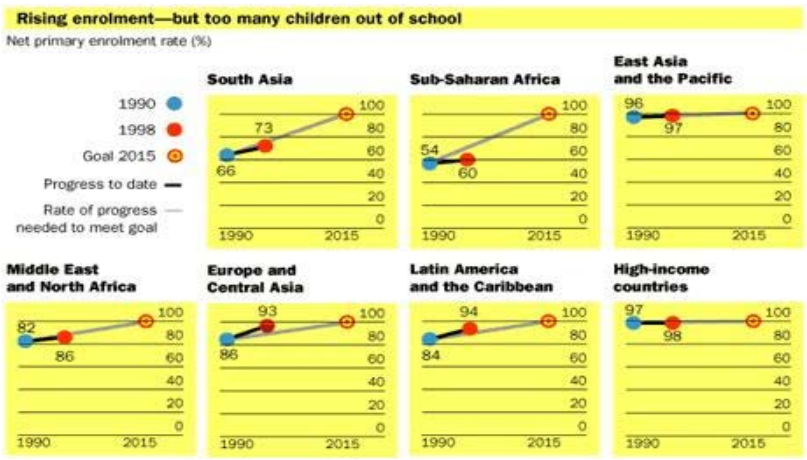
- ✓ *The Task Force should be mindful of, and examine closely, the reasons for success or failure of previous efforts to reach universal primary enrollment and completion. The issue of coherence among donors' and technical agencies' efforts should be examined, and recommendations developed.*

- ✓ *Issues of the quality and availability of data permeate the literature on education system performance, and will affect the ability of individual countries and the international community to track progress toward achievement of the Millennium Development Goal. Through new research, as well as outreach to entities that have responsibilities for compiling and disseminating data, the Task Force can develop a better understanding of the major data issues. The Task Force can develop practical recommendations for the UN to strengthen existing data collection and analysis efforts, perhaps*

through a global database on Education for All, and support for internationally comparable testing. Data-related efforts should focus on how data collection and analysis could support country-level planning efforts.

Section IV. Progress Towards Universal Primary Education

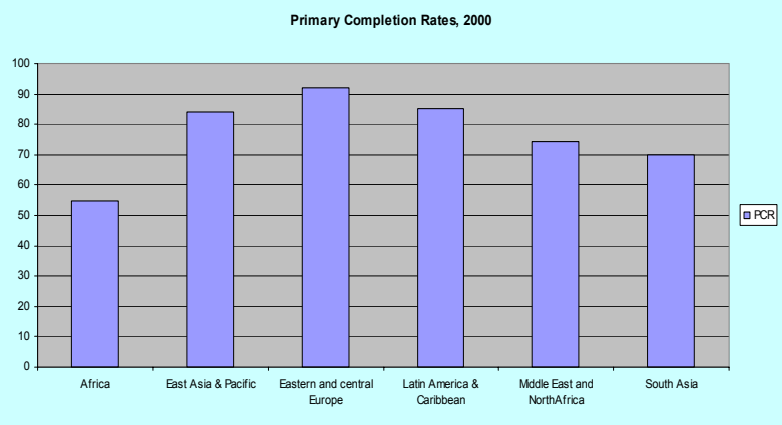
Making sense of education performance in developing countries is hampered by several factors. The definition of "school age" differs by country, and thus denominators for enrollment ratios encompass inconsistent age ranges. Aside from definitional issues, poor information systems are common in developing countries, and information may be biased due to funding incentives. There is a severe lack of information about household education expenditures, and use of private educational services (tutors, private schools, and so forth). And only very few countries employ internationally comparable measures of achievement, so there is little way to evaluate the basic outcome of schooling.[12] Despite these obstacles, we can draw some useful generalizations about each of the indicators of interest – net primary enrollment ratios, primary school completion, and youth literacy.



Looking first at the net enrollment ratio, the greatest challenge is faced by the countries of Africa, which enroll on average about 60 percent of school-age children, and are unlikely to achieve the goal of universal enrollment until long after 2015 if they follow the current trajectory. In contrast, several of the world's regions are "on track" to achieve universal primary enrollment in the very near future, and certainly by 2015. These include Latin America and the Caribbean (now approaching 95 percent enrollment), East Asia and the Pacific (now above 95 percent), and Europe and Central Asia (now approaching 95 percent). Countries in the Middle East and South Asia, with an average of about 85 percent net enrollment, are slightly "off track" in progress toward the goal. In all, about 33 countries are considered unlikely to reach the goal of universal primary enrollment by 2015 if current trends continue.[13] (See graphs – Source: http://www.paris21.org/betterworld/education.htm.)

