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**Education systems in
developing countries: income,
institutions, and incentives**

Education systems in developing countries

Statistics on enrollment, completion, and learning achievement capture part of the picture of where the world stands with respect to the education of its children.¹ Another part of the picture requires understanding how countries have managed, or not managed, their education systems and how the institutional arrangements and the incentives they create for parents, children, teachers, administrators, civil society, and politicians have mattered.

Many countries have made great strides in increasing educational opportunities, including opportunities for girls and boys from their poorest households. But in many parts of the developing world, schools and education systems are failing.

Per capita income and net primary school enrollment are correlated (figure 5.1).² Middle-income countries like Malaysia and Mexico have enrollment rates close to 100 percent, while enrollment rates in such low-income countries as Kenya and Yemen are less than 70 percent.

Income itself is neither necessary nor sufficient for countries to make progress, however. Rwanda and Viet Nam are very poor countries with high enrollment rates—higher even than in some much richer countries, including Costa Rica and Turkey. Enrollment rates vary enormously across low-income countries (figure 5.2). For countries with annual per capita GDP of \$200–\$400, enrollment ranges from less than 40 to close to 100 percent.

Many factors other than income also matter. The proportion of the population living in urban areas is important. So is a history of social mobilization (China, Cuba, and Sri Lanka all have high enrollment rates). The extent to which history and culture limit girls' attendance matters, too, as does the ability of a country's leaders to ensure that children learn.

Figure 5.1
Countries with higher per capita GDP tend to have higher primary enrollment rates
Net primary enrollment (%)

Source: Author's calculations based on data from World Bank 2004b.

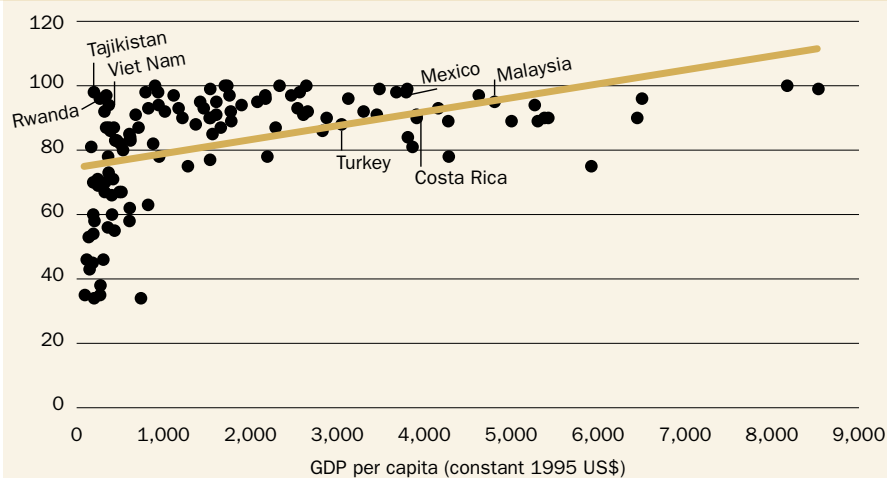
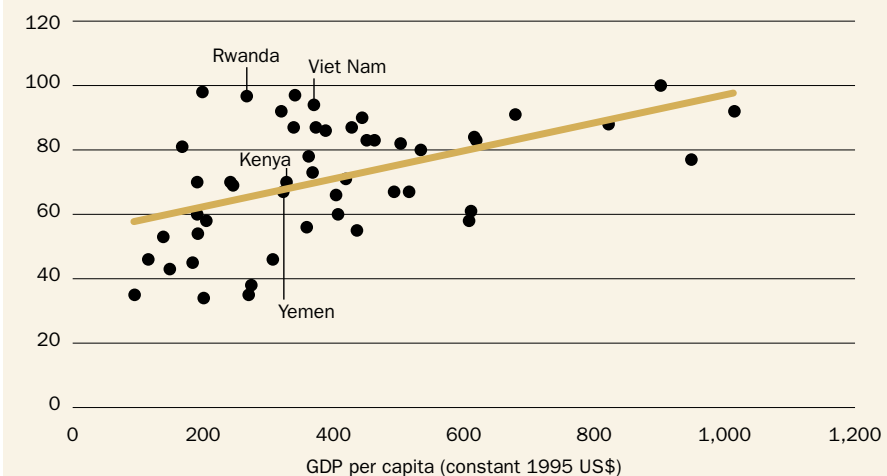


Figure 5.2
In low-income countries the relationship between per capita GDP and net primary enrollment rates is not simple
Net primary enrollment (%)

Source: Author's calculations based on data from World Bank 2004b.



High-performing educational systems can achieve results even with limited resources

Critical also is the level of performance of the education system. Many countries—including Chile, China, Cuba, the Republic of Korea, Singapore, the Slovak Republic, Sri Lanka, Tunisia, and Uruguay—have built education systems in which primary completion is universal, and many have made progress in improving learning. Most of these countries are middle-income countries today, but many achieved universal primary completion when they were at the same stage of development as today's poorer countries. And among the poorest countries today, an encouraging number have begun to register strong and sustained progress in primary completion. These include a large number of countries in Sub-Saharan Africa—Benin, Burkina Faso, Eritrea, Ethiopia, the Gambia, Guinea, Malawi, Mali, Mozambique, and Togo—all of which have increased the primary completion rate by more than 3.5 percent a year, well above the median 1.5 percent annual rate of improvement for low-income

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countries as a whole.³ In other regions Bhutan, Cambodia, the Lao People's Democratic Republic, Mongolia, Nepal and Nicaragua are also making strong progress. While all of these countries face major issues of education quality and efficiency—and none could yet be considered to have a high-performing education system—they are performing considerably better than their peers. These examples illustrate a central point: low-income countries can achieve universal primary completion, and it is possible to move more rapidly toward that goal.

In low-income countries that are making progress, some key principles appear to have guided education policymakers in defining strategies and choosing interventions. Examples of successful interventions (appendix 3) and evidence from many countries provide a menu of ideas for education leaders.

This chapter presents the principles and associated interventions that seem to have worked in successful education systems, recognizing that no one intervention makes sense in every setting. The next chapter builds on these examples to set out and describe two key strategies for all countries.

Principles and examples of associated interventions include the following:

- *Be pragmatic to reduce costs.* Countries that have jump-started progress toward raising primary completion rates have taken such pragmatic (though often politically difficult steps) as using contract teachers to make the costs of expanding coverage more fiscally sustainable (Ethiopia, Madhya Pradesh [India], West Africa); shifting to low-cost school construction methods (setting up open-air classrooms, as the Republic of Korea did in the 1950s; using local materials and community construction in other places); resisting pressures to reduce class size much below 40 until universal coverage is achieved; providing free primary education and recovering an increasing share of costs at other levels; and shortening the preservice teacher training cycle. All of these actions lower the unit costs of primary schooling and promote faster achievement of universal coverage. They give priority to finding cheaper but “good enough” models, achieving universal coverage at a modest standard and then gradually raising those standards over time.
- *Focus on teaching and learning.* Even systems with modest standards can keep the focus squarely on the teaching-learning process. Steps that can help do so include recruiting teachers based on content mastery; training teachers for student-centered or active learning instruction, rather than frontal instruction; measuring student learning outcomes (and giving teachers the same tests); designing good-quality curricula (in terms of both content and values), books, and materials and producing them in a cost-effective manner; using local language instruction for the first three to four years of schooling; implementing inexpensive but effective models of in-service teacher training (using master teachers, pedagogical advisers, and rural teacher self-help networks, for example; creating

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performance incentives for teachers linked to school and student performance.

- *Make good use of the private sector.* Countries can capitalize on what private providers do best by allowing high-quality for-profit private firms to serve the “taste for quality” of the top 10 percent of the income distribution. They can contract with private providers (as programs have done in Bangladesh, Central America, and Colombia) and work with families and communities to relieve household constraints to schooling (by adapting the school calendar, for example).
- *Ensure that the benefits of expanding the education system are shared by the poor.* Countries can set clear rules for distributing resources across regions and schools.⁴ They can monitor outputs and outcomes across schools and regions to identify where performance needs strengthening; provide support, pressure, inspection, and skill-specific capacity building targeted to the lowest-performing regions and schools (as Cuba, Singapore, and Uruguay have done); target learning support within schools to students falling behind academically (through measures as simple as peer tutoring); develop condensed cycle accelerated programs to get drop-outs back in school and up to grade level; use targeted subsidies to enroll and keep vulnerable children in school; and set up cost-effective programs that support early child development (health, nutrition, and early stimulation of infants and young children).

Of course, no single intervention fixes an education system. Successful countries engage in a continuous process of identifying the binding constraint; generating new approaches (drawing on global evidence, but adapting it to their local constraints and needs), testing, monitoring, evaluating, and then focusing on the next issue.

Countries with low-performing systems need to address a variety of governance problems

In developing a strategy, it is critical to assess why education systems often fail to work. Lewis (2004) identifies many of these problems. According to her, in too many countries, systems are plagued by irregularities, poor management, and spending and investment that are unresponsive to local needs and preferences. Few systems in developing countries are structured in a way that builds in accountability at different levels and creates incentives for performance. This does not mean that all education systems are dysfunctional; indeed, under difficult circumstances, the progress of so many countries in the past several decades has been remarkable. It does mean that weaknesses in current systems are common and need to be addressed. The first step is to grasp the nature of so-called governance problems, which include poor management, local capture, teacher absenteeism, poor expenditure management and leakage, bribery, informal payments, corruption, and private tutoring.

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Poor management

Public education systems are among the most difficult of all systems to manage. They involve millions of everyday transactions—between students and teachers, parents and schools, school directors and communities, administrators and monitors at multiple levels—that are hard to judge and impossible to monitor. Exactly what is to be monitored is not straightforward. This combination of a higher number of transactions and low specificity (Fukuyama 2004; Pritchett and Woolcock 2002) makes management difficult.

A recent review of educational systems in Peru identified basic management failures by multiple players (Crouch 2004). The Ministry of Education has no idea how many teachers exist, despite the fact that it manages the payroll. The teachers union has no list of paying members. Both institutions suffer from clientelism (political patronage) in hiring.