Looking now at primary school completion, the picture is considerably less optimistic. Using a slightly different definition of primary school completion than has been associated with the Millennium Development Goals to date,[14] overall, about 86 countries are considered to be at risk of not attaining universal primary school completion

by 2015. In general, the regional pattern mirrors that for primary school enrollment. The highest performing region is Eastern and Central Europe, where more than 9 out of every 10 children entering first grade stay to complete primary school. In Latin America and the Caribbean and East Asia, primary school completion is at slightly more than 80 percent. In the Middle East and North Africa region, however, only slightly more than 70 percent of first graders ultimately complete primary school on average, and some 59 percent of countries are "off track" toward the 2015 goal. In South Asia, where primary school completion rates are slightly less than 70 percent, on average, 62 percent of countries are off track to achieve the goal by 2015. African countries again are in by far the worst shape, with only about half of all primary school entrants completing their primary school education. In that region, 32 of 47 countries are classified as "off track" to achieve the goal of universal primary school completion by 2015. (See graph – Source: Bruns, Mingat and Rakotomala (2003)).



Many countries, including Brazil, Cambodia, Egypt, Latvia, Malawi, Togo and Zimbabwe, among others, have shown considerable progress in increasing primary school completion rates since 1990[15]. However, among those countries, some still have very low absolute numbers and will not meet the target by 2015. For example, Mali has succeeded in increasing primary completion rates from 11 to 23 percent from 1990 to 2000, but its 2015 primary completion rates is projected to be only 49 percent.[16]

Other countries, including Zambia, Cameroon, Kenya, Venezuela, Belarus and Thailand, have slipped in primary school completion over the last decade or so, making achievement of the 2015 unlikely. In Zambia, for example, the primary school completion rate eroded from 97 percent in 1990 to about 83 percent in the most recent year for which data are available (about 1999); if current downward trends continue (which admittedly is unlikely), in 2015 less than half of children entering school would complete the primary sequence.

Turning to literacy among 15- to 24-year-olds, the very weak data that exist indicate that youth literacy is almost universal in Eastern Europe and Central Asia; rests between 80 and 90 percent in Latin America and the Caribbean, and East Asia; is roughly 60 percent among the populations of Africa and the Middle East and North Africa; and is lowest – at 50 to 60 percent in South Asia. Because of questions about the quality of data, projections based on recent trends are likely to be misleading. However, it is clear that a large majority – perhaps most – countries in the developing world are unlikely to reach the goal of universal literacy among 15- to 24-year-olds by 2015. This would be

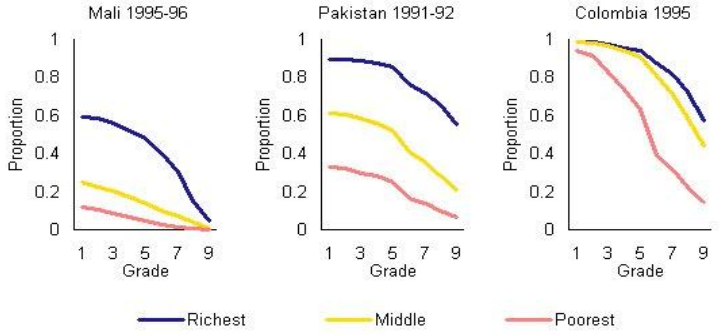
the case even if significant strides were made toward both universal primary school enrollment and completion because of the inevitable lag time.

In many ways, the large number of countries that are "off track" is an unsurprising finding. Moving from very low education levels to high ones in 15 years is unlikely, given the historical record. A 45-country analysis of the timing and pattern of the education transition – that is, what it takes to move from 10 to 90 percent literacy and gross enrollment – demonstrated that it has taken countries between 35 and 80 years to make such progress.[17]

For several reasons, primary school completion is the most valuable among the three indicators. First, the positive impact of education is felt only after five to six years of education. For most outcome measures, such as earnings and fertility, attending only the first years of primary school is no better than attending no school at all. Second, completion rates capture information about retention, which in turn can shed light on the quality, effectiveness and responsiveness of schools. In contrast, enrollment ratios tend to capture more of the demand-side determinants of education performance, including the relative value that parents place on sending their children to school. Third, some of the greatest differences by household income in children's schooling are seen in retention, rather than enrollment; thus, primary school completion is a particularly important indicator to track how well the school system is reaching the poor. Fourth, in contrast to youth literacy rates, primary school completion data are available at the country level, and can be calculated in a straightforward manner from administrative records.

Regional and national averages obscure tremendous variations in education performance across sub-populations. In general, education performance – both enrollment and retention – correlate very strongly with income within a country, although distinctive patterns of rich-poor differentials in schooling have been identified.[18] In Colombia and much of the rest of Latin America, for example, virtually all children start primary school, but drop-out is high among children from the poorest households; by fifth grade, only about 60 percent of poor children who started primary

Proportion of 15 to 19 year olds who have completed each grade



Patterns of Enrollment and Dropout among Children from Low-Income Households		
	High Enrollment	**Low Enrollment**
High Drop-Out	Eastern and Southern Africa	Western and Central Africa
High Early Drop Out	Latin America and the Caribbean	
High Late Drop Out	East Asia & Pacific, Central Asia, Middle East & North Africa	
Low Drop Out		South Asia

Source: Filmer and Pritchett (1999).

education are still in school, while virtually all of their better-off counterparts have remained in school. In Pakistan and much of the rest of South Asia, in contrast, large rich-poor differentials in enrollment are observed, with about 90 percent of children from the wealthiest households entering school, 60 percent of the children from the middle income stratum, and less than 40 percent of children from the poorest households enrolling. Children from the middle and low-income levels drop out at about the same (fairly low) rate throughout primary school, while better off children stay in school. In the end, only about 20 percent of the poorest children and 50 percent of the middle-income children complete primary school, while nearly all of the children from the better-off households do. In Mali and much of Western and Central Africa, overall enrollment rates are low, and are particularly low for children from both middle- and low-income households. Dropout is steady among all income groups, and the overall rich-poor differential in primary school completion is maintained. In short, five distinct regional patterns of wealth differentials have been identified through analysis of survey data (see table).

Country averages in education performance also hide gender differences. In many countries, including most of those in South Asia, the Middle East and the Sahel, the enrollment and completion rates of boys exceed those of girls. In other parts of the world, including Southern Africa, Central America and other parts of Latin America and the Caribbean, girls have higher levels of educational attainment than boys. Explaining those gender differences proves to be tricky, because of the inherent difficulty of separating out the phenomena of gender-based discrimination and economic opportunities, which themselves are not independent of each other.[19] (The background paper on gender equality explores these issues in greater detail, and provides data on progress toward gender parity in education.)

Implications for the Task Force are:

- ✓ *The Task Force should focus on primary school completion rate, as defined by the World Bank, as the main indicator of interest, and place secondary attention on enrollment ratios as indicators. Given the quality of data, youth literacy is of very limited value.*

- ✓ *The Task Force should seek ways to develop and support strategies that link education system interventions to the specific income-related patterns of enrollment and drop-out in a given country or region. For example, for countries that have low enrollment and high dropout, both demand- and supply-oriented interventions may be required. For countries that have high enrollment and high early dropout, attention to the quality and responsiveness of primary schooling may be the most effective approach.*

- ✓ *The Task Force should refine the extrapolation of current trends currently used to classify countries as "on track," "slightly off track" or "significantly off track" for achieving universal primary completion by 2015, and should develop reasonable alternative scenarios, based on explicit assumptions. In*

doing so, it should draw on the historical record of countries that have made rapid changes in the performance of their education systems through specific policy measures.

Section V. Prerequisites for Good Education System Performance

High (or even universal) rates of primary school enrollment and completion are, in themselves, only desirable if they yield the types of social, economic and health benefits that typically are attributed to education. Thus, if enrollment in school is high, but many children leave after only a couple of years of schooling, no bona fide gains will have been achieved. If primary school completion is high but the quality of schooling is so low – and/or children are so ill-prepared for school that they cannot learn effectively – then the education has not conferred the skills and knowledge that are the source of the hoped-for greater earnings, better health, and more engaged citizenship. All this implies that a complex set of factors, far beyond the act of children being enrolled in and graduating from primary school, exist for the fundamental goal of education for all (rather than schooling for all) to be achieved. In this section we highlight the five levels that require attention to make genuine progress.[20]

Level 1: The economic context. Higher levels of education correlate with greater economic opportunities for individuals, and higher levels of economic growth for nations, if and only if the skills acquired by future workers match the future labor demand. Thus, the East Asian experience of dramatic economic growth was fueled, in part, by the deliberate strategy of matching economic policies that promoted service-led industry and an orientation toward trade with rich countries, on the one hand, with a push for universal and high quality education to the secondary level, on the other. In contrast, economies that are persist in dependence on commodity exports rely for their growth much more on good weather and favorable international markets than on the presence of an educated workforce.

Level 2: Education sector policy. Although the development of successful education sector policy – the "right" extent of decentralization, the "right" means of financing – is very much specific to a country and to an historical moment, recent empirical work has shed light on the policy correlates of high levels of primary school completion. Two factors that have been identified as important are the overall level of public funding for education, and the relative level of teachers' salaries, compared to other workers. Countries performing well devote a higher share of national resources to public primary education (1.7 percent of GDP) than do countries performing at the average with respect to primary school completion (1.4 percent of GDP). In good performing countries, teachers tend to earn about 3.6 times the average per capita income.[21]

One aspect of education sector policy that has received relatively little attention is the link between performance at the primary school level, and the availability and quality

of post-primary education opportunities. In many countries, secondary school spaces are severely rationed, guaranteeing that for the vast majority of children formal education will end at primary school. Given the distinct possibility that a primary school education alone will not confer earnings opportunities that are significantly better than no education at all, in those settings the demand for entering and staying in grade school is likely to be quite low. Thus, progress toward achieving universal primary school completion may depend, in part, on increasing access to secondary school.[22] The development of post-secondary levels of education also plays a distinct role at the primary level – first, because of the importance of training adequate numbers of teachers with a sufficient set of skills; and second, because of the complex interplay between the development of a skilled workforce and the trajectory of economic growth. In short, while secondary and higher levels of education are often considered of lesser priority for public funding than primary school (in part because they are seen as conferring largely or exclusively private benefits), they may be essential for the development of a sound and high-performing primary education system.