Local capture

In Colombia public educational services at the department (equivalent to a state or province) level have completely captured the financing and management of education at the local level, blocking any parental or community participation. Teachers and headmasters are routinely hired based on party affiliation, regardless of their experience or training. The lack of accountability, the muting of parental voice, and the cynical exploitation of public monies for local political party imperatives have undermined education in Colombia. These factors help explain both citizen perceptions of a corrupt and unwieldy education sector and the poor performance of Colombian children on national exams (Duarte 1996). A five-state study found numerous cases of pure public negligence, including the closure of schools for months at a time for no reason, teachers' use of students as household help, and rampant corruption in the selection and appointment of teachers (PROBE 1999).

Teacher absenteeism

In a study of teacher absences in 9 countries and 19 Indian states, Peru had the lowest teacher absentee rate (11 percent) and Kenya and Uganda the highest (27–28 percent) (Alcazar and others 2004; Chaudhury and others 2004). A similar study of Indian public schools found that better educated teachers, teachers who lived farther away, and more senior teachers were more likely to be absent (Alcazar and others 2004). Surprise visits to schools in four Indian states found 33 percent of head teachers absent and only 25 percent of them actively teaching (PROBE 1999). Teachers remained on site an average of four hours, rather than the prescribed six, and for a variety of reasons they did not attend school at all for almost a third of the school year (PROBE 1999). Baseline surveys conducted by the District Primary Education Program in India found teacher absentee rates of 33 percent (Pandey 2000).

**Public
expenditure
tracking
systems
strengthen
accountability
at the central
government
and community
level**

In some parts of the world, particularly Sub-Saharan Africa, HIV/AIDS has significantly increased teacher absenteeism. The World Bank (2002a) report *Education and HIV/AIDS: A Window of Hope* reported that 30 percent of teachers in parts of Malawi and Uganda and 20 percent of teachers in Zambia are infected with HIV. In Kenya the number of teacher deaths rose from 450 in 1995 to 1,500 in 1999. Kenya can expect AIDS to claim the lives of almost 1.5 percent of the nation's teachers every year between 2002 and 2010.

Poor expenditure management and leakage

Analysis that tracked public expenditures from parliaments to individual schools in Africa revealed startlingly high leakage (Reinikka and Svensson 2001). On average only 13 percent of central government allocations for non-wage costs reached Ugandan schools between 1991 and 1995. To reduce leakages, the central government began announcing its monthly budget transfers in newspapers and on radio, and it required schools to post their receipt of funds. As a result of these and other measures, the flow of funds leapt to 90 percent in 1999, reflecting the importance of transparency and of community oversight of schools. Similar findings have emerged from surveys elsewhere, suggesting that public expenditure tracking systems, such as the ones applied in Uganda, strengthen accountability at the central government and community level. Similar results are reported for the Slovak Republic (Haulikova 2003).

Bribery

The *Voices of the Poor* study (World Bank 2000) provides qualitative results from around the world on the persistent and worldwide phenomenon of illegal fees to get children into school or to influence examination results (Narayan 2002).⁵

In national corruption reports, interviewees identified education as the most or among the most corrupt sectors in Azerbaijan, Colombia, Kazakhstan, the Kyrgyz Republic, Moldova, the Slovak Republic, and Tajikistan. The problem stems from unresponsiveness of public officials, including teachers; insistence on bribery to get anything done, including gaining access to school; and poor financial management.⁶

Bribery takes many forms. In Ghana 19 percent of households paid to get their child into primary school (World Bank and CDD 2000). In Pakistan 92 percent of households reported having to pay bribes, which averaged \$86 (Transparency International 2001, 2004). The nature of abuses associated with school acceptance, grades, and graduation at all levels of the school system has been documented in Belarus and the Slovak Republic (Transparency International 2001, 2004). Bribery in higher education has been documented in Uzbekistan (Jdanova 2000) and in Georgia (Mac-Williams 2002), where the amount charged for passing courses is publicly announced to students. Coris, a program of Transparency International, has

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compiled reports from Belarus, Lithuania, Macedonia, Serbia and Montenegro, and the Slovak Republic on the extent and nature of bribes required to prepare for exams, pass them, enter university, and receive passing grades. In all of these countries, entrance, performance, and graduation entail payouts, especially in higher education.

These practices filter down into the earlier years as well, often in a less insidious form. In Cameroon teachers sold front-row seats to children, charged parents to correct their children's homework, and demanded private tutoring fees to ensure that students were promoted to the next grade (Bennet 2001). Because corruption is likely to be underinvestigated and largely undocumented, these findings represent a widespread pattern.

Informal payments

The desire of parents to ensure their children's school attendance and graduation can take other forms that border on corruption. The breakup of the Soviet Union and its highly centralized education system resulted in a breakdown in funding, oversight, and performance of schooling and a potentially lost legacy of education, due in large part to lack of involvement at the local level. But circumstances in the Commonwealth of Independent States (CIS) (the countries of the former Soviet Union) differ greatly from those in much of the rest of the world. Negative growth and uneven macroeconomic performance, uncertain priorities for education, and management inexperience also contributed. The challenge for the CIS is to retain achievement levels and revive disintegrating and increasingly underfunded education systems. Meeting this challenge will be difficult without consensus on priorities or approaches to education at the national or local levels.

Private informal payments finance about half of all public education costs in the CIS (Burnett and Cnობlock 2003). The frequency and extent of informal payments to teachers and schools, combined with in-kind contributions demanded of households, places undue burdens on families. In five of the poorest CIS countries, 1.6–5.2 percent of monthly household spending goes to education (table 5.1). Given the recent low birthrates in these countries, these figures are high, particularly given the level of poverty. Moreover, these average figures conceal the even greater share of income spent by the poor. In Armenia,

Table 5.1
Household education expenditures as a share of monthly spending in five CIS countries
Percent

Country	Year	Share of spending
Armenia	1998/99	5.2
Azerbaijan	2001	2.8
Georgia	2000	1.6
Kyrgyzstan	1998	4.1
Tajikistan	1999	2.4

Source: Burnett and Cnობlock 2003; World Bank 2003b.

That some poor countries have made progress suggests that it is possible to do so

for example, the average household allocated 5.2 percent of its monthly budget to education, but the lowest quintile spent 7.2 percent. In the Kyrgyz Republic the share of spending of the lowest quintile was four times the average. Both countries pledge free education for all.

Corrupt practices

The lack of appropriate legislation, oversight, and regulation has allowed a host of behaviors to surface. These problems include irregularities in hiring and firing teachers, questionable procurement, selling of grades and admission to all levels of education, and informal fees (Meier 2004). In Madhya Pradesh, India, teachers encourage students to copy from one another on national exams to ensure acceptable pass rates (PROBE 1999). Evidence is mounting that these problems are systemic. The challenges associated with a breakdown in observed processes for hiring and firing teachers in the Slovak Republic and the conflicts of interest that emerge for Belarus when teachers become purveyors of textbooks point to the extent of the breakdown in rules and regulations (Transparency International 2000). In Cameroon headmasters' posts were sold, the most prestigious ones by Ministry of Education officials (Bennett 2001).

Private tutoring

Private tutoring is common in East Asia and the CIS (Bray 1996, 2003; Burnett and Cnoblock 2003). Although decried by the education community, in and of itself such tutoring is not necessarily representative of corruption. It can reflect parental desire for additional or more intensive grounding in particular subjects or reflect the inadequate learning environment at school. Private tutoring becomes abusive when teachers fail to teach in the classroom, instead earning income from teaching their own students after hours; when teachers force parents to pay for tutoring if their children are to be promoted; or when teachers use other means of holding parents hostage until they pony up.

In many places, a high proportion of primary students receive private tutoring (45 percent in Hong Kong, China (SAR), 39 percent in Delhi, 69 percent in Kenya, and 73 percent in the Republic of Korea) (Bray 2003). Estimates for secondary school are even higher. Where the majority of children receive tutoring, it becomes difficult to keep up without such additional help.

Conclusion

That some poor countries have made such progress suggests that it is possible to do so. At the same time, problems in other countries illustrate the nature of the challenge, which goes well beyond gaps in enrollment, high drop-out rates, and low levels of learning achievement to the building of the institutions and the creation of incentives that underlie functional education systems.

Strategies for creating more and better educational opportunities

Countries that are unlikely to achieve the goal of universal primary education by 2015 face two challenges: they must simultaneously address shortfalls in access and in quality. They must significantly accelerate the enrollment of children and improve their ability to keep children in school, and they must achieve major improvements in learning outcomes and educational attainment at a level required to have an economic and social impact. Increasing access and improving quality are mutually reinforcing; if schools cannot offer a good-quality education, parents are far less likely to send their children to school.

Achieving more education and better education will require efforts in a number of domains within the education sector, as well as within the broader social and economic context. There are lessons to be learned both from countries that have succeeded—sometimes at levels far above what would have been predicted given their economic level—and from those whose progress has been slow.

Two major strategies can be used to address these challenges: getting out-of-school children into school and creating better institutions and more favorable incentives. The first strategy involves overcoming both demand- and supply-side constraints to enrollment and retention. The second requires successfully addressing serious and pervasive institutional shortcomings, many of which are linked to dysfunctional incentives for administrators and teachers. These strategies and interventions are intended as a menu from which country-level decisionmakers can craft approaches and solutions that are appropriate to local contexts.

Strategy 1: get out-of-school children into school

Higher levels of enrollment and longer retention in school can be stimulated in three ways: focusing on specific interventions to reach out-of-school chil-

Reaching out-of-school children will take special efforts, beyond what is typically thought of as scaling up

dren, increasing the educational opportunities (formal and nonformal) for girls and women, and increasing access to postprimary education. All of these approaches take into account the powerful demand-side influences that affect the propensity of parents to send their children to school.