Level 3: School effectiveness. A vast but uneven literature on the elements of school effectiveness has identified several factors that are highly correlated with high rates of student performance. These include: the use of teachers who originally are from the community; the availability of an adequate number of textbooks and/or radios (for distance education); the availability of acceptable sanitary facilities for students (which is of particular importance for girls); the involvement of parents in the school, taking a variety of forms; and a pupil:teacher ratio of about 40:1.[23] It is important to note that this list is drawn from literature that includes both quantitative and qualitative studies, including (in rare instances) randomized trials. However, the quality of the research on school effectiveness has, in general, been limited because most of the studies are observational, rather than experimental (or quasi-experimental) in nature, and the outcome measures are varied, including enrollment, retention, examination scores.

Level 4: Household demand. Unlike health, where it's reasonable to assume that the demand is universal and context-independent, the demand for education among parents (and guardians) of children is a derived demand. The underlying demand is to be able to take advantage of better labor market opportunities, to gain higher levels of financial security, to have the best possible marriage prospects, and to have the same or greater life chances for the next generation – in short, parents want a brighter future, for both their children and themselves, and under certain circumstances formal education is the means to that end.[24] Whether parents choose to send their children to school, then, depends on factors that include: perceived short- and long-term stream of benefits of education (which is conditioned by labor market opportunities, among other things); direct costs of schooling (such as school fees, uniforms, transportation costs and so forth); and opportunity costs of schooling (including the money income that could be earned by children, and the in-kind contributions that children make to household welfare by doing chores, caring for younger children, and other tasks).[25]

As suggested earlier, many of the elements of household demand are gender-specific. The perceived (and real) stream of income-related benefits from girls'

education may be less than from boys', given gender discrimination in employment and interruptions in earning associated with motherhood. The opportunity cost of sending girl children to school also may be higher, particularly among girls who are considered old enough to help with housework and childcare. And the physical risks in insecure environments may also affect the propensity of parents to send their girl children to school.[26]

The inter-generational nature of demand for education is clear and indisputable, having been documented in a large body of research. Although income and geography play a role on the demand side, in most studies parents' (and particularly mothers') education has been found to be the strongest correlate of children's education.[27]

Level 5: Children's preparation for learning. The characteristics of individual students also affect education outcomes. The health and nutrition conditions that are strongly associated with cognitive deficits, which in turn lead to lack of preparation for school and poor classroom learning, include: past and present nutritional deficiencies (protein-energy malnutrition); iodine deficiency; severe parasitic infection; and growth failure due to diarrheal disease and acute respiratory infection. Vitamin A deficiency and other causes of partial or total blindness lead to low levels of school participation, and guinea worm has been shown to have a significant effect on school participation because of the resulting disability and disfigurement. High rates of absenteeism due to illness are found in areas where malaria is endemic, and where the rates of respiratory ailments are high, and among students in households where alcohol and other substance abuse is present. In addition, girls' school participation in particular has been shown to be affected by the health of siblings, as girls in some cultural and economic settings often are required to care for sick brothers and sisters at the expense of their own education.[28]

In looking across these five levels, it is important to take special note of how the achievement of universal primary education a particularly steep uphill struggle for the countries most affected by the AIDS pandemic. With respect to the economic context, countries with high AIDS prevalence (and high case-fatality rates) experience the loss of a large share of the skilled workforce, which may reduce the returns to the acquisition to skills among survivors. In the domains of education policy and school effectiveness, the AIDS-related deaths of large numbers of adults, including hundreds of thousands of teachers, increases Africa's high fiscal burden of teacher salaries and/or will induce governments in the region to reduce the starting qualifications of teachers to maintain even the same inadequate numbers as are presently in the education system. Looking at the demand for education, lowered life expectancies reduce the lifetime private returns to education, making investment in schooling appear less attractive to households. An analysis of Demographic and Health Survey data found that when life expectancy increases by 10 years, schooling attainment increase by 0.3-0.6 years; if life expectancy were to decrease by 20 years – as has been the case in countries most affected by the epidemic to date – the reduction in life expectancy might be expected to reduce average schooling of young adults to one to three years from the current two to four years.[29] Finally, children orphaned by AIDS – a population currently estimated at 12 million in

SubSaharan Africa – suffer from a constellation of physical and emotional disruptions that greatly impede their ability to attend school and to learn in the classroom.

For the Task Force, there are three major implications of the foregoing:

- ✓ *As it develops recommendations for strategies to achieve universal primary school completion, the Task Force should consider policy reforms and interventions at each of the levels described above, from economy-wide to the health of preschool children. Emphasis throughout should be on how policy reforms and interventions can improve the chances of obtaining the potential benefits of education, incorporating issues related to quality and responsiveness to economic conditions; the emphasis should not be on the quantitative enrollment targets. Of particular interest might be an examination of the potential for conditional cash grants to stimulate greater retention in primary school.*

- ✓ *The Task Force should consider (and potentially commission a background paper on) the importance of secondary and higher levels of education on the quality of and access to primary education – indirectly, through the impact on the labor market and the orientation of economic growth; and directly, through the availability of trained professional teachers.*

- ✓ *The Task Force should draw on existing literature to better understand the relationship between the economic growth strategy and the educational development approach adopted in East Asian countries.*[30]

- ✓ *The Task Force should draw on existing literature to better the understanding of the relationship between hunger, food security, and education and work closely with the Task Force on Hunger towards this end.*

Section VI. Reforms and Innovations to Increase and Improve Primary Education

In each country in the world, multiple attempts have been made to expand access to and improve the quality of primary education. These have been made on the initiative of the national and/or local governments, civil society and external funding and technical agencies. Setting aside for the time being the economic and higher education policies that are likely to have an indirect effect on primary education performance, one can identify several distinct types of reforms and interventions within the realms of education sector policy, school effectiveness, household demand and preparation of students. Resource limits precluded a comprehensive review of these initiatives, but a basic list culled from literature on developing countries is outlined below, as a starting point for future work of the Task Force.

Education Sector Policy: This category includes decentralization, which is the most common of the current round of education sector reforms; as well as school vouchers, fostering of informal education, curriculum reform, standardized testing, and distance education.

School Effectiveness: Efforts to improve the quality of school management and instruction include a broad range of interventions, such as packaging textbooks and other inputs, providing healthy meals (especially earlier in the day), developing school-based management and greater parental involvement; and improving the schools' physical plant.

Household Demand: Interventions aimed at increasing demand at the household level include both reducing or eliminating school fees and other direct costs, and "negative price" interventions, such as conditional cash support programs, scholarships for girls, school feeding and take-home food rations.

Children's Preparation for Learning: Initiatives designed to increase students' ability to learn include a variety of early childhood education programs, as well as school feeding and school health programs.

A very incomplete inventory of which of these efforts has been attempted, by region, is shown in the table. It is important to note that the impact of these interventions is difficult to summarize because evaluations have been done in a somewhat scattershot manner, with very few based on comparisons between randomly selected "treatment" and "control" groups – which might be considered a gold standard for evaluation – and extremely limited information on costs or cost-effectiveness.[31] An issue to consider while evaluating the scalability of successful

Examples of Education Reforms and Interventions, by Region

	Education Sector Reform	School Effectiveness	Household Demand	Student Preparation
Eastern Europe/Central Asia	Curriculum reform in Slovenia			
Latin America and the Caribbean	Decentralization in Brazil, Mexico School vouchers in Colombia, Guatemala	Parent involvement in school management in El Salvador	Conditional cash grants in Mexico, Brazil, Honduras	Early childhood development in Argentina, Bolivia
Middle East / North Africa		Community-based girls' schools in Egypt		
East Asia and the Pacific				School feeding in Indonesia
South Asia	Decentralization in India School vouchers in Bangladesh	Community-based girls' schools in India (MAYA)	Take-home rations in Bangladesh	
Western and Central Africa				
Eastern and South Africa	Decentralization in Zambia School vouchers in Lesotho	Textbook/radio packages in Kenya Parent involvement in school management in Tanzania	Elimination of school fees in Uganda	School feeding and deworming in Kenya

interventions is the importance of good managers, which is often overlooked in evaluations. As such the replicability of interventions may depend less on rules and more on the role of implicit managerial knowledge.

The implications for the work of the Task Force are as follows:

- ✓ *The Task Force should consider commissioning a background paper that identifies the range of different interventions that have been attempted to improve primary education, both by region and by pattern of education system performance. This should include a synthesis of what is known about the costs, cost-effectiveness, and impact of the interventions, as well as an assessment of the quality of the information available (indicating, for example, whether evaluations were based on a quasi-experimental design, etc.). As part of this, the Task Force should seek to better understand the capacity constraints, including the role of managers to the adoption and scaling-up of interventions.*

- ✓ *The Task Force could consider whether some interventions – particularly in the area of school effectiveness and stimulating the demand side – have a good enough track record so that they could be advocated for wider adoption without significantly more research or evaluation. If that is the case, the Task Force could use various means to promote wider use of those interventions.*

- ✓ *The Task Force should assess how countries can be supported in efforts to integrate planning for education into their national and economic planning efforts.*

Section VII.Constraints to "Scaling Up" and Costs of Achieving the Millennium Development Goal

Making the transition from a relatively small-scale, donor-funded project that appears to have a positive impact on education-related indicators, to a country-level program that is sustained with public funds (or a combination of public and private funding) is a big leap. Pilot projects may work well because they fit specific local conditions, and they benefit from intensive attention from outside agencies and/or local authorities. In many cases, the potential for "scaling up" is constrained by: high cost, particularly if intensive technical support is required; the need for high levels of management capacity; and institutional issues, such as the acceptance by a teachers' union and the ability of the education sector to absorb and efficiently use new resources.