Reaching out-of-school children will take special efforts, beyond what is typically thought of as scaling up. Expanding access to and completion of primary schooling implies reaching children from households at society's margins. Most of the roughly 104 million school-age children who are not attending school are poor and have parents who are uneducated and illiterate. In all countries poor children are less likely to start school, more likely to drop out, and more likely to engage in child labor or domestic chores that keep them from schooling. In most countries, girls are less likely to be in school than boys. Universalizing primary schooling cannot be achieved without addressing the specific reasons that poor children and girls do not attend school, repeat grades, and drop out.

Some interventions target getting poor children and girls into school and keeping them there by making schools affordable, reducing the direct costs for all children, and compensating for some of the added opportunity costs for girls. Other measures do so by increasing demand for schooling, through such measures as conditional cash transfers and school feeding and health programs.

No intervention is guaranteed to work, and the appropriateness and cost-effectiveness of each must be assessed given the particulars of the supply of and demand for education in a country, and the resource constraints it faces. Presented below are examples of the types of interventions that appear to work—and in some instances have been definitively shown to work—in improving education outcomes. It is important to note, however, that the evidence base is weak, particularly with respect to the type of rigorous evaluation findings that would be required to be able to make clear statements about what works and what does not work.

Eliminate school fees

Eliminating or reducing school fees has substantially increased enrollment, particularly for girls. When free schooling was introduced in Uganda in 1997, primary school enrollment nearly doubled, from 3.4 to 5.7 million children, rising to 6.5 million by 1999. Girls' enrollment increased from 63 percent to 83 percent, while enrollment among the poorest fifth of girls rose from 46 percent to 82 percent (World Bank 2002). In Tanzania the elimination of primary school fees in 2002 resulted in additional enrollment of 1.5 million students (Coalition for Health and Education Rights 2002). A scholarship for girls in Tanzania significantly increased their enrollment in secondary school (the program was subsequently extended to boys as well). In Bangladesh a stipend for

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girls in secondary school substantially increased their enrollment, particularly in rural areas (World Bank 2001).

The increased enrollments that result from eliminating fees represent an important achievement. For girls especially, just the opportunity to leave home daily and participate in a larger social setting may matter. Indeed, that opportunity may help explain why women with five or six years of schooling, who may barely have retained literacy as adults, have fewer and healthier children and are more likely to ensure that their own children attend school (IDB 1999).

It is also true, however, that a surge in enrollment can significantly strain educational systems. In Malawi the elimination of school fees in 1994 led to a 55 percent increase in enrollment. The addition of 1.2 million students overwhelmed the capacity of Malawi's schools (Rugh 2000) and was followed several years later by drop-out rates that brought primary completion rates virtually back to where they had been. In the immediate aftermath of fee elimination, the sudden lack of resources at the school level and surging enrollments are bound to overwhelm the education system, unless there is adequate planning and new resources reach the schools. A second generation of education reforms in Malawi, Tanzania, and Uganda, which focused on quality improvements and replacement financing, has had far more success in sustaining enrollment and increasing completion rates.

Of course, reducing or eliminating tuition has little impact if school districts are permitted to levy additional fees, such as building funds and student activity fees. Kenya first tried eliminating tuition in 1974, but these other fees quadrupled the cost of schooling to parents in some districts, resulting in a substantial increase in the drop-out rate, particularly in poorer districts (Herz and others 1995). Experience shows that eliminating fees will not help poor families unless more equitable and efficient sources of financing are provided, either by transferring district, provincial, or central government funds to the local level or by providing funding from locally raised revenues, something that occurs only rarely.

Provide conditional transfers

Programs for conditional cash transfers for education provide resources directly to targeted beneficiaries only when they keep their children in school. Such programs serve as social safety nets, raising the immediate incomes of impoverished families while also increasing the human capital of the poor by educating their children. Conditional transfer programs are well established in Mexico (Progresá), Brazil (Bolsa Escola), and Bangladesh (Food for Education). Such programs also exist or are being planned in Argentina, Chile, Colombia, Ecuador, Honduras, Jamaica, Nicaragua, and Turkey (Morley and Coady 2003). In addition, the World Food Programme assisted 27 countries with "take-home rations" programs in 2002.¹

School feeding programs disproportionately benefit poor children

In Mexico, Progresa (the expanded form of which is now known as Oportunidades) provides cash transfers to poor households in the most marginal rural areas. The transfers are provided as long as children attend school regularly. The program has increased enrollment rates at the primary and especially the secondary levels, for boys and especially girls. The greatest impact was during the important sensitive transition year to secondary school, during which girls' enrollment rose 20 percent and boys' enrollment rose 10 percent. The program is expected to increase educational attainment for the poor by 0.66 years of additional schooling by grade 9 (T.P. Schultz 2000).

In Bangladesh the Food for Education program provides a monthly in-kind food transfer (primarily wheat) to poor households as long as their primary school-age children attend school. Enrollment at participating schools increased 35 percent (44 percent for girls and 28 percent for boys). For the country as a whole, school enrollment had risen just 2.5 percent over two years. Attendance was higher and drop-out rates lower in Food for Education schools (Morley and Coady 2003).

Nicaragua's conditional cash transfer program for poor households with children in primary school has also produced results. Enrollment increased 22 percent, with the poorest households benefiting most. Grade progression also improved, particularly among the poorest students (Morley and Coady 2003).

Offer school feeding programs

School feeding programs disproportionately benefit poor children by creating incentives to enroll in and attend school and by improving health, attentiveness, and capacity to learn. Offering meals at school is an effective way to encourage children who are poor and chronically hungry to attend classes. In Bangladesh school-based food distribution increased enrollment 20 percent at a time when enrollment at nonparticipating schools fell 2 percent (Ahmed and Billah 1994). In Jamaica, Tamil Nadu (India), and other places where school feeding programs have been evaluated, attendance and retention generally rose (Simeon and Grantham-McGregor 1989; Babu and Hallam 1989). In Kenya a randomized control study demonstrated that children's school participation was 30 percent higher among students attending schools with feeding programs (Vermeersch 2002).

World Food Programme case studies in Cameroon, Morocco, Niger, and Pakistan have documented strong improvements in enrollment and attendance when families receive food incentives in return for good school attendance (World Food Programme 2001). In Pakistan enrollment of girls increased 247 percent in the North West Frontier Province and 197 percent in Balochistan Province between 1994 and 1998. Student attendance and dropout rates were also positively affected. Each month a five-liter tin of vegetable oil was distributed to the family of each female student who attended school for at least

School health programs, such as deworming and iron supplementation, also increase school attendance and raise scores on tests of cognition or school achievement

20 days (World Food Programme and UNESCO 1999). In Morocco girls in targeted rural communities who attended school regularly were given 100 kilograms of wheat and 10 liters of vegetable oil per year for good attendance. Within the first two years of the program, the number of girls in the first grade doubled, and in one province covered by the project girls made up 43 percent of total primary enrollment in 1999, up from 10 percent in the early 1990s (World Food Programme and UNESCO 1999).

Hunger and chronic malnutrition reduce learning achievement of children already in school. In poor households the problem begins early, with malnutrition and poor health of mothers. Poorly nourished women give birth to children of low birth weight. In the absence of special interventions, these children often lack the micronutrients and energy required for normal development, critical to their learning once in school.

The Food and Agricultural Organization estimates that 300 million children, most of them in developing countries, are chronically hungry (World Food Programme 2003a). Without breakfasts, students are more easily distracted in the classroom and have problems staying alert and concentrating on lessons. Studies in many countries suggest that hunger affects cognitive functions and may therefore impair a child's ability to benefit from schooling. A program that provided breakfasts to primary school children in Jamaica significantly increased arithmetic scores (Simeon and Grantham-McGregor 1989). School feeding programs that address specific micronutrient deficiencies have also been shown to improve school performance. Iron supplementation raised test scores of preschool children in India (Seshadri and Gopaldas 1989). In Kenya students participating in a feeding program had higher test scores, but only in schools where teachers were relatively well trained before the program started (Vermeersch and Kremer 2004).

This evidence led the International Food Policy Research Institute to conclude that "hunger is a barrier to learning. . . . A hungry child cannot concentrate. A hungry child cannot perform. Hungry children are unlikely to stay in school. School-based feeding programs have proven effective in encouraging enrollment, increasing attention spans, and improving attendance at school" (IFPRI 2001, p. 3).

Offer school health programs

School health programs, such as deworming and iron supplementation, also increase school attendance and raise scores on tests of cognition or school achievement. The World Health Organization (WHO) has identified worm infections as the greatest cause of disease among 5- to 14-year-old children. School health programs have provided deworming medicine, with great success. In Kenya school-based mass treatment of children for hookworm reduced student absenteeism by one-quarter (Miguel and Kremer 2003). In India a program to provide iron supplementation and deworming medicine to pre-

Increasing girls' educational attainment is essential to fulfilling education's potential

school students decreased absenteeism 7 percent among 4- to 6-year-old children (Bobonis, Miguel, and Sharma 2002). A study in Indonesia investigating the association between helminth infection and cognitive and motor function in school-age children found that children infected with hookworm scored significantly lower on tests of cognitive function than did uninfected children (World Bank and the Partnership for Child Development 2004). Deworming treatments are safe, inexpensive (the average cost is \$.30 per child per year), and so easy to administer that teachers and even semiliterate community workers can be trained to successfully manage school- and community-based deworming campaigns (Awasthi, Bundy, and Savioli 2003).

Recent evidence demonstrates the benefits of deworming treatments in addressing other critical health problems as well. Deworming appears to improve the effectiveness of malaria control measures (Molyneux and Nantulya 2004). People free of soil-transmitted intestinal parasites have “the same degree of protection against malaria as that provided by sickle-cell trait carriage, the most potent factor of resistance to malaria identified to date” (Spiegel and others 2003, p. 199). Worm infections make their hosts more susceptible to HIV infection and enable the virus to replicate more rapidly; chronic worm infections may also account for the higher prevalence of tuberculosis in low-income countries (Stephenson 2001; Borkow and Bentwich 2000).