Cost alone would be a major impediment to the achievement of universal primary education, even if well evaluated, locally appropriate reforms and interventions were agreed upon by all parties, and institutional constraints were eliminated. According to one estimate, it would cost approximately US$9 billion per year through 2015 to achieve universal primary enrollment (rather than completion). This estimate is based on actual current spending per pupil, extrapolated to a larger population of school-age children. This figure is high relative to current spending, representing more than four times the total amount currently spent by donors, and far more than current government spending, particularly in the heavily-indebted poor countries. For Tanzania, for example, universal primary enrollment under this model would imply an increase in the education budget of 150 percent. In Ethiopia, the education budget would have to expand by 330 percent. Another estimate, which takes into account a variety of scenarios for input costs estimates that universal primary enrollment would cost US$11.4-27.6 billion per year across all regions. (See table – Source: Devarajan, Miller and Swanson, (2002))

"Unit Cost" Estimates of Universal Enrollment (US$ billions)

Region	If $110.60 were spent per out of school child	If regional/group median of spending per student were spent on each out of school child	If country level of spending per student were spent on each out of school child	If 13% of GDP per capita were spent on all children of school age
SSA	4.94	2.63	2.15	1.27
MENA	0.90	0.87	2.18	5.73
SA	3.69	2.24	1.80	1.58
LAC	0.73	1.45	3.23	8.10
EAP	0.89	0.89	0.38	10.4
ECA	0.30	0.47	0.63	0.46
All Regions	11.4	14.9	10.4	27.6

Five messages stand out from the costing exercises that have been attempted to date: First, that estimates of the cost of achieving universal primary school enrollment fall far short of the actual cost of achieving the outcome of interest – universal primary school completion, and the corresponding gains in life chances. Second, that we have little or no solid information on the country- or region-specific costs of the full set of inputs that would be required to provide an adequate education, with the best chance possible of retaining children from the first to the final year of primary school. Estimates based on the proportion of GDP or another relative figure are weak. Third, that we know little about the marginal costs of getting (and keeping) in primary school the hard-to-reach children who currently are not attending school. Extrapolation from the costs for the current in-school population is bound to underestimate the true cost. Fourth, despite the weaknesses in the costing exercises available so far, it is clear that the SubSaharan African countries will face the greatest resource hurdles, given the current low levels of enrollment and completion. Finally, that economic growth alone is highly unlikely to provide the additional resources developing countries will require to achieve universal primary completion. According to one estimate, for example, overall economic growth in African countries would have to be maintained at more than 8 percent per year to

accommodate the additional public expenditures required.[32] Thus, significantly greater donor support will be required.

It is important to remember, however, that additional resources alone are necessary but, in most countries, insufficient for the achievement of the Millennium Development Goal of universal primary education. This is the case both because of three factors: First, resources alone cannot overcome some of the institutional and demand-side barriers to full enrollment and retention.[33] Second, large new inflows of resources cannot immediately be put to good use in countries that lack basic institutional capabilities and adequate numbers of teachers and other professional staff. Third, as noted earlier, the development of an education system is closely tied to a country's political and ideological context, neither of which are (or should be) instantly modified with the availability of new funds.

For the Task Force, there are a couple of major implications of the foregoing:

- ✓ *The Task Force should identify interventions that have been successful "at scale" – that is, at the level of a large province or state, or a country, and that have been sustained over a reasonable period of time (e.g., five years). An assessment could be done to examine the factors that contributed to such success.*

- ✓ *The Task Force should investigate commissioning the preparation of a costing exercise that would estimate future costs based on (a) an agreed-upon set of input requirements for adequate primary school education; (b) region-specific input costs; (c) estimates of the marginal costs of reaching out-of-school children (or children from families that currently are unlikely to send their children to school); and (d) future population growth. While this costing estimate would necessarily have vulnerabilities, it would likely provide a truer picture of the actual costs of universal primary completion than has been created in the past.*

Section VIII. What is "Global" about Education?

In the previous sections, we have attempted to present a picture of the context for the Millennium Development Goal of universal primary education, and to indicate the range of aspects of and approaches to the challenge. We also have tried to highlight some of the major implications for the work of the Millennium Project Task Force, a body charged with undertaking and disseminating essential analytic work, and providing input to the formation of a "global strategy" for the achievement of universal primary education. In the following paragraphs, we set forth some preliminary and broad ideas about the global policy agenda for the developing country and donor country governments, which may serve as a part of the basis for future deliberations of the Task Force.

There are clear ways in which achievement of education-related goals is very much a country-specific enterprise. Unlike health, environment and other sectors where

there are direct cross-border impacts, the education sector generates almost exclusively within-nation effects. (The exception to this is in the extent to which education contributes to social stability, but in fact the evidence is mixed on this subject; it is not necessarily the case that an educated populace is a peaceful one.) The content of much of what is taught is country-specific in nature, determined by national values and the priorities for shaping the views of younger generations. And virtually all the inputs required for education, particularly at the primary level, are local in origin, requiring little or no foreign exchange, adoption of intellectual property regimes or access to world markets. In short, in terms of impact, orientation and inputs, education is predominantly a local (or at best national) affair. The core responsibility for education planning, financing and implementation rests with the State. National and local civil society organizations, and citizens acting through democratic institutions, have the primary role in advocating for the State to fulfill those responsibilities, and for promoting accountability in the education sector,

There are three dimensions of education that may be considered regional or global, and thus of interest for a supranational strategy or strategies. The first is how global markets and related economic forces affect the returns to education for individuals and societies. Increasingly, with the mobility of capital and the development of investor-producer-consumer relationships that stretch across the globe, the potential for economic growth of poor countries is shaped by external forces: Whether a child in Zambia who completes primary school will have better life chances as a result (or contribute to the future economic growth of the country), then, may depend less on decisions made in Zambia than on decisions made by international investors. Included in this dimension is the extent to which the demand for education is driven by opportunities for temporary or permanent migration. All this implies that there is a role at the global level for thinking and action to ensure that trade and other policy regimes facilitate, rather than frustrate, national-level efforts to educate children.

The second dimension is how the quality of education can be affected by access to a global or regional knowledge base. Although ultimately decisions about curriculum, instructional methods, use of examinations and so forth are taken at the country (or subnational) level, they can usefully be informed by knowledge about what has worked in other countries, particularly those that share linguistic and other cultural traditions. One of the universally acknowledged benefits of globalization is greater access to knowledge, and this is true in education as in other sectors. For this, institutions and actions at the regional level may play a particularly helpful role, given the similarities among countries within a region in the patterns of enrollment and retention.

The third dimension is found in donor financing. Like the health sector, the education sector in developing countries has been a major recipient of external assistance, in the form of grants and concessional loans for technical assistance, inputs (principally textbooks), and budget support (often linked to policy changes). Donors can take responsibility both for some of the achievements in education system performance, and for some of the shortcomings that have been observed in recent years. As noted earlier, the magnitude of the financing challenge is very large, and will be met only with a

concerted, sustained and large commitment from rich countries. Recognizing that these same donor countries are also under pressure to support other sectors (such as AIDS interventions in the health sector) – which arguably yield more immediate and direct benefits to the rich countries themselves – much work will be required to develop through rigorous evaluation a set of technically sound and cost-effective approaches to primary education, to estimate the volume of both national and international resources that would need to be mobilized, to understand how to relax the constraints to absorbing additional resources, and to advocate for funds based on a strong knowledge base.

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[1] Sen (1999).

[2] A large amount of literature exists on the relationship between educational attainment and economic growth. See, for example, Lucas (1988) and Barro (1993).

[3] Pritchett (2001) demonstrates that, looking cross-nationally, there is no association between increases in educational attainment of the labor force and the rate of growth in productivity (output per worker). This may be due, in part, to the poor quality of education in many low-income countries.

[4] Glewwe (2002).

[5] In general, women with at least primary school education marry later, have their first child later, and have fewer children during their life than do women with little education. On average, the total fertility rate declines by 1 child for every three years of education. In a study of 14 African countries, for example, researchers found that women who had stayed in school until at least the later years of primary school had significantly lower levels of childbearing than women with less schooling in about half of the countries; across all countries studied, women who stayed in school through the secondary level had substantially lower levels of fertility. The education-fertility relationship has been attributed to the increase opportunity cost of women's time when education opens up labor market opportunities; changes in childbearing preferences and the desire for "higher quality" children; and increases in women's ability to bargain within the household. (Ainsworth, Beegle and Nyamete, 1996). See also many other references regarding the relationship between mothers' education and child health (Bicego and Boerma, 1991); fertility (Ainsworth, Beegle and Nyamete, 1996); child nutrition (Thomas, 1998); and other impacts (Schultz, 2001 and Behrman Foster, Rosenzweig and Vashishtha, 1999).

[6] A recent example illustrating this point is the revision of Indian history textbooks under the auspices of the current government led by the Bharatiya Janata Party. Several organizations in India such as the Rashtriya Swayamsevak Sangh (R.S.S) have long been strong advocates for a re-interpretation of the history of India taught so far, but it is only now that they have had an opportunity to influence the national curriculum due to the current government being more sympathetic to their views. One example of a change in the new textbooks released recently is that the Indus Valley Civilization is now being shown to be a part of the Vedic Civilization (which till now was considered to have appeared almost a 1000 years after the end of the Indus Civilization). (Kai Friese, "Hijacking India's History," *The New York Times*, 30 December 2002). Another example of politics influencing education is the denial of education to women under the Taliban government in Afghanistan due to their existing political ideologies.

[7] The lack of rigorous evaluation is endemic to education systems throughout the world, although increasing attention is being given to randomized trials as a method of assessing the impact of specific classroom, school and policy interventions. See, for example, Mosteller, Boruch and Janeway (2002).

[8] Corrales (1999) and Fiske (1996).

[9] In 2000, 120 million school age children were not in school – more than in 1990.