Providing water and sanitation facilities at school is critical, especially for girls. According to the Ugandan Health Minister, Dr. Crispus Kiyonga, “Lack of latrines, especially separate latrines for girls, was identified as the worst school experience for girls.... Privacy issues relating to sanitation are a major factor forcing girls out of school” (World Bank 2004). A Department of Public Health Engineering–UNICEF study conducted in Bangladesh in 1994–98 showed that provision of water and sanitation facilities in schools increased girls' attendance 15 percent (World Bank 2004).

Recognizing the need to improve approaches and strategies to health and nutrition in schools, UNESCO, UNICEF, the WHO, and the World Bank launched an interagency initiative in April 2000. In 2001 the World Food Programme joined the initiative, called FRESH (Focusing Resources on Effective School Health and Nutrition) (UNICEF 2001). Collaborators identified a core set of best practices from health programs that promote learning through improved health and nutrition. They also identified interventions that would be feasible in resource-poor schools and in hard-to-reach and urban areas. Policymakers can consult this framework to develop their own strategy.

Create programs for girls

Increasing girls' educational attainment is essential to fulfilling education's potential for positive social transformation. Education is the key intervention for increasing inclusion of women in decisionmaking in public life, as well as empowering them within the home and the workplace. Given the barriers to

Schools need to be safe places for girls

girls' education, specific interventions are needed to make schools more accessible and secure for them.

Providing female teachers for girls may address some security concerns, as well as provide positive role models. International cross-sectional data suggest some positive correlation between gender parity in enrollment and the proportion of female teachers (Herz and others 1995). Qualified female teachers, however, are in short supply.

Schools need to be safe places for girls. Girls need to be protected against harassment from male peers and predation by male teachers (Lloyd and Mensch 1999). The problem is a serious one: in Cameroon 27 percent of girls surveyed reported having had sex with teachers (UNICEF 2002a). Changing this pattern of behavior involves significant cultural changes.

Decreasing the distance to school raises girls' enrollment and attendance by assuaging their concerns about safety and reputation. Research in such diverse places as Ghana, India, Malaysia, Peru, and the Philippines indicates that distance matters for all children, especially for girls (Sipahimanlani 1999; Lavy 1996; Gertler and Glewwe 1992; King and Lillard 1987). Providing schools in local communities substantially increased enrollments in Egypt, Indonesia, and several African countries. The impact is particularly pronounced for girls. In Egypt, for example, following a campaign to construct rural primary schools, girls' enrollment grew by 23 percent, while enrollment of boys rose 18 percent (Duflo 2001; Rugh 2000; Filmer 1999).

Girls and their families may find little reason to attend school if they are taught that girls are of less value than boys or if they are tracked into fields of study or low-paid occupations considered traditional for women. Analyses of textbooks in Africa, Asia, and the Middle East consistently find stereotyped material, with women portrayed as subordinate and passive while men are shown as displaying intelligence, leadership, and dominance (Lloyd and Mensch 1999; Herz and Sperling 2003). Many developing countries also practice gender streaming in secondary school, directing girls away from math and science (Herz and others 1995). Teaching practices—such as giving boys more opportunities than girls to ask and answer questions, use learning material, and lead groups—may further discourage girls (UNICEF 2002). Several countries in Africa and Asia are beginning to use gender sensitivity training for teachers and administrators to encourage girls' participation (UNICEF 2001).

The opportunity costs for girls' education that arise from their heavy burden of household chores can be addressed in a variety of ways. Some measures reduce the need for girls' work by establishing day care centers and pre-schools for younger siblings or students' children or improving the supply of accessible water and fuel. Others—such as flexible school schedules—enable girls to pursue an education while assuming household responsibilities. Take-home food rations for the families of girls in school can offset the loss to the household of the girls' labor. Flexible schedules, double sessions, and evening

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after conflict**

school hours have been introduced in Bangladesh, China, India, Morocco, and Pakistan (Herz and others 1995).

No programs appear to be in place that encourage boys take on a larger share of the domestic load, although preliminary evidence suggest that at least in some situations, declines in boys' school attendance may be associated with significant increases in girls' attendance (World Food Programme 2003). If such an association does exist, it is likely to be because boys must perform some or all of the household labor previously performed by girls. In Latin America the fact that girls' enrollment often exceeds boys' enrollment may reflect the higher opportunity cost of boys' time (working in the fields or in the streets). This illustrates the need to shape specific interventions based on local conditions.

Educate children in conflict and postconflict societies

Lack of access to education is often severe among children in regions experiencing or recovering from armed conflict. A review of the limited evidence suggests that provision of education during and after conflicts is possible, despite the hardship imposed on children, teachers, and program administrators. It is essential that education programs start during and immediately after conflict; countries cannot wait until "security" is established without losing a generation of children. Education must be seen as a core part of national healing and reconstruction.

To respond to the needs of these conflict and postconflict countries, the Inter-Agency Network for Education in Emergencies (INEE) created the collaborative Initiative on Education in Situations of Emergency and Crisis. INEE creates forums for communities, practitioners, researchers, and experts to share resources and information, identify problems and issues that affect education programs, and share best practices (UNESCO 2004c). It encourages all donors to put more resources into education for emergency programming and to ensure an early reconstruction response following conflicts.

UN agencies, especially the United Nations High Commissioner for Refugees (UNHCR), UNICEF, and the World Food Programme, have worked together and with nongovernmental organizations (NGOs) to support education in emergencies and refugee situations. UNICEF and the World Food Programme have cooperated to implement large-scale Back-to-Peace, Back-to-School campaigns in a variety of postconflict situations, including Afghanistan, Angola, Liberia, and Sierra Leone (World Food Programme 2004).

Educate children with disabilities

Of the 40 million children in the world with disabilities, it is estimated that more than 90 percent do not attend school (UNESCO 2004a). Both developing countries and donors need to target this group if efforts to increase enrollment are to reach many children with disabilities. Country plans should

Educating girls and mothers leads to sustained increases in education attainment from one generation to the next

include teacher training, school construction, outreach, retention efforts, and performance assessments. Early child development programs are important, as screening can identify disabilities early enough to make timely, effective interventions. Without better data and research on children with disabilities and their experiences in the education system, such targeting will not be possible.

In many cases a small investment can have a dramatic impact on a child's ability to learn and stay in school. In Brazil, for example, more than one-third of the 14 percent of children with disabilities have visual problems that are correctable by glasses (World Bank n.d.) As new schools are built to respond to increased demand for education, they can be made accessible to children with physical disabilities for less than 1 percent extra in construction costs (U.S. Architecture and Transportation Barriers Compliance Board 2004).

Developing countries are slowly beginning to address the education needs of children with disabilities. An effort launched in Panama in 1995, as part of a broader education reform, created a national directorate for special education to help students with disabilities enter the public school system. Implementation of this reform initially was slow, but the recently elected government has made a new commitment to educating children with disabilities. Beginning in 2005 the government will launch a three-year inclusive education plan to end segregated classes for children with disabilities and enroll them in regular classes. The government will also train teachers to address the needs of these students in integrated classes.

Break the cycle of poverty and illiteracy by educating mothers

Educating girls and mothers leads to sustained increases in education attainment from one generation to the next. It can change a society in which not sending one's children to school is socially acceptable into one in which the expectation is that every child completes school. A wealth of cross-country and individual country studies from Africa, Asia, and Latin America over the past 25 years reveals that mothers' education is a strong and consistent determinant of their children's school enrollment and attainment.

Multiple studies find that a mother's level of education has a strong positive effect on their daughters' enrollment. The effect on daughters' enrollment is stronger than the effect on sons' enrollment, and it is significantly greater than the effect of fathers' education on daughters. Studies from Egypt, Ghana, India, Kenya, Malaysia, Mexico, and Peru all find that mothers with a basic education are substantially more likely to educate their children, especially their daughters, even controlling for other influences (Lavy 1996; Ridker 1997; King and Bellew 1991; Lillard and Willis 1994; Alderman and King 1998; Kambhupati and Pal 2001; Parker and Pederzini 2000; Bhalla, Saigal, and Basu 2003).

Moreover, the more educated a mother is, the better. A study by the Inter-American Development Bank found that in Latin America 15-year-olds whose

Education is related to an adult's long-term earning capacity and to women's bargaining position for resources within the family

mothers have some secondary schooling remained in school two to three years longer than the children of mothers with less than four years of education (IDB 1998).

A study of 57 internationally comparable household datasets from 41 countries found that the education of adults in the household has a significant impact on the enrollment of children in all of the countries studied (Filmer 1999). The effect of mother's education is larger than that of fathers in some but not all countries. In countries in which the marginal effect of maternal education is significant, it increased the likelihood of enrollment by less than 1 percentage point to 6 percentage points. The study supports the view that women's education often has a stronger impact than men's education in breaking the cycle of low educational outcomes.

How does maternal education affect children's enrollment? Several mechanisms have been suggested. First, education is related to an adult's long-term earning capacity and to women's bargaining position for resources within the family. Educated mothers may have the resources they need to send their children to school. Second, more educated mothers may provide a more cognitively stimulating experience for their children. They may play a more effective pedagogical role, encouraging, monitoring, or helping their children do their homework or prepare for examinations. Third, educated mothers serve as role models for their children. If children, particularly girls, know that their mothers attended and valued schooling, they may aim to follow their example.

Several studies have sought to isolate these different causal mechanisms. Research in Latin America suggests that the pedagogical model does not apply there. "Were this a pedagogical story," concludes the Inter-American Development Bank (1999, p. 74), "mothers who do not participate in the labor market would be expected to have more time to improve their children's schooling. However, children of working mothers actually attain higher educational levels than those of mothers who do not work." After controlling for a variety of factors, the study finds that a mother's participation in the labor force increases a child's likelihood of being enrolled in school. In 13 of the 15 Latin American countries for which data were available, this positive effect of a mother's participation in the labor market on a child's educational enrollment is positive and statistically significant. On average if a mother participates in the labor market, her child will remain in school two or three more years.