[10] The gender goal corresponds to another Millennium Development Goal, which is discussed in a separate background paper. Between 1960 and 1990, the world saw an increase in primary school net enrollment rate by about 10 percentage points per decade. Then between 1990 and 2000, the increase in the net enrollment rate slowed to about half that rate. If current trends were to continue, the world will reach universal enrollment only by 2030 (well short of the 2015 goal) - Vandemoortele, J. (2002).

[11] World Bank.

[12] See for example Watkins (2000) and World Bank (2002).

[13] Presentation by Barbara Bruns (Education department, World Bank) at the inaugural meeting of the Millennium Project Task Force on Education and Gender, November 4, 2002.

[14] We use here the World Bank definition of primary school completion, which is the total number of students successfully completing (or graduating from) the last year of primary school in a given year, divided by the total number of children of official graduation age in the population. In countries where the number of primary graduates is not reported, a proxy primary completion rate is calculated: the total number of students in the final year of primary school, minus the number of students that repeat the grade in a typical year, divided by the total number of children of official graduation age in the population. The primary completion rate reflects the primary cycle as nationally defined, ranging from a very small number of countries with 3 or 4 years of primary education, to a majority of countries with 5 or 6 years, and a relatively small number of countries with 7 or 8 years. The numerator may include over-age children who have repeated one or more grades of primary school but are now graduating successfully as well as children who entered school early. In countries with high repetition but relatively low dropout, the primary completion rate may exceed 100 percent, but as internal efficiency improves and on a steady state basis, the primary completion rate should not exceed 100 percent. (Bruns, Mingat and Rakotomala, 2003)

The original MDG indicator is the percentage of children starting primary school who eventually attain grade 5 (grade 4 if the duration of primary school is four years). The estimates are based on the reconstructed cohort method, which uses data on enrollment and repeaters for two consecutive years.

Thus, the main differences between the World Bank and the MDG indicator for completion are: the time period under consideration (five years of education in the case of the original MDG indicator, and the full, country-specific primary course in the case of the World Bank); and the denominator (children entering Grade 1 in the case of the original indicator, and all school-age children in the case of World Bank.)

[15] Although the future upward trend is uncertain in countries like Zimbabwe and Malawi, which are likely to experience a reversal in progress due to the HIV/AIDS pandemic.

[16] Bruns, Mingat and Rakotomala (2003).

[17] Wils and O'Connor (unpublished).

[18] Information on the rich-poor differentials is derived from analyses of the Demographic and Health Surveys. Although in the vast majority of countries DHS do not collect information on household income or expenditures, researchers have developed proxy indicators for wealth based on an index of household assets (Filmer and Pritchett, 1998).

[19] Considering parents' (and other caretakers') investments in the education of children (including the opportunity cost of time spent in school), Alderman and King (1998) identify two explanations for gender differentials: First, that rates of return to education may be gender-specific. This may encompass different underlying costs of education by gender – for example, the potentially higher opportunity cost to send girls to school, if they must therefore abandon household chores and care of younger siblings – as well as different streams of benefits, often in the form of future earnings. Second, that parental empathy, and the future transfer from children to their parents, may be gender-specific. For cultural reasons, parents may prefer sons to excel in

the public sphere through education; and/or have higher expectations that an income-earning son will care for parents in old age, relative to a daughter.

[20] These levels fit imperfectly into an economic framework because they simultaneously represent aspects of the "market" for schooling – the supply and demand factors that affect whether children enter and remain in school – and the "production function" for education – the combination of inputs and technologies that translate into the acquisition of knowledge and skills by children. So, for example, the effectiveness of schools and the preparation of students for learning are fundamental parts of the production function. The economic policy context (which affects the real long-term stream of benefits), education sector policy, school effectiveness and demand-side factors are elements of the market. Thus, it is easy to see the interaction between the production of education and the market for schooling, but an articulation and exploration of them is beyond the scope of this paper. The "levels" approach was selected because the levels map relatively well to specific types of interventions.

[21] Bruns, Mingat and Rakotomala (2003) and Scheerens (1999).

[22] One study of the determinants of educational attainment in 45 countries found that the single most important factor in explaining school enrollment was the proportion of adults with secondary education (i.e., the pool of potential teachers). This factor was shown to have a large effect even than income, Wils and O'Connor (unpublished).

[23] Glewwe (2002) and Bruns, Mingat and Rakotomala (2003).

[24] The authors are grateful to Richard Sabot for this observation at the inaugural meeting of the Task Force.

[25] Alderman and King (1998).

[26] Alderman and King (1998).

[27] Behrman, Foster, Rosenzweig and Vashishtha (1999).

[28] For a full review of the relationship between key education outcomes and health and nutrition conditions, see Leslie and Jamison (1990).

[29] For further information about how the AIDS pandemic impedes progress toward achievement of better educational outcomes, and economic growth, in several distinct ways, see an analysis by Hamoudi and Birdsall (2002).

[30] Birdsall and Sabot, forthcoming.

[31] Glewwe (2002).

[32] Hanmer and Naschold (2001).

[33] Even relatively resource rich countries, such as Brazil, face tremendous difficulties in achieving adequate quality standards, and in retaining in school children from lower income households.

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