Is there still a positive and significant impact on children's education where educated women do not participate in the labor market? Behrman and others (1999) examined the relationship between maternal education and children's schooling in a region of India with very low participation of women in the formal labor market. Their findings underscore the potential pedagogical effect of maternal education. Despite the absence of market returns to female schooling, their study reveals a rapid increase in demand for schooled wives in areas of high agricultural growth. They interpret this as derived demand for

Increased investment in female schooling has social payoffs, even where there are not substantial labor market opportunities

female schooling as an input in the production of child schooling. Returns to women's schooling are found in the household sector, where schooling increases "the efficiency of maternal time in the production of child human capital" (p. 36). Children of literate women study two hours more a day than children of illiterate women. Increased investment in female schooling thus has social payoffs, even where there are not substantial labor market opportunities for the women themselves. The authors of the study conclude that increasing labor market opportunities for women is not necessary to justify increased investments in female schooling, which have payoffs even in settings with increased demand only in male-dominated occupations. The conclusion from these studies is obvious: improving educational opportunities for girls is essential to improving the next generation's educational outcomes.

Whether providing educational opportunities to uneducated or illiterate mothers of young children today can break the cycle and facilitate better education outcomes in the current generation remains unclear. But some evidence suggests that it can.

In one study of the survival of children of women who acquired literacy exclusively through the adult education campaign that took place in Nicaragua in the 1980s, researchers demonstrated a strong association between maternal literacy and child health. Socioeconomic status did not account for the survival and nutritional advantages of children born to educated mothers.²

A longitudinal study in Nepal concluded that women's literacy programs had a positive impact and contributed to women's empowerment or advancement or their social and economic development. Women who participated in the program were poorer than women who did not, more likely to send their children to school, more knowledgeable about family and reproductive health issues and several health and related political issues, and more likely to participate in income-generating, community, and political activities (Burchfield 1997).³

A longitudinal study with a similar focus carried out in Bolivia found that NGO-sponsored literacy programs had a significant positive impact on women's social and economic development (Burchfield and others 2002). Controlling for education level, marital status, locality, home material possessions, and season, the study found that program participants experienced greater gains in reading skills and were better able to help their children with homework than were nonparticipants. Few mothers were reading to their young children, however, and the program had little impact on women's involvement in their children's school. Whether or not women were participating in these programs, when faced with difficult economic times, their daughters were at greater risk of dropping out of school than their sons.

In light of these results, support to women's literacy programs should be considered an important complement to interventions to increase access and retention at the primary school level. Adult literacy programs may be particu-

larly useful in settings in which there are pockets of undereducated women, such as ethnic minorities or members of indigenous communities.

Expand postprimary education

The Goals have focused much of the world's attention on the completion of a five- or six-year cycle of primary education.⁴ The commitments at Dakar referred to basic education of eight or nine years of schooling. Different countries define "primary," "basic," and "secondary" in terms of different numbers of years. However defined, the task force believes that a focus on completion of just five or six grades is too narrow, for several reasons.

First, the hoped-for economic and social benefits of education may be unattainable with only five or six years of schooling (see appendix 6.) One of these benefits is reduction in the incidence of HIV/AIDS (box 6.1). Between 1990 and 2000 the likelihood of a young person who attended secondary school contracting HIV/AIDS declined by 12 percentage points; the figure for students who had not completed primary school was just 6 percentage points (De Walque 2004). By 2000 young rural Ugandans who were in secondary school had a prevalence rate of just 3.2 percent—one-third the rate of those with no education and half the rate of those with some primary education (De Walque 2004). Evidence shows that girls who have attended secondary school are more likely to assert their rights to protection in a sexual relation-

Box 6.1 **Educating children** **can help slow** **the spread of** **HIV/AIDS**

Universal primary education could save at least 7 million young people worldwide from contracting HIV over a decade (700,000 cases a year), according to a recent report from the Global Campaign for Education (2004). About 36 percent of young adults in low-income countries never completed primary school, but they account for an estimated 55 percent of new HIV cases among young people.

Education can serve as a "social vaccine" against HIV, especially for school-age children and young adults. A review of 11 studies of school-based HIV prevention programs for youth in Sub-Saharan Africa found that it is easier to establish low-risk behaviors and build knowledge around prevention among younger students who are not yet sexually active (Gallant and Maticka-Tyndale 2003). Reaching children when they are young is thus very important.

Given that the HIV infection rate in many developing countries is growing fastest among teenage girls, educating girls may be critical to breaking the pattern. Girls who attend school are far more likely to understand the risks involved in risky behavior, to reject the myths associated with sex, and (in the case of good school programs) know how to use effective refusal tactics in difficult sexual situations (Herz and Sperling 2004).

Schools provide a ready-made infrastructure for reaching the world's children with education to change behavior before they become infected. Unfortunately, HIV/AIDS is also undermining education systems and pulling children, especially girls, out of school. In Zimbabwe, for example, a study of five provinces found that more than three-fourths of the children pulled out of school to care for relatives with AIDS are young girls (UNESCO 2002). In these circumstances, it is critical to simultaneously attack HIV/AIDS and work to preserve and improve the school system, incorporating education on HIV/AIDS as a critical part of teaching.

Parents see primary school as a necessary step their children need to take before continuing their education, not as an end in itself

ship, reducing their vulnerability to HIV infection (Herz and Sperling 2003). A 32-country study found that women with postprimary education are five times more likely than illiterate women to know the facts about HIV/AIDS (Vandemoortle and Delamonica 2000). Illiterate women are three times more likely to think that a healthy-looking person cannot be HIV-positive and four times more likely to believe that there is no way to avoid AIDS (Vandemoortle and Delamonica 2000). In Zimbabwe only 1.3 percent of girls ages 15–18 who were still enrolled in school were HIV-positive. Girls of a similar age who had dropped out of school were more than six times as likely to be HIV-positive (Gregson and Chandiwana 2001).

Second, the demand for primary education may be determined in part by the availability of secondary education slots, because parents may understand that the economic benefits of primary schooling alone are not great enough to offset the opportunity cost. Particularly where the quality of primary schools is low, parents see primary school as a necessary step their children need to take before continuing their education, not an end in itself. Of course, success in moving close to universal primary school enrollment generates new challenges. As more children complete primary school, the private benefits, in higher wages, will decline (the social benefits remain large, which justifies making primary school access universal). Private rates of return to primary education—perceived and real—cease to be seen as much of a reason for sending one’s children to primary school unless access to postprimary education increases.

Third, expanding the existing education systems in many developing countries and scaling up other public sector functions (particularly health services, water management, and general public administration) requires a larger cadre of educated and trained workers.

In most developing countries, secondary and other forms of postprimary schooling are heavily slanted toward better-off segments in society—and, in most countries, toward boys. Countries must begin to identify and implement strategies such as need-based scholarships to reverse the tendencies toward inequitable access.

Spending on postprimary education should be additional to spending needed to provide universal access to good-quality primary education. The greater demand that postprimary opportunities can generate for primary school is unlikely to create the kinds of efficiencies that will reduce the cost of providing primary education. Donors will thus need to provide additional financing for postprimary schooling.

Implications for strategy 1

These findings suggest several actions that can be taken by country-level decisionmakers seeking to increase the number of school-age children in school:

- Depending on local conditions, introduce, test, and scale up specific strategies to attract out-of-school children to school.

Several actions can be taken by country-level decisionmakers seeking to increase the number of school-age children in school

- Support adult literacy programs designed for mothers of young children, evaluate the programs to determine whether they are working, and use that information in future decisionmaking.
- Balance investments in primary education with selective support to postprimary education, paying particular attention to educational opportunities for girls and young women. Include planning for expanding postprimary education with planning for achievement of universal primary education.

Strategy 2: create better institutions, increase transparency, and provide better incentives

Sustained improvements in education are impossible to achieve without improving both parental involvement in decisions affecting their children's education and the way key institutions in the sector function. These institutions include the schools and local and national authorities that have influence over funding and school management. Many of the countries that are performing poorly suffer from institutional weaknesses, including low management capacity, nontransparent resource allocation and accounting practices, and substandard human resources policies and practices. Incentive structures fail to reward good performance over bad create and reinforce the most deleterious characteristics of weak institutions.

Parents who are both well informed about policies and resource allocations in the education sector and involved in decisions about their children's schooling exert considerable influence and contribute solutions. Involved communities are able to articulate local school needs, hold officials accountable, and mobilize local resources to fill gaps when the government response is inadequate.

While recognizing that context-specific solutions will be required, the task force identifies five specific ways that education institutions can be improved: strengthening the national commitment, improving accountability through local control, improving the quality and availability of the information base, investing in serious evaluation to learn what affects learning outcomes, and strengthening the role of civil society organizations.

Strengthen the national commitment

Successful education requires a strong national commitment, expressed in the legal and institutional framework as well as in budgetary outlays to the sector. A commitment to compulsory primary education signals that the nation's leaders place high priority on education as a central pillar of development and supports healthy debate about what constitutes education and how it can be funded. Having a strong national framework for primary or basic education is a necessary, although not sufficient, condition for the full set of institutional changes required to accelerate progress.

One part of the solution to institutional problems is parental and community involvement in education

Improve accountability through local control

One part of the solution to institutional problems is parental and community involvement in education, which anchors education in the social fabric of the community, fosters demand, and ensures that schooling provides social benefits and economic returns that reflect local priorities and values.⁵ Whether parents and communities provide financial support, administrative support, or simply play an oversight role, local engagement, commitment, and support remain vital to ensuring that schooling is a priority for the community. Because the direct and opportunity costs of schooling and the real or perceived lack of economic returns dampen demand for education, such support cannot be taken for granted.

Experiments that have devolved authority and fiduciary responsibilities to parents and communities have produced encouraging results. Evidence suggests that greater parental and community control leads to higher teacher attendance. Evaluations in Argentina, Brazil, Chile, El Salvador, Honduras, Mexico, Nicaragua, Nigeria, Peru, and a number of Indian states link reduced absenteeism to involvement by parents, the community, or the school leader (Chaudhury and others 2004; Vegas 2002; Gaynor 1998; Gershberg and Winkler 2003; Pandey 2000; PROBE 1999; Alcazar and others 2004).

Oversight and authority by parent-teacher associations or parent councils were found to raise student test scores in Argentina, Brazil, Honduras, India, Indonesia, and Nicaragua (Eskeland and Filmer 2004; Paes de Barros, Mendonca, and Soares 1998; King and Ozler 2001; Di Gropello and Marshall, 2004; PROBE 1999; Pandey 2000; Alatas and Filmer 2004) and to reduce drop-out and repetition rates in some of these countries. A cross-country regression of 10 Latin American countries found that parental participation has the strongest impact on student achievement and that autonomy without parental involvement is only marginally important (Gunnarsson and others 2004).

Probably the most celebrated case of successful parental control is that of the Community-Managed Schools Programme (EDUCO) in El Salvador, where parents select, hire, supervise, and dismiss teachers—all responsibilities traditionally controlled by the central government. The program links teacher salaries to performance and leaves budget management in the hands of parent committees. Although program households are poorer, parents have less education, and access to services is below the average for El Salvador, EDUCO led to greater parental participation in school affairs, lower teacher absenteeism, more textbooks, and lower teacher-to-pupil ratios. Government transfers were more reliable in the EDUCO schools, and EDUCO students tested almost as well as students in other schools, a remarkable result given that these students came from the poorest communities (Jimenez and Sawada 1998; Sawada 1999; Ragatz and Sawada 2004).

In what may be the most extensive reform in Latin America, Nicaragua delegated management and budget to autonomous local school councils, who

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hire and fire school staff, set salaries, and establish and handle school fees. The intent of the reform was to devolve control to communities and to generate local fee revenue to finance bonuses for well-performing teachers. This feature of the program led to support from teachers, whose union opposed the reform. Broad parental participation raised additional revenue for schools from school fees and ensured community control of the schools.

The arrangement proved popular with communities. Between the inception of the reform (in 1993 for secondary schools and 1995 for primary schools) and 2000, more than half of all primary schools and 80 percent of secondary schools became autonomous, all at the initiative of communities. Teachers expressed mixed views on the new structure, but they have also paid more attention to student performance and become more responsive to school councils (Fuller and Rivarola 1998; King and Ozler 2000; Gershberg 2004).

In Honduras the Community-Managed Education Program (PROHECO) shifted school management, and teacher hiring, salaries, and oversight to school directors, teachers, and communities. The degree to which responsibility is exercised by the three players varies across communities. Relative to traditional schools, PROHECO schools report longer teaching hours, fewer school closings, smaller class sizes, and more homework. The fact that teachers and directors complained about parental intrusion suggests that parents are actively involved in efforts to influence education. Despite the lower socioeconomic status of students and the lower level of training of teachers, PROHECO students performed better on science tests and no worse on math and language tests than students at other schools. Both repetition and drop-out rates appear to be declining (Di Gropello and Marshall 2004).

In the Brazilian state of Minas Gerais, parent-elected community education associations work with public school directors and administrators in managing an extensive after-school program for disadvantaged youth. The program focuses on socialization, tutoring, and curriculum enrichment. The associations manage their own budgets and appoint the school director. Test scores and enrollment, repetition, and drop-out rates all improved at participating schools, and improvement was greater than at nonparticipating schools (Paes de Barros, Mendonca, and Soares 1998).

A study of school autonomy in Argentina found limited effects—except where participation was part of an autonomy package or schools were in poor areas. Standardized test scores rose at autonomous schools in poor areas, suggesting the importance of autonomy and parental involvement in the lowest income areas (Eskeland and Filmer 2004).

In four PROBE (1999) states—Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh—parent-teacher associations and village education committees, which were meant to support the public education initiatives, had only a minimal effect. Although marginally more active than parent-teacher associations, the village education committees had an uneven impact across communities,

**Simply
decentralizing
can result
in perverse
effects**

and where they were effective, their contributions were modest. The research team blamed the top-down nature of the system, which bypassed engagement of the community in defining the role of the village education committees, provided them with little support or resources, and left their responsibilities ambiguous. In contrast, the state of Himachal Pradesh relied heavily on parent-teacher associations and other village organizations to foster and oversee education, identify problems, and seek ways of improving education. The differential impact on enrollment and performance between the four PROBE states and Himachal Pradesh is striking (box 6.2). Although other factors obviously contributed, the PROBE team attributes much of the difference to the attitudes, actions, and performance of parental leadership in schools.

A 1992 policy review by the government of India described a poorly performing educational system with low efficiency and effectiveness, poor retention, low learning achievement, and high wastage (Pandey 2000). Policymakers in New Delhi were responsible for all aspects of education, including hiring and deploying teachers, setting (rigid) standards, building schools, and distributing standardized materials.

The District Primary Education Program, which empowered communities to take charge, offered an antidote to the myriad of central government failures. Rooted in local governments, or panchayats, parent-run village education committees identify needs and constraints, provide space for schools, and manage school budgets. Flexibility in design and implementation allows village education committees to hire their own teachers (without meeting national standards), set compensation (through transfers and local revenue generation), and design programs that meet the full needs of the community. Some states have produced multiple models—offering classes only in the evenings, targeting girl's enrollment, addressing the needs of children with disabilities, and adapting school days to the agricultural calendar.

In India a 10 percent increase in the budget, often used to help teachers develop new or adapt existing curricula to local needs or subgroups, has proven critical to success. The program reaches 55 percent of India's primary school students. All districts made progress in enrollment, particularly of girls, among whom increases in enrollment outstripped boys by a significant margin. Enrollment of scheduled castes also improved, often as a result of providing alternative schooling models. The median drop-out rate fell by half, internal efficiency increased, and learning achievement improved, especially in the early grades. One of the unanticipated outcomes of the program is the enhanced efficiency at the local level. School construction costs have declined, as a result of using local materials. The long-term sustainability of the approach will depend on ensuring cost-effective interventions, dropping unaffordable trappings (such as school uniforms), and raising local revenues (Pandey 2000).

Small studies in El Salvador, Mexico, Nepal, and Pakistan suggest that increasing school autonomy can help reduce teacher absenteeism and increase

Box 6.2
Parent involvement has produced remarkable results in Himachal Pradesh, India

India's Public Report on Basic Education (PROBE 1999) covers all school facilities and a sample of 1,376 households in 234 randomly selected villages in Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh, and Himachal Pradesh. These five states account for 40 percent of India's population and more than half of all out-of school children.

One of the striking findings of the PROBE survey is the contrast between Himachal Pradesh and the other states. Himachal Pradesh has made remarkable progress toward universal elementary education. The state thrives on social consensus regarding the need for education for all children. Parents overwhelmingly support compulsory education, for both boys and girls, and rank it high on their spending priorities. Between 1961 and 1994, the male literacy rate rose from 21 percent to 94 percent, and the female literacy rate rose from 9 percent to 86 percent. Today Himachal Pradesh ranks among the most educated states in India (UIS 2004).

Himachal Pradesh benefits from a relatively homogeneous population, village communities, and a strong tradition of civic cooperation. The superior quality of education management reflects the political commitment to expanding education. The PROBE researchers found "relatively well-functioning schools even in remote villages where no inspector had reached for months or years. Parents [are vigilant and able] to keep the local teachers and administrators on their toes . . . [There are] stories of villagers resorting to spontaneous agitation (for example, blocking the road or threatening to boycott the elections) to obtain a new school or effect the transfer of negligent teachers" (PROBE 1999, p. 124).

Himachali parents are better informed and more demanding of the schooling system, and they are more aware of the facilities provided to them. This has resulted in better maintenance and upkeep of school buildings and equipment. Cooperation between parents and teachers led to the construction of extra classrooms, the provision of wood for the winter, the leveling of playgrounds, and the upgrading of school buildings.

In the other PROBE states, less than one-fifth of the schools surveyed have a parent-teacher association, and the parent-teacher associations that do exist rarely do more than hold perfunctory meetings. The village education committees have become token institutions from which neither parents nor teachers expect much. Committees built on government directive, an intrinsic problem of an overcentralized education system, often prove ineffective.

Unlike the other PROBE states, Himachal Pradesh made a concerted effort to keep their schools well staffed. The average primary school has more than three teachers, instead of the single-teacher schools more common elsewhere. The pupil to teacher ratio is 27 in Himachal; in the other PROBE villages it ranges from 9 to 172.

Administrative management in Himachal Pradesh is superior to that in the other states studied, in that:

- Few teaching posts are vacant (more than 10 percent are vacant in the other states).
- Salaries are paid punctually (Bihar is infamous for irregular payment of salaries).
- The school calendar is adjusted to the agricultural cycle.
- A proper Board examination is given at the end of class 5.
- School inspectors look for problems beyond just the school registers.
- Schools have well-maintained records, including enrollment and attendance registers; corruption is absent in school incentive programs.

Much remains to be done in terms of the quality and level of education provided. But the virtuous cycle of state support and local community leadership has set a strong foundation for further progress.

Despite their potential, parent associations face limitations in low-income settings

motivation (Gaynor 1998). In India and Peru active parent-teacher associations (those that had met in the previous three months) were associated with lower teacher absenteeism (Kremer and others 2004; Alcazar and others 2004).

Not surprisingly, the mere presence of a parent-teacher association does not have a measurable effect on indicators of performance. Controlling for household and community characteristics, in India and Peru the existence of a parent-teacher association had no effect on absence rates of teachers (Kremer and others 2004; Alcazar and others 2004). In the PROBE (1999) states, inactive parent-teacher associations correlated with poor overall performance and a general disregard for education.

In the same vein, simply decentralizing can result in perverse effects. In Zambia decentralization shifted spending from the province to the districts, negatively affecting the equity of fund allocation and crowding out parental and community contributions. Decentralization marginally increased overall funding, but it caused parents to withdraw (Das and others 2004). In much of the CIS, decentralization led to lower national government spending, a decline in aggregate education expenditures, and a rise in formal and informal payments by parents. Lower levels of government were handed responsibilities without commensurate funding. As a result, teacher salaries and complementary inputs declined and drop-out rates began to rise in some countries (Vandycke 2000; Burnett and Cnoblack 2003).

Despite their potential, parent associations face limitations in low-income settings, and in some cases they have at best a minimal effect on teachers. In Ghana parents did not feel competent to oversee schools, and teachers, who were unfamiliar with collective decisionmaking, felt unsure of their roles (Akukwe 2003).

An innovative program in the Brazilian state of Parana, the school report card program, engaged parents and encouraged them to rate their school, the teachers, and overall performance. Parents attended meetings, but like parents in Ghana they found it difficult to criticize and take on the education establishment. Indeed, they were unsure about what to assess. According to the then Secretary of Education, getting parents to change their perceptions of their roles and their behavior toward schools and teachers is the hardest step (Vasconcelos 2004). This initiative will therefore take time to become effective, but both the process and the result are critical to improving the accountability of school administrators and teachers and to raising performance in the sector.

In rural areas of many low-income countries, flexibility in education policies and approaches is critical to both convincing parents that the investment in schooling is worthwhile and in encouraging them to get involved in decisions affecting their children's education. In Madagascar in response to radio announcements, parents attended meetings about the school and its role given the new financial deconcentration of schools. The community elected a parent-school partnership association, which was given responsibility for financial oversight and school performance. Parents decided to modify the school year

Parents and administrators need information about the effectiveness of their schools

to accommodate agricultural demands, oversaw the budget, and reported the amounts received by the community over the radio. District managers effectively eclipsed the role of parents in teacher hiring, firing, and oversight, however, and reduced their ultimate engagement (Brinkerhoff and Keener 2003).

Improve the information base, especially for parents and communities

Information at the local level. Information is an essential element in local control and accountability. Parents and school administrators need information about the effectiveness of their local schools. Simple indicators of relative performance—spending per child, preparation of teachers, educational outcomes compared with other schools—are essential. Such information is generally unavailable to parents, particularly parents who are most likely to face failing primary schools.

Examples from Brazil and Uganda illustrate the point. In 2001 the Education Secretariat of the State of Parana in Brazil introduced the Boletim da Escola, an annual school report card of the performance of each primary and secondary school under its jurisdiction (www.pr.gov.br/cie/boletim). The report cards seek to increase accountability of the schools and the government to the community. The cards help the community, the government, and the school adopt a shared vision of universal primary education. The report cards also seek to empower parents to participate in the education process and inform decisionmaking at all levels. The report card covers student achievement, parents' opinions (based on a survey), and other information. In 2002 about 1.3 million report cards were disseminated to parents and community members, stirring significant interest. Teachers, parents, and administrators are already using the cards as their primary source of information for implementing solutions and monitoring progress (Vasconcelos Saliba 2003).

A 1991–95 survey in Uganda revealed that only a small fraction of central government funding destined for local schools was actually reaching them. In response, the central government launched an information campaign. Each month data on grants to school districts were published in newspapers and broadcast on the radio. Equipped with such information, local communities were able to monitor the flow of federal funds precisely and effectively. By 2001 fully 80 percent of federal funds was reaching schools. Many other changes were occurring in Uganda during the same period, making it difficult to isolate the impact of the transparency in information. But it is noteworthy that schools with access to newspapers increased their funding on average by 12 percentage points more than schools without access to newspapers (Reinikka and Svensson 2003).

Information at the national and international levels. At the national level, data are required for planning for the education sector as a whole and for deter-

An acute problem for national planners is the lack of information about the characteristics of in-school and out-of-school children

mining how it fits into macroeconomic policies. Good data and program evaluations are also essential for designing and assessing the cost-effectiveness and impact of a range of investments and interventions. All countries require reliable national data to craft their sectorwide plans.

Statistics for gross enrollment in primary grades are fairly complete for Africa, and response rates have improved significantly. But the collection of data is interrupted by changes in staff and by economic or social crises. And although response rates remain relatively constant, the particular countries that respond change from year to year.

Enrollment data are weakest for the small island nations of the Caribbean and Pacific. Only about 30 percent of Caribbean countries provide enrollment figures, and only about one-fourth of Pacific island countries provide data on teacher to pupil ratios.⁶ Better vital statistics would have the greatest impact in these island nations.

An acute problem for national planners is the lack of information about the characteristics (other than location of residence) of in-school and out-of-school children. Household survey data are a valuable complement to administrative data. Data on household spending on education, for example, can help planners interpret the impact of government spending on educational outcomes. Household survey data are useful because they cover several areas, including the characteristics and home circumstances of children who do not attend school, home factors that influence attendance at school, and informal and private schooling (including early childhood education), that administrative sources may not.

Survey data can be problematic, however. Surveys are conducted only once every three years, they lack global coverage, and they are generally financed and operated on behalf of donor agencies and may not be integrated into national government policy.

An increasing number of surveys collecting data on education participation have been conducted in developing countries. Efforts have been made to try to harmonize some of the key variables, in order to generate an international database of comparable education indicators. The number of developing countries covered by USAID's Demographic and Health Surveys, UNICEF's Multiple Indicator Cluster Surveys, and the World Bank's Living Standards Measurement Surveys is large and growing.

UNESCO's Institute for Statistics, the lead agency for internationally comparable education statistics, has highlighted many problems with education data. These problems, which reflect underlying weaknesses in national information systems, include the following:

- Data are unavailable: fully 30 percent of countries cannot provide basic education data.
- Time-series data are incomplete.
- Data on particular areas, such as private education, or segments of the population, such as migrant groups, are difficult to obtain.

**Monitoring
of progress
toward the
Goals is needed
to optimally
allocate donor
resources**

- Data are inconsistent, especially where they have been supplied by different ministries. Population data used by the education ministry often differ from the data supplied by the national statistical agency or the data distributed by the UN Population Division.
- International standards and classifications are not adequately implemented, generating data that are not comparable across countries.
- International classifications are changed, making it difficult to compare time-series data.
- Metadata are poor or incomplete, and information on the quality of the data is missing.
- Too much reliance is placed on data from administrative sources, and too few other sources are available with which to validate administrative data.
- Time lags before data are processed and available are long.

The data used by international agencies are inconsistent because of cross-country differences in data-collection methodologies. Because “UNICEF uses enrollment data for most countries and survey data where enrollment data are either not available or are older than the survey data,” UNICEF’s statistics are higher than those of other international agencies. UNICEF estimates that 121 million children are out of school, of which 65 million (54 percent) are girls. “Using different methods—enrollment and attendance—helps get us closer to the real number of children who might be denied their right to an education, and so in need of intervention” (2004, p. 7).

At the international level, monitoring of progress toward achievement of the Goals is needed to optimally allocate donor resources. Monitoring helps international agencies assess the effectiveness of policy and programmatic changes. Good data also help coordinate activity among partners. While poor performance in the education sector may not retard international rhetorical support, it certainly prejudices aid flows.

Reliable, accessible data are also required from donors if planning for education at the national level is to be sound. The UN Joint Inspection Unit has noted the difficulty of obtaining “a single set of comparable and accurate data on the level and amount of assistance provided to primary, basic education by the various actors, bilateral, multilateral, regional and financial institutions in 2002” (Bertrand 2003, p. 10) “Methods for attributing aid to basic education are not clear and consistent (should teacher training, for example, be counted as support to tertiary or primary education?). Funds pledged for new initiatives may represent transfers from existing assistance rather than increases in aid.

Evaluate learning outcomes

The ability to measure what the education sector produces—that is, learning outcomes—is weak. Instead, the focus is typically on the number of children in seats or even children’s names on class rosters.

The ability to measure what the education sector produces—that is, learning outcomes—is weak

Enrollment and completion indicators are not necessarily good or consistent predictors of outcomes. A 1999 study of six African nations reveals a range of relationships (Ellis 2003). Kenya had the lowest completion rate, at 63 percent, but 65 percent of its sixth grade pupils achieved minimum literacy skills—a better outcome than in any other country. Malawi’s completion rate was almost identical to Kenya’s, at 64 percent, yet only 22 percent of its sixth grade pupils demonstrated minimum literacy skills.

National outcome measures are an important indicator. But it is important to go beyond averages and disaggregate results by region, gender, ethnic group, and socioeconomic status to identify weaknesses within a particular segment of the population.

Direct assessment of what children have learned in school can be undertaken in a number of ways. A national examination system can be designed to assess children against a national standard (acquisition of a national curriculum or acquisition of sufficient knowledge to move on to secondary school). Under a national examination system, the number of students who pass the exam is sometimes limited to the number of places available in secondary school.

Another option is a national learning assessment. Rather than testing children against a certain standard, this kind of test involves directly assessing what skills they have acquired.

A third option is an international assessment. This is a test that is controlled to test equivalent skills acquisition across a group of countries, so that countries can benchmark themselves against each other or a regional average. Comparability is ensured by taking into account the relevant national and subnational cultural context.

The most robust test of acquired learning that provides international comparability is a full international learning assessment, such as the System for the Measurement of Educational Quality (SIMCE, developed in Chile), the Southern and Eastern African Consortium for Monitoring Educational Quality (SACMEQ), or the OECD’s Program for International Student Assessment (PISA). Because administering and analyzing the results of such tests are very resource intensive, it is unlikely that they can be undertaken often. Moreover, the results of these tests may not be fully comparable at the global level, because of cultural differences in interpreting questions. Testing also raises the prospect of reducing the output of schooling to the ability of students to answer questions on standardized examinations and of providing incentives to teachers to simply “teach to the test.”

Strengthen the role of civil society organizations

Civil society organizations play a major role in advocating for children and parents and in holding local governments, national governments, and international organizations to their commitments (see appendix 2). These organizations engage in advocacy, service delivery, and sometimes both. They are

Civil society organizations play a major role in holding local governments, national governments, and international organizations to their commitments

particularly effective in the areas of community participation, empowerment, literacy, community schools and development centers, and reproductive health and early childhood education (UNESCO 2001).

Civil society organizations are active at the local, national, regional, and international level. At the local level, the Le Minh Xuan Commune is a network of unsuccessful state farms southwest of Ho Chi Minh City, Viet Nam, that has left thousands of families unemployed and children out of school. To provide basic education to children who left government schools, Friends for Street Children founded the Le Minh Xuan Development Center. Friends for Street Children provides uniforms, books, and school supplies to children from poor families. The curriculum includes literature, math, natural sciences, health, vocational training, and family-centered activities. Parents meet monthly with teachers to keep informed of their children's progress (Global Fund for Children 2004).

In rural Bangladesh the Dhaka Ahsania Mission creates community development centers to respond to the demand from the local community for learning life skills among adults and adolescents. Established in 1981, the program, called Ganokendra, has created more than 1,150 community development centers, which offer literacy programs (Dhaka Ahsania Mission 2004). The program targets women. The Movement for Alternatives and Youth Awareness (MAYA) is a nongovernmental organization at the local community level in India working to reform education through community ownership. MAYA's Prajayatna Process addresses issues of quality in 15,000 government schools in six districts in the state of Karnataka by working with students' parents, school committees, the education bureaucracy, and the state bureaucracy. This method of participation in school governance incorporates the culture and characteristics of local communities and trains excellent facilitators and volunteers with leadership skills. Karnataka registers relatively high levels of enrollment and retention in comparisons with other regions in India, and MAYA has been successfully scaled up in the state. The model of community participation is replicable in different contexts after redesigning to take into account the culture and context of each community.

At the international level, the Global Campaign for Education and the national civil coalitions affiliated with it in the North and the South play a strong advocacy role, urging developing country governments to abolish primary school fees and increase government spending on education, while pushing for increased debt relief and aid from donor countries. The African Network Campaign on Education for All builds the capacity of African civil society to reach the goal of free and good-quality education for all by engaging civil society in the national and international dialogues on such issues as gender equity and the impact of conflict on education. It also monitors and evaluates the achievements of Education for All targets. ActionAid UK helps communities secure education rights and ensure that schools are places where education

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is respected. They hold governments accountable and assist them in developing practical, innovative, and flexible solutions. They hold international agencies, such as the World Bank, and developed countries accountable for their promises on education funding.

Implications for strategy 2

Strengthening the institutions that manage and deliver education services represents a huge challenge, particularly because weak education institutions are typically only part of widespread weakness in public administration. However, the experiences highlighted above suggest that, depending on local conditions, countries can take specific actions, including the following:

- Develop, strengthen, and bolster the constituency for a national commitment to education with a legal and institutional framework that places high priority on public sector provision of quality education.
- Promote mechanisms for local control of education, in which parents and other citizens are given an explicit role in holding schools and teachers accountable for delivering results.
- Improve the quality of information about education sector performance, so that the agents and agencies charged with planning and monitoring have accurate and up-to-date knowledge of how many children are in school, how many teachers are employed and on the job, whether children are remaining in school, and so on.
- Institute systems to assess the acquisition of skills and knowledge based on an international standard. Ensure transparency in the dissemination of this information, at both the national and local levels.
- Create an environment in which civil society organizations are recognized as legitimate participants in debates about the direction of the education system.

Financing the education Goals

Achieving universal primary education and gender equity at the primary level will cost more than is currently being spent by developing country governments and the international aid community. How much more varies across regions and countries and depends on the assumptions used to estimate costs.

Recent studies estimate that putting every child in the world in a good-quality primary school would cost \$7–\$17 billion a year (Delamonica, Mehrotra, and Vandemoortele 2001; UNESCO 2002; Oxfam International 2001; Devarajan, Miller, and Swanson 2002; Bruns, Mingat, and Rakotomalala 2003; and Sperling 2003). These very rough estimates probably understate the full costs of the expansion, quality gains, and special programs, including subsidies to poor households, that are critical if all children are to complete primary school (box 7.1). And they ignore the cost of expanding opportunities for postprimary schooling, without which it is unlikely that all parents will see the value of having their children complete primary school.

These and other studies share several findings. First, all of them indicate that recurrent costs, not capital investments, represent the bulk of required funds. In a detailed study of 47 low-income countries, Bruns, Mingat, and Rakotomalala (2003) estimated that 90 percent of the total costs of meeting the Goal are recurrent costs. They concluded that even if donors financed all of the incremental capital costs in those countries through 2015, an even larger volume of donor aid would be needed to support countries' recurrent spending. Donors must redress the fact that their assistance to education goes largely to capital expenditures (World Bank 2003b).

Second, although the incremental costs needed to meet the Goals are large, countries should be able to finance a significant share from domestic resources. UNICEF assumes that countries will increase education spending by 1.1 percent a year between 2000 and 2015. Bruns, Mingat, and Rakotomalala show

that if all low-performing countries matched the fiscal effort of those countries making the fastest progress, even low-income countries might cover 60 percent of the incremental costs (and 80 percent of the total costs) of achieving the Goals. UNESCO (2002) is more pessimistic about the capacity to mobilize domestic funding, but it, too, assumes that national resources will outweigh international assistance.

Third, differences across countries and regions are extremely large in terms of the affordability of reaching universal primary enrollment as well as the external financing needs. In Sub-Saharan Africa external aid will have to

Box 7.1
Calculating the
cost of providing
universal primary
education is tricky

Initial estimates of the costs of providing universal primary education were very rough, based on average costs per pupil and the number of children out of school. Such calculations underestimate the cost of achieving universal primary education, because they focus on enrollment rather than completion, graduation, or other endpoints more closely aligned with the goals of a well-functioning primary education system. These improvements require enhancing quality as well as simply extending service to more students.

In principle, the estimates could overstate the costs of expansion, since they assume that marginal costs will be equal to current average costs. In fact, marginal costs could decline (by filling urban classrooms, for example, adding more students at no extra cost in teacher time and little extra cost in books). In the poorer countries, it is more likely that the estimates understate costs, however, as marginal costs may rise (if, for example, expansion implies building new schools and paying more to teachers in rural areas).

Simple calculations generally focus on the primary education sector, without taking into account the potential need for investments in secondary and postsecondary education needed to increase the value of completing primary school and increase the supply of primary school teachers. Moreover, simple estimates usually neglect the costs of implementing policies in other areas that could have a substantial impact on reaching the goal of universal primary schooling, such as “roads and other basic infrastructure or broader policy and institutional changes.” Simple estimates also ignore the costs of programs and policies aimed at reducing gender discrimination, even though the magnitude of gender discrimination will affect enrollment, the supply of teachers, and the quality of benefits of schooling.

Recent estimates have improved on the initial efforts by addressing one or more of these issues. Most studies now aggregate total requirements from regional or country-level estimates and calculate annual spending based on the required flow of children into the school system. They also separately calculate recurrent and capital costs, and some incorporate changes in average costs and quality over time.

All of the studies are subject to the same data limitations. Population data necessary to estimate the size of student cohorts are weak in the low-income countries of interest; student enrollment data are notoriously unreliable due to poor recordkeeping, repetition, and poor attendance; and costs per pupil are confounded by inadequate information on budget expenditures, numbers of employed teachers, wage information, and private expenditures. These problems notwithstanding, improvements in methodology have generated better estimates of the global requirements for achieving universal primary enrollment than were previously available.

play the largest role. African countries will need 76 percent of the total donor resources required, and South Asia will require 16 percent; other regions will require much less donor assistance (Bruns, Mingat, and Rakotomalala 2003). Currently, only 33 percent of donor resources for education go to Sub-Saharan Africa. In Ethiopia, Tanzania, and many other Sub-Saharan African countries, even with a doubling or tripling of domestic primary spending, reaching the Goals will require very large increases in external aid.

Table 7.1
Bilateral and multilateral commitments to basic education, 2001–02
Millions of dollars

Source: OECD Creditor Reporting System 2004.

Donor	Commitment
Bilateral donors	
Australia	20
Austria	1
Belgium	8
Canada	57
Denmark	16
Finland	6
France	28
Germany	42
Ireland	10
Italy	1
Japan	78
Luxembourg	7
Netherlands	194
New Zealand	2
Norway	32
Portugal	4
Spain	21
Sweden	16
Switzerland	12
United Kingdom	84
United States	163
Subtotal	803
Multilateral donors	
International Development Association	212
Asian Development Fund	57
UNICEF	50
African Development Fund	39
Inter-American Development Bank	15
European Commission	5
Subtotal	379
Total	1,182

The timing and depth of changes and other politically delicate steps to make systems cost-effective will greatly affect costs

Fourth, the range of estimates is partly a function of different assumptions about the quality of programs and the extent to which countries introduce the institutional reforms and policy adjustments that could reduce costs (while extending opportunities). Even with new resources, the education Goals are not reachable without major changes in institutional arrangements and improvements in the efficiency of education spending in developing countries. Efforts must be made to reduce repetition, allocate sufficient resources to complementary inputs, maintain facilities, and use multigrade schools and other strategies to keep class size at efficient levels. In some low-income countries, teacher salaries should be reduced (though in an equal number of schools they should be raised). The timing and depth of these changes and other politically delicate steps to make systems cost-effective will greatly affect costs.

Even assuming maximum additional effort by developing countries themselves (such as annual increases of more than the 1 percent mentioned above), a large funding gap is implied by these numbers. This gap will need to be filled by external financing, if progress is to be made. In 2001–02 bilateral and multilateral donors contributed about \$1.2 billion in external assistance for basic education (table 7.1) Estimates of what is needed and what could be absorbed vary, in part because of the wide range (\$7–\$17 billion) of estimates of total costs, including countries' own spending. However, it is certainly plausible that in the next four years countries could absorb an additional \$5–\$6 billion a year in external funding, particularly because not all of these estimates fully take into account the costs of scholarships and other demand-side programs necessary to ensure completion, including increasing access to postprimary education. The Global Campaign for Education estimates the external resource requirement at least \$10 billion. But even this figure may understate the full cost, given that at least some of the additional students completing primary school will go on to secondary school.

Some donor efforts may raise the profile of education. In 2004 the United Kingdom pledged to spend £1 billion to meet the education Goals over the next four years. Prime Minister Tony Blair's Commission on Africa will issue a report in 2005 to guide decisions on policy and funding in the region; education, particularly for girls, seems to be a priority. France has also committed to increase its education spending over the next few years, although it has not offered specifics. In 2003 the Netherlands, an early leader of the Fast Track Initiative, committed nearly \$235 million over three years to start the Catalytic Fund—providing support to countries that have been without strong external funding—to which other donors have started to contribute.

